



Avion

Newspapers

9-17-1987

Avion 1987-09-17

Embry-Riddle Aeronautical University

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This Week

■ Soccer team plays with competitive edge

page 9

■ AOPA president calls for resignation of Dole

page 18

CW&R

An Award-Winning College Newspaper

Volume 57, Issue 1

Embry-Riddle Aeronautical University, Daytona Beach, Florida

September 17, 1987



Above photo by Ron Clark

New simulator stirs

Frasca 242 simulator used to enhance Crusader training

By Marty Smith
Avion staff reporter

A new Frasca 242 simulator with an Inves VDS 1000 visual system was acquired by the aeronautical science department. The system is used for normal course of training.

The new simulator is con-

figured identically to the Cessna T-303 Crusader, which is the current multi-engine aircraft here at Daytona campus. The Flight Technology Department hopes to determine the applicability of the system with regards to training at ERAU.

The simulator is unlike any other previously used here, in that it has full visual scenery to accompany the flight. In instruments, giving a more realistic feel to the flight.

The visual display portion of

the system is separate from the

frasca 242, and the simulator can be operated without the visual portion of the system. The frasca can be programmed to simulate any type of approach in any variety of ceiling, wind, or flight visibility conditions.

The lives portion of the system computer data stored on a laser disc to provide accurate scenery for 25 nautical miles. A resolution of DAB 1000 system provides accurate visual proximity cues, so one might encounter during an actual operation. Because the data is stored on laser disc, more information can be stored than could be on present systems, which record information on picture frame by frame basis.

The system also knows the current runway headings for all ports within 1000 nautical miles. Segments from Delta's FMS system were used to create the terrain.

According to Avion sources, the FAA is considering a joint program with ERAU to determine the applicability of this type of system for initial multi engine training. The current itinerary for

the advanced operations such as instrument training. The test program would be administered to a group at no cost to students to see if initial multi engine training would develop the required skills before a student would fly the actual aircraft.

The program would save thousands of dollars in initial training costs. Although the complete system costs more than the actual aircraft, there are no fuel costs and operating expenses would be considerably less.

It was also noted that evolution in cooperation between ERAU's Flight Technology Department, Aeronautical Science Department, Ives, and Frasca made the acquisition of the system possible, and the system would have likely materialized had this cooperation not existed.

Although the system is currently located with the GATs in 'G' building, future plans include a separate enclosed room to house this simulator.

Missing mail boxes

By Lito Doukas
Avion staff reporter

A large number of the incoming freshmen and a number of returning students do not yet have a mailbox. Although there are 5450 mailboxes, enough for all current students, the problem arises because there are some hold-over students from previous years who still do not yet have a permanent address have requested to be allowed to use the office boxes until an address is found.

According to Charles Fountain, this mailbox situation should be cleared up within the

next month. This problem has been every year since Fountain, but this year, with the largest freshman class ever, the problem seems to be compounded.

A sophomore, who wishes to remain anonymous, voiced his complaints to the *Avion*. This person says that is is annoyed by having to stand in line for hours to get a mailbox. He claims that he can't pick up his mail because of the office hours the mail room keeps. According to Fountain, the University underestimates the number of these students, and is doing its best to get the situation under control.

ERAU not lacking events

By Linda Johnstone
SGA Secretary

If you missed the Tom DeLaca Show, Thursday, September 3rd, you missed a real goodie. From the very beginning until the very end, everyone was in stitches from the hilarious jokes, tricks, slide show and antics of Tom DeLaca.

The highlight of the show came when approximately 25 students volunteered to be hypnotized on stage. From there it just got funnier and funnier. Tom had the students thinking that they might be in trouble, but that they were on the wrong feet, that they had landed a big fish, that they were great dancers, that the audience was naked, that THEY were naked, and many other hilarious situations. The last individual on stage, the students who were "under" didn't think they were, yet sometimes they would say something that they couldn't believe had just come out of their mouth.

This was Tom DeLaca's fifth appearance at Embry-Riddle and certainly not his last. He always puts on an excellent show. In fact, he was recently chosen National Campus Entertainer of the Year. One big "attaboy" goes to

Student Activities for sponsoring this great event.

The Orientation Pool Party held on Saturday, September 5th was a great success with approximately 1500 students attending. The success was due, in great part, to the hard work and cooperation of everyone in the SGA. Particularly, SGA Representative Thomas Hisam who planned and co-ordinated the event, SFA Member David Haslop who got many area businesses to donate door prizes and SFB Member Greg Janeczek who got 2500 hot dogs donated.

Other SGA members who obtained door prizes for the party

were Michael Miller, Janet Leake and Deryk Nicholson. Prizes were also given to winners of the Belly Flop Contest, the Ice Race, the Egg Toss and Water Balloon races. Donut prizes included everything from a donut to a donut-making lesson. There was also plenty of free hot dogs, potato chips and Pepsi for everyone.

SAs Entertainment Department presented the first ever MC of the day was SGA Representative Mike O'Brien.

This Fall keep your eyes and ears open for some fantastic entertainment put on by the Entertainment Department. You won't want to miss any of them.

