

President's Message

The 1999 Auxiliary-powered Sailplane National Contest was held in Hobbs, New Mexico July 6-15. This years contest was very challenging and had many surprises. The contest was held in conjunction with the 15-Meter Nationals. The general weather conditions during the contest were dominated by higher than normal humidity, rain showers and slightly lower average temperatures. The result was that most contest days saw cloud bases of 10,000 to' 12,000 MSL. The tasks often required large deviations around rain showers and thunderstorms. Pilots had to draw on all their skills to make it back. However, each pilot was able to come up with a personal best during the contest. The most consistent flying was done by Coggins in an ASH-25M who was flying his first contest in the ship. In winning the contest he made the most out of some pretty dicey situations. The Air Force crew made the Stemme sing. I flew with the Stemme several times in my ASH-25e during the contest and was amazed at how well the ship performed in the hands of the crew. On the first contest day, when everyone received distance only points, Don Pollard skunked everyone, landing at 7:30PM with almost 250 miles to his credit. Don traversed the largest, softest, weakest, blue hole I have ever seen in a contest. He then flew over 100 miles east of Hobbs to get back. Don finished the contest third. The team of Gross/Howell flying their Ventus B/T in the 15meter configuration put in a scorching performance during a post task picking all the right streets and winning the day. John Lubon, flying my old Ventus CM came in second in the contest and won several days smoking everyone. Dave Volkmann came on strong in the last days of the contest and finished fourth. Ed Shilen did a great job flying but got shot down by weather, coming in fifth. On one day, the task was to Big Spring, Texas and return. Big Spring is about 100 miles from Hobbs. Only three of us made it back that day without using the engine. We had to deviate going in and out of the turn point around a humongous thunderstorm which covered at least half of the task area. We all learned a lot about the capabilities of our ships on that day. Soaring contests get in your blood. In a ten day period you can learn more about your ship, your personal performance, weather and soaring in general than in any other venue. I highly recommend attending the coming Auxiliary-powered Sailplane National contest to meet some great people, have many questions answered, and go home a much better and safer pilot. *Stan Nelson*

Auxiliary-Powered Sailplane NEWS

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Stan Nelson-President • Bruce Templeton-Vice-President

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In Remembrance



Photo taken in August 1997 at Minden-Tahoe Airport by Pete Williams

It is with great regret we mourn the passing of Bill Ivans and Don Engen in the crash of Bill's Nimbus 4DM on Tuesday 13 July, 1999. As of the publishing of this newsletter, press coverage of this tragic event has received world-wide publicity. These men were pilots in every sense of the word having devoted a significant portion of their lives to aviation. Each in his own special way made outstanding contributions. The legacy of their accomplishments is now history and will not be forgotten. Those of us who were privileged to know them personally will remember first and foremost that they were gentlemen and never too busy to take the time to share their flying experiences. As SSA and ASA members, they shared a reputation for proactive thinking that promoted the sport of flying a glider. Let us continue to reach out to their families and loved ones at this time of remembrance.

Auxiliary-powered Nationals Hobbs, NM July 6-15 1999

1	PAP	Coggi ns/Roberts	ASH- 25M	7042
2	JL	Lubon	Ventus CM	6447
3	ZQ	Pollard	ASW- 22 BLE	6432
4	DRV	Vol kmann	DG- 800A	6356
5	TM	Shi l en	DG- 800B	6076
6	FD	Howell l /Gross	Ventus bt	6024
7	BZ	Maclean	S- 10V	5981
8	E8	Estrada	ASH- 26E	5577
9	ZO	Nel sen	ASH- 25E	5009
10	UFO	Sul l i van	Ventus CM	4620
11	VO	McWhorter	Ventus CM	2591
12	N20	McKi nl ey	ASW- 24E	2510
13	FI	Fi dler	PIK- 20E	523



TOP LEFT: L-R: Roy McMaster, Bernie Gross, Rick Howell, Stan Nelson, Ray Lutz (NAA) and Charlie Miner seated.



TOP RIGHT: Stan Nelson and his ASH 25E.

BOTTOM RIGHT: Some of the contestants and crews.



All photos via Stan Nelson.