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Inefficient policy cause for action

Bookstore no longer effective

At the beginning of every term, the bookstore is on the top ten of the students' public enemies list. Although there are a variety of reasons, most agree that the long lines are the worst.

Our bookstore doesn't really need to expand. Except for about six weeks out of the year, it is an adequate store. What it does need to do, however, is find a creative and viable solution to the lines.

Unfortunately, the bookstore doesn't seem to be concentrating very hard on finding that solution; they protect their monopoly by not allowing other stores a listing of required texts. This keeps the students' money at Riddle. Theoretically, that is so the profits generated can be used to improve the school. That is fine.

However, because of this zealous protection, the bookstore may be overlooking a possible solution. If our bookstore would try, surely, they could make an arrangement with other stores. The other stores could carry Riddle books, with the University stocking or selling them. In exchange, the other businesses would have an increased volume of traffic resulting in better sales of their impulse and complementary items. They would also have better exposure, which may result in overall increased business throughout the year. Another solution has arisen with the completion of Spruce Hall. Now that some empty office space is available, this could be used as temporary satellite stores. Instead of having one horrendously long line, there would be several shorter lines that would move more quickly. With ERAU being a school that bases most of its decisions on what other schools are doing and the general opinion of the students, it is surprising that our bookstore doesn't publish a required text list as other institutions do. Perhaps the bookstore and other divisions of this University ought to look at its best resource for solving some of its problems - the student body.



Letters to the Editor

No Comprende

To the Editor:

There has been a lot of attention given to the qualifications of teachers before they are hired by the university and I believe that there is not one single teacher among the ERAU faculty that does not have a wealth of knowledge to offer to the students, but does this knowledge actually get to the students?

Last trimester, I had two instructors who were both of a foreign nationality and I had a hard time understanding both of them. Both teachers were concerned if the students understood them, but when they would try explaining things they would usually write the words down that we were trying to have explained in the first place. In many cases when a student would ask a question, it would take five minutes to explain the question to the teacher and when the teacher would answer the question, it would take another few minutes to figure out

explain while the students just sat with a blank look on their faces due to not understanding. The teacher did understand the student's apathy. Thinking that the students did not understand the lesson, the teacher would keep explaining the lesson.

There is one other trait of some teachers in this university that I find disturbing and that is when the teacher is talking with the students, mumble the explanations quietly to their chalk. I am waiting to see someone stand up in class and say, "We are the ones who pay hundreds of dollars to attend this class not the chalk board, so do you mind speaking to us?"

I am sure I have a lot of people thinking I am some type of narrow minded red neck for making these complaints and they are probably right, but when I forfeit my life savings and skip meals to attend Embry-Riddle, I am waiting to see someone stand up in class and say, "We are the ones who pay hundreds of dollars to attend this class not the chalk board, so do you mind speaking to us?"

That is all I have to say.

to have difficulty understanding the teacher, but this is America where the students should have an understanding of the American language and the American way of life.

There are certain things that can be done to take care of the aforementioned problems such as at the end of the trimester, after three hundred and ninety dollars have gone into the teacher's wallet, there are the teacher evaluation forms,

not to say that they will do me any good, I could write a letter to the editor of the Avion, in a few weeks

we will see if such an approach has any effect. You could go through the Add/Drop lines and hope for something similar, which is what I did.

I am sure I have a lot of people

thinking that this would be the only other section

that would help, but I am not

sure that this would be the only other section

that would help to go to the same teacher, which is what happened in my case. Because we have this block tuition program, I would have to pay the tuition anyway,

so I decided to just take the course

and ret the instruction that I am

leading aerobatics institute and all of the students come here because they want to work around airplanes, in one way or another. So why is it that there are c-mill teachers who don't know anything about flying?

Name withheld upon request

Y.E., at the Avion, apologize for the late paper. However, in this technological age, we too are at the mercy of our computers; one can understand temperamental computers are. Also, we are also suffering from a dwindling staff.

Because of this, we are looking for new members; not only for their help, but also for someone on which we can affix the blame next time. If you are interested

in reading the Avion, stop by the Avion office in the U.C.

Once again, we regret the delay.

The Avion.



"That's ridiculous, Dan Lester. I am over paying for my tuition... But I think there is a problem with my account."

they tried to explain things they were understanding the wrong text that was trying to have explained in the first place. In many cases when a student would ask a question, it would take five minutes to explain the question to the teacher and when the teacher finally answered the question, it would take another five minutes to figure out what the teacher was talking about. After a few questions, I would get frustrated and just go to sleep.

Occasionally the teacher would explain something that was well understood by the students but the teacher may not have understood, or for some reason, was really trying to

understanding what I am doing. I am sure I have a lot of people thinking I am some type of narrow minded red neck for making these complaints and they are probably right, but when I forfeit my life savings and skip meals to attend Embry-Riddle, I need it as if I have a right to a little more of an education than what I can read in a book. No, I do not have anything against certain teachers, but I have a few friends who are from out of the states. I just don't feel I should have to put up with the aforementioned traits common to those teachers. If I went to school in France or England or Tin buck Two (sic) I would expect

things better, whatever what I did and I got into a section run by staff which was the only other section that I have heard of. I am not sure what could happen would be to see the same teacher which is what happened in my case. Because we have this block tuition program, I would have to pay for the course anyway, so I decided to just take the course and ret the instruction that I am

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temperamental computers are. Also, we are also suffering from a dwindling staff.

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Once again, we regret the delay.

The Avion.

Klyde Morris

Wes Oleszewski



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This week's staff: Wes Oleszewski, Marty Smith, Larry Rice, Tim Van Milgen, Dave Rovis, Marnie Ferreira-Longo, Steve Cagle, Bill Fisher, Liu Dorrus, Kimberly Stover.

The opinions expressed in the Editorial are those of the majority of the Editorial Board, and do not necessarily represent those of the university, the staff of the Avion, or the members of the student body. Opinions expressed elsewhere are those of the writer, who is blamed.

The Avion is not affiliated with the university, and subscriptions to the Campus News Digest and College Press may be sent to the Avion. The Avion is a member of the Associated Scholastic Press Association, College Media Advisors, and the National Scholastic Press Association.

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Correspondence may be addressed to: The Avion, Embry-Riddle Aerospace, 229-5046, University, Regional Airport, Daytona Beach, Florida 32114. Phone: (304)



ASSL facilities flaunt technology

ERAU Press Release

The Airway Science Simulation Laboratory simulates the various elements of the National Aerospace System: weather, airports, airways, Air Traffic Control, flow control, pilot and aircraft performance.

The Laboratory has the potential of becoming a year-round simulation training and research laboratory for education/training, instructional material development and human factors/aviation safety research and development.

The current initial configuration of the laboratory is comprised of six elements:

1. Computer Based Instructional System Center
2. Flight Simulator
3. Air Traffic Control Simulation: Non-Radar Trainers
4. Air Traffic Control Intelligent

Simulation Training System

5. Meteorological Center
6. Micro-Vax Mainframe Computer

The computer-based instructional system utilizes the IBM-PC with a color, touch screen display and a laser vision video disc player and the QUEST authoring system. The initial implementation provides for individual student tutoring; in Phase II the workstations will be networked to permit student interaction.

The Mooney Aircraft Simulator integrated with the Paragon Virtual System manufactured by High-Tech of Orlando, Florida, provides realistic graphics for optimum training value. The result is a highly detailed rendering of objects and accurate texture of the terrain and other geographical features. Runway markings and landscape texture, built into the data base creates excellent depth perception and closure clues. Voice

communication with the Air Traffic Control/non-radar trainers provides the basis for interactive simulation. Future configurations will tie the flight simulators to ATC/radar systems.

The Air Traffic Control (ATC) equipment is designed to simulate the Air Traffic Control non-radar environment. Students taught basic principles of ATC will be able to maneuver-based instruction systems will receive hands-on systems training when the controller stations are interfaced with the meteorological center and the flight simulators.

The radar system is a component of the Air Traffic Control intelligent simulation training system uses two Apollo 3000 computers. One Apollo 3000 has a high-resolution color monitor and constantly displays the radar scope in real time and the air borne aircraft. The display includes the current airport altimeter setting,

simulation time, simulator status, wind velocity and direction, and aircraft position. The radar is also capable of changing the scope on the radar to include additional information such as navigation aids, airways, airport map, and range rings.

The second display provides information to the operator for a given simulation scenario is the result of a joint University of Central Florida / General Electric / Embry-Riddle Aeronautical University research and development program. The project is focused on using artificial intelligence and computer graphics technology to develop an interactive "expert system tutor" using the National Aerospace System as the demonstration vehicle.

The weather system in this Airway Science Laboratory is the total Kavouras Weather System by which weather data is disseminated by both

satellite and landline.

The nucleus of the weather system is the Ethernet controller which interfaces alphanumeric, facsimile map data, satellite data, radar data and the highly sophisticated MC IDAS software package to produce real-time animated graphic video with freedom to edit, construct, and archive color graphics displays.

It also enables the operator to exercise complete freedom to edit, construct, and archive color graphic displays. Independent but also capable of being integrated into the system is the radar component which is the radar controller and data array of the 127 units of the National Weather Service (NWS) network by telephone line.

The system can print out any world-wide weather data and plot the complete NWS map package. The satellite portion of this system enables the user to display various

portions of the world including full disc visual and infrared pictures and a 50-degree portion of North America including the Gulf of Mexico and the Caribbean.

The satellite disseminated data stream will be entered into the Micro-Vax mainframe computer which will drive the total Air Traffic Control and simulation capability of the Airway Science Simulation Laboratory to achieve its ultimate goal: the efficient training and education of ERAU students in an airway science career field.

Digital Equipment Corporation's Micro-Vax Mainframe Computer provides a rich set of utilities, languages, development tools and applications. The Ethernet controller provides an interactive network of workstations, such as weather systems aircraft performance, Air Traffic Control, human factors, aircraft management and operations.

Weather also simulated at ASSL building

ERAU Press Release

Embry-Riddle Aeronautical University (Daytona Beach, FL) is offering media representatives assistance in compiling data in order to track hurricanes and other weather phenomena.