"Here's some interesting statistics: I've had my glider for 5 seasons, and restarted the motor in flight about 9 times a year, or about 1 out of every 5 flights. Rudy Allemann's had his DG 400 for 7 years, and has restarted the motor only twice in all that time! I knew we had different philosophies about motor use, but I was dumbfounded that someone could fly that long and only need to self-retrieve twice. Does anyone have any idea how often other pilots make air starts?"

On a similar note, when I was visiting a pilot in FL earlier this year, I noticed the used ASW 24 E he'd purchased had very few hours on the engine compared to the airframe. Turns out the first owner always took tows and would only start the motor a couple times a year, and the 2nd owner intended to do the same. I was aghast, and asked how he could expect the motor to start when he wanted it to if it hadn't been run recently, how he could stay current with the starting procedures if it had been months since he'd started it, and if he wasn't running it at least once a month, was he using the long-term storage procedures for it?

He decided maybe it would be a good idea to run it a few minutes after releasing from tow; after all, this would only amount to 2 or 3 hours a year, definitely not wearing it out!

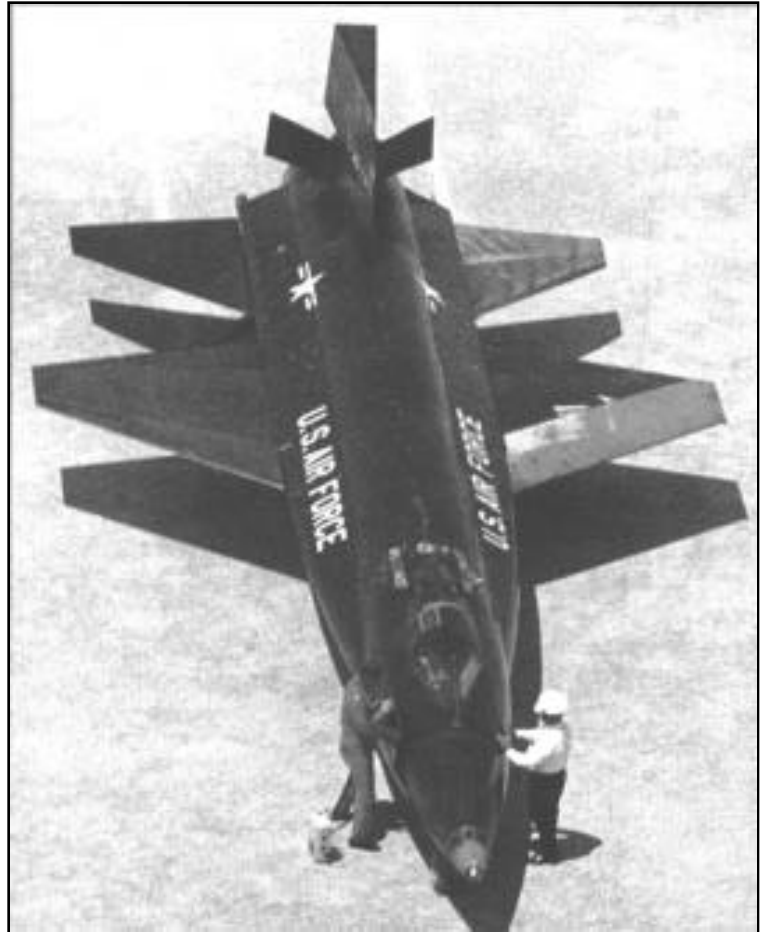
It got me wondering how many people that don't regularly self-launch (especially the Turbo owners) do the same thing, then get into trouble because the motor won't start easily, or they botch the start from lack of practice. It's quite a different situation from those of us that routinely self-launch."

Editors Comments: In a Survey conducted by ASA in Feb. 1998, the 46 self-launching owners plus one turbo pilot responding averaged 8 soaring hours to one engine operating hour. [these figures are most likely skewed as two respondents were Stemme pilots]. A more realistic average ratio would be 10 soaring hrs per one engine hr. The average engine run time for a self launch can vary from 8-13 minutes depending on taxi time, ground run up and tests and other variables. In flight starts were not tabulated.