Embry-Riddle's Airway Science Simulation Laboratory, located on Clyde Morris Boulevard, simulates the National Aerospace System, including airports, airways, air traffic control, and control of aircraft performance...and weather.

The nucleus of our weather service is the Trinet computer, which integrates alphanumeric, facsimile map data, satellite data, radar data and a highly sophisticated software package to produce real-time ani-

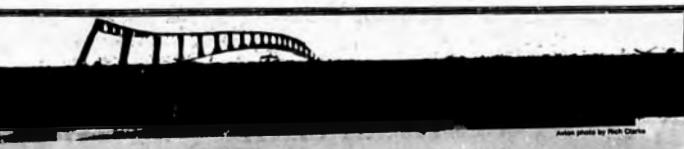
mated graphic video weather display. The combination of weather information and other components of the national aerospace system helps students understand the interrelationships and how they affect decision making.

While this information is used for instructional purposes, we feel that local newspaper, radio and television reporters may find the systems beneficial by contacting Embry-Riddle's meteorological faculty for significant developments, particularly regarding severe alerts.

You are invited to call George O. Thane, public relations director, to make arrangements for a private tour of the facilities and to make arrangements to use our laboratory on a public service basis. Call 904-239-6178.



Avion photo by Rich Clarke



Avion photo by Rich Clarke

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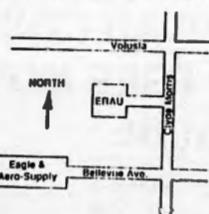
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Drugs: the cure for jet-lag? CAS designer recognized

Evelyn D. Harris
American Forces Info. Services

In one way, our Space Age ancestors had it easier than we do. They never had to fly across time zones and face a power breakfast meal at 3 a.m. or a bath when their bodies told them it was time to sleep. And unlike most people in uniform, our fur-wearing forebears never had to work late at night and then defend the Free World early the next morning.

Along with the joys of modern civilization comes the need to be alert to the command of the clock. Our bodies tell us to sleep, eat and sleep according to a cycle known as a circadian rhythm, which is be-

lieved to follow the sun's cycle. We can't just not have it adjusted to clock time; the balance is easy to upset. We don't even have to travel to get that rhythm out of whack. All it takes is a weekend or a couple of days off duty, when we go to bed and get up later than normal, and we throw our bodies up for a let-down, the "Monday syndrome."

No matter the cause, a fould-up body clock can lower productivity and cause accidents. Dr. William Storm, Chief of the Aerospace Research branch at Brooks Air Force Base, Texas, said that military researchers are looking at short-haul sleeping pills as a short-haul fix as one way of minimizing jet-lag problems. Ordinary sleeping aids stay in the body a long time and

cause a hangover—which can dangerously hamper performance in critical situations.

The British had some success with these new type of pills when they gave them to troops en route to the Falklands to make them sleep in the daytime so they'd be ready to fight on arrival. Storm says the research is being done on the sleeping aids and advises strongly against self-medication.

Storm says there is no way to completely avoid the fatigue of time changes or longer working hours. But he recommends ways to manage the body's reaction at a manageable level.

To avoid "Monday syndrome," don't stay up late on weekends. Storm says it's best to simply get

several good night's sleep at your regular bedtime before flying. He also advises experts who say to adjust your bedtimes several days before you fly across time zones by one hour per time zone.

While flying across time zones, eat good meals don't smoke. In general, it's a good idea to drink plenty of nonalcoholic and caffeine-free fluids while flying. If possible, take walks up and down the aisle or do isometric exercises in your seat.

If you have control over your schedule, don't plan a critical event for a time you'd normally be asleep. Even when you're not traveling, be aware of your most alert times and try to do your difficult work then.

Experimental Aircraft Assoc.
Press Release

EAA AVIATION CENTER,
OSHKOSH, Wis. — Paul Shuch received a new Lycoming 0-325 engine as the 1987 winner of the EAA/AVCO Lycoming Safety Achievement Contest.

Shuch was recognized during ceremonies at the 1987 EAA Fly-In Convention, which was held at Wittman Field in Oshkosh, Wis., Jul. 31-Aug. 7, for the design and development of his Biurnal Doppler Collision Alert System (BIDCAS). The system utilizes a Doppler radar position of nearby aircraft through sound, as the pilot is

equipped with stereo headphones. The system is totally self-contained; it does not depend on compatible equipment in other aircraft. This is significant because it can protect all planes instead of only those equipped with highly expensive transponders.

Shuch is an aerodynamics lecturer at San Jose State University and an electronics instructor at San Jose City College. He is a prominent inventor best known for designing and developing the first commercial home satellite television receiver. U.S. Air Force veteran, Shuch also serves as Technical Director of Project OSCAR, Inc., a non-profit group of builders of experimental communications satellites.

AIRCRAFT FOR SALE

CF6&SNA 172P II.

PIPER SEMINOLE.

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PIPER WARRIOR.

PIPER CHIEFTAIN.

PIPER WARRIOR.

CESSNA 150.

CESSNA 152.

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(1981) 2 Coms, 2 Navs, R-Nav, Encoder, TXP, HSI, Elec Trim, DME, ADF, New Paint. \$39,000.