Perhaps a better way to look at engine use is by number of sorties or flights per soaring season. Most factory manuals suggest preserving the engine if a period of 60 days or more of inactivity is expected. Each pilot should establish his own safety net as far as self-launch takeoffs and air starts. It's much easier to abort a takeoff due to engine problems than try to sort things out during an air start. This applies also to the amount of fuel in the tank/s. Launching with a full tank of fuel provides a measure of assurance that, if need be, you have enough fuel to get out of harms way and come home or arrive at a suitable airport. A recent case in point was an air start over high terrain (near an unmanned 7600' msl dirt strip) where the engine ran rich and the climb rate was 1/2 of what of should have been. Two previous self-launches had depleted the fuel to 1/2 tank. With the fuel quantity going down fast and forward progress very slow due to moderate sink and a headwind, it was time to try something different. I placed the aircraft in horizontal cruise 10 kts over best climb rate speed allowing more ground to be covered while searching for a thermal. Since that flight I have leaned the carbs a bit and always launch on a full tank of fuel.

Pete Williams

X-15: The World's First Hypersonic Glider



North American's X-15s first rocket powered flight with Scott Crossfield as pilot was on September 17, 1959. The test program spanned 10 years ending on October 24, 1968 after 199 flights. This program proved that a pilot could consistently fly a vehicle from space including atmosphere reentry, to a safe unpowered landing. The X-15 had an L/D of 3 (yes, three!). The landing approach was flown at 300kts with a sink rate of 10,000fpm. At 900ft a 1.5G flare was made and the gear extended. Touchdown was at about 200kts.

Some of the milestones set by this bird include Mach 6.7 and 354,000ft. It had 3 control sticks. One conventional stick for launch and landing; a right hand side stick for control during hypersonic flight high G conditions and a left hand side stick to control thrusters. On the aerodynamic side, the X-15 was the first to have a "rolling tail" with all moving horizontal tails controlling both pitch and roll. There were no ailerons. Most modern day fighters use rolling tails. Every manned spacecraft from mercury to the space shuttle owe some part of its success to the X-15. Specs: Span-22.6'; Length-50.75' Height- 13ft; Launch Weight-38,000lb; Landing Weight-12,500lb; Power-57,000lb thrust Thiokol Reaction Motors (Text and photo from October 1999 Flight Journal article by Barnaby Wainfan; Specs-National Air & Space Museum)

Soaring Software: Go www.x-plane.com to take a look at what promises be the ultimate flight simulator. Over 50 ships are available including gliders. The user can set weather conditions and locales including all airports: USA, Europe and Australia, configure instrument panel design your own ship. Stick control forces are real and gear go up and down. You can pre-fly tasks any

Soaring For Records

National record flights in a motorglider can still be established in the USA. This includes both single and multiplace. Use of GPS Flight Recorders allows remote starts and greatly simplifies both pilot and official observer procedures since the baro trace shows use of the engine, start and finish altitudes and precise turn point sector positions. Verification of the flight is part of the documentation captured by the logger. A GPS Flight Declaration and Data Form is submitted by the Official Observer

along with a printout from the disk file of the flight transferred from the flight recorder. The IGC approved flight data sheets printout contains the flight route, statistics of the flight, barograph trace and turn point sectors. The types of records and current USA record holder are presented below: (Statute Miles, feet and MPH)

Straight Distance-489.85-Don Hurd

Straight Dist./Goal-412.39 Don Aitkin

Out/Return Dist.-512.34 Don Hurd

Absolute Altitude-33,733 M. Stevenson

Altitude Gain-32,595 M. Stevenson

100km Triangle Speed- 98.12 Don Aitken

300km Triangle Speed-94.59 G. Kaufman

500km Triangle Speed-85.49 G. Kaufman

750km Triangle Speed-86.80 G. Kaufman

1000, 1250, 1500, 2000km Triangle

Speed-OPEN

Dist Triangular Course-580.18 Don Hurd

300km O/R Speed-104.97 Bill Seed

500km O/R Speed-84.86 Don Hurd

750km O/R Speed-74.1 G. Kaufman

1000, 1250, 1500, 2000km O/R Speed-

OPEN

Free Distance-354.63 G. Kaufman

Free Distance O/R- 551.31 G.Kaufman

FAI Sporting Code Section 3 rules and procedures for Class D motorglider record flight attempts can be obtained by contacting Arleen Coleson by Email: The badgelady@ssa.org, phone:303-388-9845 or Fax: 303-388-9639 or by mail from SSA at P.O. Box 2100, Hobbs, NM 88241.