(1981) Radar, DME, R-Nav, Autopilot, Dual Yoke, ADF, Dual Nav-Comms. \$27,000.

(1978) DME, ADF, 2 Navs, 2 Comms, Elec Trim, Full IFR, CALL FOR DETAILS!

(1978) 2 Collins Micro Line, King flight Planner, 2 Coms, Power, Air, Oxygen, and MORE. Call For Details.

(1979) King Avionics, DME, Auto Pilot, Electric Trim, ADF, And MORE. \$35,000.

(1977) Nav-Comm, Transponder, Chrome Spinner, and MORE. \$15,500.

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Orbital Inclinations



Checks and balances 'could only cause more delays for NASA'

The next launch of the space shuttle *Discovery* will be one of, if not the most, important shuttle launches ever.

The fast arriving June 2 launch date was picked as a target date of when NASA officials believe they will have everything completely modified and tested. To reassure the safety of the next launch, the KSC Director, General McCarty states that more checks and balances have been instituted, and all procedures are more extensive.

It appears that NASA wants to make this launch date without any pressure to launch and only if all tests are positive.

Doesn't this sound familiar? Before the *Challenger* accident NASA told us that there were no pre-sures to launch, and inspections and repairs were not being rushed to meet launch dates.

NASA reassures us that it is doing its best to avoid being rushed. But, with all the new quality assurances instituted, and more procedures added, one flaw in the modifications, such as the hydrazine leak in the redesigned 17 inch disconnects for the orbiter, could delay the launch by weeks, if not months. This, in effect, would put a high level of pressure upon the work schedule.

The shuttle desperately needs to get airborne to deploy crucial payloads. The Space Station, the Space Telescope, and other scientific satellites need to be deployed to keep the US competitive in the space market.

Also, many satellites are at the end of their lifetime and need to be replaced soon. Fortunately, NASA is not depending solely upon the shuttle for space launches, like originally planned. The reinstatement of the Delta launch vehicles, the Titan 34-D, and the conceptional Advanced Launch Systems should assist in keeping the pressure off the shuttle program.

Space Center opens new facility

By Chip Zodrow

The National Aeronautics and Space Administration activated their newest building at the Kennedy Space Center (KSC) last Friday, Sept. 11. The Space Shuttle *Columbia* was cautiously towed into the new Orbiter Maintenance and Refurbishment Facility (OMRF) from the Vertical Assembly Building (VAB).

The bay, built as a controlled environment to withstand temperatures, humidity, and cleanliness within aerospace standards, will be used to complete inspections, repair work, off-line modifications, and storage. The third of the bays will assist in diminishing the delays in the processing flow of orbited through the Orbiter Processing Facility (OPF).

The Columbia now sits in the OPF waiting to have the thermal protection system inspected. The test will range from waterproofing to removal and replacement of tiles. General maintenance to other systems will be performed during the inspection. These include flight software, windows, hatches and door, control systems, vents, and any lifting gear.



Many NASA employees turned out to observe the meticulous tow of the space shuttle Columbia into the new Orbiter Maintenance and Refurbishment Facility at KSC.

The third bay, having the same dimensions as the first two OPFs, is 197 feet long, 150 feet wide, and 95 feet high. It has a 100-ton capacity, until future upgrades are added into the facility. The upgrades will include service of the fuel cell tanks, dumping of the orbiter's

flight recorders, servicing the fren cooling system, and other tests that require assistance from the Launch Control Center.

For the Christmas break at the KSC, the *Columbia* will be moved back into the VAB with a zero "G"

overhead crane is installed in the OMRF. The crane will be used to assist in opening the payload doors and moving equipment. The doors are designed to be opened in space where there is limited gravity, not like on earth, therefore the crane must be used to open the doors.

Progress continues on engines for aerospace plane

By Chip Zodrow

The National Aeronautics and Space Administration and the Department of Defense (DOD) announced that the engine technology development of the National Aerospace Plane (NASP) Program will proceed into the next phase.

Experiments at NASA research centers are pointing the feasibility of a hypersonic, hydrogen-fueled airbreathing vehicle capable of at least Mach 8.

The initial contracts were awarded April 1986. Rockwell International Corp., Rockeydyne Division, the United Technologies Corp., Pratt & Whitney will be removed from the original design phase to the subsystem construction and test phases.

The tests will demonstrate the use

of airbreathing engines to power a horizontal take-off and landing vehicle capable of sustained hypersonic flight into orbit. The approximate value of each contract is \$85 million.

Air Force, Navy, and NASA laboratories are supporting the program with both personnel and facilities. If the NASP program is successful in testing the needed technologies in X-30 flight trials, a whole new class of commercial aerospace vehicles will be possible.

The potential applications include:

an airbreathing space launch vehicle operating from conventional runways, a long range air defense interceptor, and a civil hypersonic transport.

The vehicle, following takeoff, will climb and accelerate rapidly to a speed where the principal propulsion system, a supersonic-burning

ramjet, or scramjet, takes over. Once velocity exceeds this changeover Mach number, the vehicle must accelerate through a combination with the scramjet - a supersonic air past the aircraft that the airframe will allow despite such problems as flutter and structural and ac aerodynamic loads. This flight profile is necessary because the scramjet engine has no compressor and depends entirely on the forward motion of the aircraft to push air through it.