The National Aeronautic Association issues a handsome certificate and the record is published in NAA's Annual World and United States Aviation and Space Records publication

From Texas to Alaska and Back With No Trailers

PART II OF AN EXTENDED SAFARI BY 2 GERMAN PILOTS FLYING
ASH 26Es

The following are excerpts of a very interesting article that was published in a recent issue of Motorgliding International. It involves Winfried Boos and Fritz Schneider's trip from Galveston Texas to Alaska and back flying ASH-26E self-launchers. It was truly a pioneering flight that tested the pilot's soaring ability and the propulsion systems under trying and adverse conditions. Winifred Boos is the author. Used by permission from Motorgliding International.

We rejoin our intrepid pilots on 30 July, 1998 at Northway, Alaska. They have now flown (soared and motored) all the way from Galveston, Texas to Alaska and visited several airports. They have been enroute since 12 July and are ready to head south. Low ceilings, rain and engine problems had made it necessary to lay over at several airports waiting for the weather to break or parts and maintenance help to arrive. Longing for warmer and drier skies, they self-launch for Whitehorse with engines running under low clouds only to make an emergency landing at Burwash 143 miles away. Fritz's engine had started its coughing routine again. They were prepared to remove the engine to solve the problem but after adjusting the carb, the engine again ran smooth. They relaunched and continued via Whitehorse, Mackenzie and Golden B.C. where a thunderstorm forced a landing. From Whitehorse on the weather permitted soaring flight. They were "real glider pilots again" according to Boos. While at Golden, they met an ultra-light pilot, Rüdiger Schulze, who had the knowledge to tune the carburetors on their ships. They engines were now running smoothly and with increased confidence they launched on 3 August for Felts, Washington and continued via Madras, Christmas Valley and Lakeview Oregon, landing at the Minden-Tahoe Airport, Nevada on 5 August. They were now 2,191mi from Northway, Alaska.

After replacing the wing tip wheels and picking up some parts and oil which were waiting for them at Soar Minden, they launched on 6 August without a clear cut destination. After passing Bishop, they decided to head east for Utah. At sunset they landed at Cedar City, Utah after covering over 400mi. Some glider pilots at Cedar City said the lift was not that good and it might OD but our pilots launched anyway on 7 August in spite of what Boos terms "a highly infectious communal glider depression". Sure enough, after a breathtaking glide over Zion National Park, Boos had to use 20 minutes Wankel power to reach the first blue wisps on the way to the North Rim of the Grand Canyon. Poor lift and and dense smoke from a fire on the North Rim made necessary a run to the south crossing the canyon to arrive near suitable cumulus. As he crossed the Canyon Boos said "it was like flying on a different planet and I figured the soft whistling of my wings would not disturb the eagles or the tourists" After dodging more overdevelopment they reached Belen, NM (south of Albuquerque) after covering 387mi. On 8 August they landed at Ozona, Texas for another 387mi day. The last day they passed over Uvalde, Texas in weak lift and saw a lot of gliders on the runway. Boos said "they were barely able to stay airborne and the cumulus clouds disappeared about 100 mi west of Galveston where they climbed under power to 13,000ft for a final glide to Schooles Airport, Galveston after covering almost 393mi. An ice cold Coke offered by the FBO line girl marked the end of their adventure.

Boos regretted they could not spend longer periods at good thermal sites and said they sat 6-8hrs in the cockpit on the longer jumps but without ill affect. Their instruments (Zander and Garmin GPS) always worked. A cellular phone, he said, was useless in Alaska and only worked near towns. Spare parts and metric tools are a good idea. Would Boos do it again? "Definitely yes, but I would take much more time and hang around somewhere where the lift is strong or the mountains high and beautiful. Maybe I will do it when retirement catches up with me"

Total mileage according to Boos story of the flight was 9,313 miles.