Many aerodynamic and propulsion uncertainties must be resolved in flight, because existing ground test facilities cannot replicate true temperature and pressure profiles. Thus, the first vehicles will not immediately go straight into orbit. They will slowly progress their flight envelope in both speed and altitude.

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Long summer for NASA ends with a bang

Space agency was busy during hot summer with tests, morale boosting events

By Jim Banks
Special to the Avon

KENNEDY SPACE CENTER, Fla. -- A long and sometimes difficult summer has concluded for the National Aeronautics and Space Administration. The space agency has had reason to celebrate and to turn away in embarrassment.

This past summer the agency struggled to get back into space, and made some definite ground. The agency presented a major report to the President which identified the agency's strengths and weaknesses. The Report's Commission made its nine recommendations to NASA.

Both program management and hardware changes have taken place which NASA hopes will allow them to launch *Discovery* June 2 of next year.

One of the issues called on by the Report's Commission for action was that NASA examine its orbiter breakaway methods. Landings have always been rough on the orbiters, and the brake system was not up to the full satisfaction of all concerned.

A team worked to stop an orbiter from running off the end of the runway was set this past June using the retired orbiter *Enterprise* at Dulles in Washington, D.C.

Arresting nets big enough, and strong enough, for the vehicle were set up, and *Enterprise* was slowly towed toward to determine how the nets would react to the contours of the spaceplane.

Arresting nets have been proposed for all fields where a shuttle might drop in quickly, following various kinds of aborts after lift off.

Should an orbiter come down immediately after lift off it will be extremely heavy, and there is concern that in such a situation the arresting net may prevent major damage to the vehicle and crew.

Other shuttle events this summer included the return of the Orbiter Processing Facility here at the Kennedy Space Center. The vehicle was turned on with much fanfare and national headlines. The power was quickly turned off shortly after when the few planned events were completed.

Yet another event up the milestones in the return-to-flight timeline, and for many it was an honest morale lifter. Spirits at the Cape needed a lift following an accident in July which canceled the last *Atlas-Centaur* mission, and which was followed by a two-month delay.

While working on extracting an access panel from the upper-stage Centaur area, a work platform "contacted" the skin of the liquid hydrogen tank and ruptured

the tank. The tank is a very thin-walled stainless steel structure only .014 of an inch thick. The tank is pressurized with helium to maintain the integrity of the tank while not loaded with propellants. When the platform broke open the skin, the hydrogen tank sprung a leak which was never repaired.

This mishap scrubbed the launch, and the fate of the Navy *FLTSATCOM* satellite scheduled for launch using the booster is unknown. There are no more Centaur stages available for use. All pieces of the booster have been removed, with the Atlas stage being "de-erected" recently. All parts are in storage and will eventually be shipped to their respective manufacturers.

NASA had hoped to make up for the last *Atlas-Centaur* launch which was cut short by lightning, and was destroyed last Spring.

The launch did end with a bang -- a two-minute blast.

A full scale solid rocket booster, incorporating all of the major design changes for the first flight vehicle (STS-26), was test fired at the end of August at the *Autogas* facility in Utah.

The test was delayed from the original ignition because of faulty ground equipment and uncooperative computer programs. A two-day delay to fix things and run tests was called for; and on a



NASA photo

Orbiter *Enterprise* tests arresting nets at Dulles this summer.

bright clear Sunday the booster was fired, with a thousand seconds of combustion and more than a few NASA officials.

The full results of the booster test, which featured design changes to prevent the escape of burning gases through joints in the rocket, will be available in a couple of weeks. There were some cracks discovered in the booster, but these were blamed on the failure of ground equipment responsible for keeping the development motor cool.

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Force Base, California. All landings of the shuttle, in the foreseeable future, will be conducted at Edwards while the orbiter's landing system is overhauled and updated.

Discovery will carry a Tracking and Data Relay Satellite (TDRS) in orbit. TDRS is an essential part of the Space Transportation System. One TDRS is in orbit now, launched on *Challenger*'s maiden flight in 1983 -- and a second was to have been carried by *Challenger* on her last mission which ended so tragically.

Fred Hauck, Capt., USN, is Commander of the flight and Richard Covey, a USAF Col., is the Pilot. Mission Specialists for STS-26 are John Lounge, George "Pinky" Nelson, and David Hilmers. All mem-

bers of the crew have previously flown on shuttle missions performing some of the most spectacular tasks in space to date.

STS-26 crew emblem



The STS-26 mission emblem was recently unveiled by NASA officials.

cials. The explanation of the crew patch describes a new beginning for the shuttle, a safe return (stylized launch and plume), the building upon the traditional strength of NASA (the vector which symbolizes aerodynamics on the original NASA insignia), and a memory to the seven dead astronauts of mission 51-L (the seven-member Big D).

The colors of the patch include a dark blue/black background, grey exhaust, and red vector. It was designed by artist Stephan Hustvedt of Andover, Maryland. The emblem distinguishes itself by being only the third patch of twenty-plus that does not feature a depiction of an orbiter. The other two were from flights 41-C and 51-L.

NO SHIRT, NO SHOES NO PROBLEM!

The STS-26 mission emblem was recently unveiled by NASA officials.

feature on the emblem are two other depictions of an orbiter. The other two were from flights 41-C and 51-L.

The last *Atlas-Centaur* is removed from Launchpad 36-B following a work platform accident on July 13, 1987.

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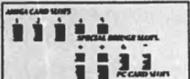
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Repair Near Completion

By Brian Moseell

Earlier in the year, the racquetball courts deteriorated from the extreme Florida heat, keeping with annual tradition. When the courts were designed, they were built to minimum building code. You get what you pay for.

The exterior of the complex can reach over 120 degrees, while air conditioning keeps the court interior below 70 degrees. All materials expand with increasing temperature. The temperature gradient between the court interior and exterior causes the wall to bow. The temperature difference also causes condensation, like on a glass of ice water in the sun. The condensation gathers at the bottom of the windows and floor. The combination of condensation and structural expansion has devastated the courts yearly.

This year the playing surface in all courts was damaged badly enough to make extensive repair necessary. The new court surface being constructed consists of insulating the building's exterior



On the mend...

The racquetball courts have been closed for six months. Repair is near completion and the

courts will be operational within the next few weeks. Recreation will hold tournaments.

with styrofoam. The thermal insulation is now approximately two inches thick and should prevent recurrence of the problem.

The courts have been out of use since the beginning term. Painting of the building exterior is near completion. All that holds

back play now is replacement of back wall sections. Look for the courts to be operational in two to four weeks.

Riddle Eagles Stun FIT Soccer

By Brian Moseell

The Embry Riddle Eagles played their first match of the fall term Tuesday, September 1 against the Florida Institute of Technology at Melbourne. The game began in a typical fashion for the Eagles, but didn't end that way.

The Eagles were heavy underdogs against NCAA division 2 F.I.T. E-RAU stunned F.I.T. in the early minutes when skillful play from Eagle forwards Mohammed Alsharani and Amer Bushara created the first scoring

opportunity. The pair confused the F.I.T. defense forcing center forward Andy Amento to split the defense. Amento took the ball to the edge of the penalty area and ripped a shot past the F.I.T. goalkeeper hitting the post. E-RAU continued to pressure, as another goalizer, F.I.T., notoriously ranked last season, opened the scoring 15 minutes into the match when their left winger received a nice cross from the right side, beat his defender, and placed the ball over Eagle goalkeeper Leo Glynn.

Embry Riddle did not give up. Down by two goals a well-con-

densed, well coached F.I.T. team started a comeback. The Eagles, firing in their first match, could not keep up with F.I.T. The pressure increased on E-RAU's defense, requiring Glynn to make several saves to keep the Eagles on top. Without ample reserves, constant substitutions led to organizational collapse and F.I.T. scored twice quickly to tie at the half.

The second half was mostly a midfield battle, as both defenses held tough. There were few scoring opportunities and the final result was a 3-3 draw, and a great start for the Eagle Soccer Club.

Club Overcomes Hurdle

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minutes into the match when their left winger received a nice cross from the right side, beat his defender, and placed the ball over Eagle goalkeeper Leo Glynn.

Embry Riddle did not give up.

corner of the goal to give E-RAU a 2-1 advantage. F.I.T. scrapped to relieve the pressure but could not prevent Fred Kalloo from fighting for the Eagles' third goal.

Down by two goals a well-con-

tributed, well coached F.I.T. team started a comeback. The Eagles, firing in their first match, could not keep up with F.I.T. The pressure increased on E-RAU's defense, requiring Glynn to make several saves to keep the Eagles on top. Without ample reserves, constant substitutions led to organizational collapse and F.I.T. scored twice quickly to tie at the half.

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INFORMATION

Eagles travel to St. Augustine

Friday Sept. 4 to take on the Monarchs

The Eagles traveled to St. Augustine Friday Sept. 4 to take on a tough Flagler side. The rain poured down all day making play difficult. The field was covered with water, some puddles the size of Lake Superior. This made passing and judging the ball tricky, and dribbling impossible.

The playing conditions gave Flagler an advantage as they focused on the dribbling skills of their forwards and a fast-break attack.

Flagler got on the scoreboard early when a misstep in the defense left the Flagler right wing on a break away from thirty yards out. The attacker pushed the ball to the inside of the penalty area and placed the ball past the Riddle goalkeeper. Flagler scored once again in the first to make the score 2-0 at the half.

The second half saw a deter-

mined eagle team come out and fight harder than in the tentative first. The Eagles were given a tremendous lift by club supporters who traveled to St. Augustine for the match and sat through the rain.

E-RAU put on the pressure as the tie began to change. A few scoreless chances charged the Eagles even more. The Eagles scored to make the score 2-1 after being awarded a penalty during attack on the Flagler Goal. Amer Bushara took the ball into the lower left corner of the goal. The lower left corner of the goal. The Eagles had two more good opportunities but could not capitalize. The first came on a pass to James Idowu in the goal area. Idowu was not able to field the pass as he fell into a puddle before reaching him. The second chance came when Marshall Ogle made a run through the defense as the ball was chipped over the defense from midfield. Ogle was able to get a piece of the ball before being taken down by the Flagler right wing.