The splendor of the Sierra Nevada Wave as seen after sunset (about 8PM) near Minden in the Spring of 1999. The main lennie on the right is very high standing above what appears to be a lower lennie or rotor cloud. The wind on the ground was calm./Williams

Cockpit view of the Russia AC-4M self-launcher. At this writing Bill Ard advised he will be able fly this version as soon as the N number is assigned. Details of his test flights will be forthcoming. Starter, Prime, Ignition and RPM gauge seen on left console./Bill Ard



The 100th Stemme S10 was delivered according to a report from the factory. Recent improvements include solar cells molded into the cowling, new winglets, a reduced size Mountain Soaring Panel for increased visibility, a leather interior upgrade, acrylic exterior paint and modified ergonomic control levers.

Photo by Ron Kanter

Scheibe SF-28A Tandem Falke in powered flight over Japan. 80 were built and 3 are in the USA. Powered by a 65hp Limbach 4-stroke with a full feathering propeller. L/D 26:1 @ 46kts. In 1973 this ship took the first 4 places in 2-place class at the international motorglider contest, Burg Feuerstein, Germany. Photo Courtesy AIR WORKS Magazine



Motor Service Manual Available for SOLO 2350C Engine as Installed in the Vertus cM

In 1991, David Noyes translated this manual as a public service on an "as is" basis. This 13-page manual contains definitive information on Tools, Motor Disassembly, Major Engine Parts Inspections, Carburetor Settings for Mikuni BN 38, Ignition, Motor Re-assembly and a Parts List. A copy is available from ASA Publications for \$4 pp.

DC-800R NOTES

This is a new column based on input from pilots flying the SOLO powered version. This information is provided as public service on an "as is" basis with no expressed or implied warranties with regard to accuracies or completeness.

ELT Installation: One pilot reported after inspection of the fuel line installation, he found

the fuel line was installed with a loop between the ACK ELT and the fuselage. The loop was tight enough to kink and restrict fuel flow.

Fuselage Engine Doors Return Springs:

These are the two long springs that attach to the fuselage doors for proper closing of the doors on mast retraction. One of these springs was discovered broken and replaced with a similar spring found at the local hardware store. The pilot believes the factory spring was made of very hard and brittle material, which failed after so many cycles.

Screwjack Motor Circuit Breaker Pops on Extraction of Engine:

Inspection revealed a very tight fit of prop mast and associated equipment between the walls of the engine compartment opening resulting in the mast "popping" up when extraction selected. To accomplish an extraction required the CB be held in for a short period. The system seemed to loosen up a bit after continued extractions. Suggest a very close inspection of clearances by incremental extraction of the mast while observing clearances. It was also discovered the bungee attached to the rear part of the doors was too short causing excessive pressure to be exerted by preventing the doors from opening smoothly during extraction.

High Performance VHF Antenna Available.....

Most antennas today are base loaded short length whip types and while they perform adequately at medium ranges, there is still a need for a long range tuned 1/4 wave dipole antenna for pilot-crew transmissions over long distances. Such is Tom Massoth's MTM Designs antenna. This is a long (6.5 ft) antenna tuned for extended distance reception. It can be bumper mounted or installed on the roof top of an FBO facility or the crew's motorhome.

Contact: MTM Designs 5379
Los Monteros, Yorba Linda,
CA 92686 Tel: 714-692-0148
Email: massoth@earthlink.net
Price: \$125 + shipping.

Survey Results for Engine Service Facility.....

In the Spring an exploratory survey was mailed to all ASA motorglider owners asking who would be interested in a proposed engine service, repair and overhaul facility located at Amarillo, Texas.

The results are as follows:
Out of 67 surveys mailed, 46 pilots returned the form with 32 pilots indicating they were interested in using such a facility. The results of this survey have been forwarded to the organization who requested the survey. ASA will monitor the situation and advise if and when such a facility will become available.

Errata: In the July-August Issue on page 5, the ASH-26E (6A) pictured belongs to and was manned by Eric Greenwell not Gale Johnson who snapped the photo.

Russia AC5M Update.....

Bill Ard, Russia Sailplanes U.S. Dealer reports the Italian Zanzottera MZ25i 2-stroke engine will be installed and tested in the AC-5M. The MZ25i is a single cylinder 30hp fuel injected engine with electronic ignition and electronically controlled carburetion for altitude compensation. The bare engine weighs only 23lbs including ignition, starter, generator and automatic decompressor. Add about 3.5lbs for the exhaust system. To eliminate vibration, a counter-rotating shaft is part of the single cylinder package.

The power to weight ratio is expected to be about 20.2 lbs/hp as compared to the DG-400's 24-25 lbs/hp which should provide spirited takeoff performance. A power curve (peak rpm 6450) as well as fuel consumption, propeller shape and diameter and engine-prop gearing ratio are still under development.

Zanzottera MZ35i Specifications:

Type: 2-stroke, single cylinder
Displacement: 313 cc
Bore: 76mm
Stroke: 69mm
Fuel: Unleaded Super/2% 2-stroke Oil
HP: 30@ 6450 rpm
AC-5M tentative price (factory F.O.B.)-\$30,000

Continued on page 7.....

Russia (continued from page 6)

Eric Greenwell's Comments: "I am quite excited about this glider because of its low cost and good performance and encouraged Bill Ard to persuade the factory to drop the 15-meter plans and concentrate entirely on the motor glider. I even went to the extreme of flying a Russia in our Region 9 Sports Class contest. It is a pleasure to fly and very easy to live with on the ground. My wife liked rigging it (an entire wing panel weighs 85 lbs, compared to 105lbs for just the root of my ASH-26E wing). The assembled Russia can be pushed around like a shopping cart at 320lbs, 130lbs less than just the fuselage of the ASH-26E. I hope to fly the prototype #1 in Montana in September and #2 prototype when it is delivered (hopefully a few months later). I am looking forward to reporting these flights in the ASA newsletter"



The Grob 109 motorglider was first introduced into the USA market in 1981. Seen above is the B version with a 95hp Grob 2500 engine. Capable of a range in excess of 500 miles at a cruise speed of 124mph, 481 have been produced. There are approximately 61 in the USA and 10 ASA members own and fly the 109. The used selling price is between \$35 to over \$40,000 depending on instrumentation. Photo courtesy of AIRWORKS magazine.



In this photo teamwork is evident as Bill Stowers adjusts the carburetor's high speed needles and Charm Williams prevents the nose from dipping while Pete Williams applies full static throttle and observes the rpms of the Mid West engine in his DG-800B. The occasion was the conclusion of the complete replacement of all wiring of the CDI ignition and related systems accomplished by Wolfgang Beyer in May 1999 at Minden-Tahoe Airport.

Pilots who fly powered sailplanes out of Minden are fortunate to have the expertise of Bill and Tom Stowers of High Country Soaring for upkeep of their ships. Wolfgang is the designer of ignition systems for DG motorgliders and while visiting Minden replaced the system in Pete's bird.

Photo by Wolfgang Beyer



Inset: Wolfgang Beyer

Photo by Pete Williams

Issues & handsome certificate and the record is published in NAA's Annual World and United States Aviation and Space Records publication.

ASA Mission

The Auxiliary-powered Sailplane Association, Inc. was founded in 1988 as a non-profit organization to encourage the design, development and safe use of motorgliders, self-launching and sustainer engine sailplanes.

ASA Membership

Membership in ASA is open to anyone interested in powered sailplanes. Write or call: Brian Utley, ASA Membership Chairman, 1930 S.W. 8th St., Boca Raton, FL 33486-5205
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Annual Dues: \$20 USA, \$25 International

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Publishing Information.....

Pete Williams, ASA Publications Manager, is the Editor, and Print Production Manager for the newsletter. As such, he supervises and coordinates with a printer located in Minden, Nevada. The Newsletter is mailed from the Taos, NM address.

Contributors are requested to submit hardcopy typewritten or keyboarded text. 12pt font size is best for accurate scanning. If submitting text on a floppy disk, please advise the word processing program used. Text may be edited as required to fit the newsletter. The newsletter is produced on a Macintosh G-3 using AppleWorks word processing software. Photos are always welcome and will be returned promptly.

The newsletter is delivered to the printer the last week in Jan; Mar; May; July; Sept & Nov. ASA desires input on what the members want in this newsletter and we are doing all we can to keep it informative and interesting. It's your newsletter, so please let us hear from you!

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50 cents/word, prepaid for 3 insertions.
Contact Pete Williams for Display Ad sizes and rates.

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September-October 1999 NEWSLETTER

INSIDE.....

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Soaring for Records

Russia AG-5M Update

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