The ball went just wide of the goal. Ogle had to leave the game with a groin injury. No foul was called.

Student Opinion Poll

Many sports clubs on campus such as the Lacrosse, Baseball, Golf, Rowing, and Soccer Club have been providing athletic outlets to the students of Embry Riddle. Examples of academic and student facilities has met with approval from all on campus. The sports program could see intercollegiate action as soon as this Fall. Before we can be administered, we need the input of all on campus. Please take the time to answer the following questions and donate your opinion.

Please type or print clearly and return to the Author.

- Would you like to see intercollegiate sports at E-RAU this Fall?
- Would you support E-RAU teams by attending home games?
- Which sport(s) do you think would benefit the University the greatest?
- If transportation were provided, would you travel with a sport team to see away games?
- Should the grass area between the University Center and the Softball Field be designated a multi-purpose athletic field?
- Should the Student Government promote sporting events as a student rally point by providing refreshments or other incentives?
- Should the Entertainment Committee be involved in promotion?
- Would you be willing to pay an additional \$5 fee per semester to fund the sports program?

Please list any additional comments and ideas:

1.

Thank you for your input.

Club Overcomes Hurdle

Eleven starting Eagles and one reserve made the journey to Melbourne for the first game of the soccer season. The players had to rent a fifteen passenger

van out of their own pockets. Unfortunately, strict insurance regulations make acquisition of student-activities vans a virtual impossibility.

Eagles to Play St. Leo

This Saturday, the Embry Riddle Eagles will travel to St. Leo College to take on the Monarchs. Transportation will be arranged

for club members. All others interested should contact the Soccer club through Student Activities. Experience Eagle pride!



Beech's Best...

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Dallas	at NY Giants
Detroit	at LA Raiders
Kansas City	at Seattle
✓ Minnesota	at LA Rams
✓ St. Louis	at San Diego
New Orleans	at Philadelphia

TIEBREAKER: Predict the score of any one game above. List teams with score.

NAME:
ERA BOX:
PROGRAM:

Eagles Fall to Flagler

By Brian Moseell

The Embry Riddle Soccer Club went into it's third match of the season with a 1-0 record. The team that would put a blemish on their record was Flagler College of the A.I.A.

The Eagles traveled to St. Augustine Friday Sept. 4 to take on a tough Flagler side. The rain poured down all day making play difficult. The field was covered with water, some puddles the size of Lake Superior. This made passing and judging the ball tricky, and dribbling impossible. The playing conditions gave Flagler an advantage as they focused on the dribbling skills of their forwards and a fast-break attack.

Flagler got on the scoreboard early when a misstep in the defense left the Flagler right wing on a break away from thirty yards out. The attacker pushed the ball to the inside of the penalty area and placed the ball past the Riddle goalkeeper. Flagler scored once again in the first to make the score 2-0 at the half.

The second half saw a determined eagle team come out and fight harder than in the tentative first. The Eagles were given a tremendous lift by club supporters who traveled to St. Augustine for the match and sat through the rain.

E-RAU put on the pressure as the tie began to change. A few scoreless chances charged the Eagles even more. The Eagles scored to make the score 2-1 after being awarded a penalty during attack on the Flagler Goal. Amer Bushara took the ball into the lower left corner of the goal. The lower left corner of the goal. The Eagles had two more good opportunities but could not capitalize. The first came on a pass to James Idowu in the goal area. Idowu was not able to field the pass as he fell into a puddle before reaching him. The second chance came when Marshall Ogle made a run through the defense as the ball was chipped over the defense from midfield. Ogle was able to get a piece of the ball before being taken down by the Flagler right wing.

The ball went just wide of the goal. Ogle had to leave the game with a groin injury. No foul was called.

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ARMY

By Bill Fisher
Cdt. Cptl Army ROTC

With the beginning of the trimester comes many events; friends meeting for the first time since the end of the summer break, getting to know new teachers and new subjects, and forming back into the mold of student with too many homework assignments and too little time.

Last Thursday marked the beginning of the term for Army ROTC students with the first gathering of Eagle Battalion Cadets. For the returning cadets it was the first chance to familiarize their new position with the battalion and for the new cadets in the battalion, it was their first glimpse of the organization, as a whole, that they have just become members.

The cadre and cadre chain of command formally welcomes these new cadets into Eagle Battalion and hopes that they find it to be as rewarding and challenging as we have: Welcome Aboard!

September will be a busy month for Eagle Battalion. Many of the yearly programs are beginning and most notably, because of the early November competition date, is the

Ranger Challenge Team's preparations. Last year the team placed 3rd overall in a regional competition against other schools from Florida and Georgia.

Ranger Challenge consists of six mentally and physically stressing events culminating with a grueling 10k (6.2 mile) forced march with approximately 40lbs of combat gear. Last year's team ran the entire course and finished seconds with a time of 61 minutes and 37 seconds.

If any cadet is interested in becoming a member of the Ranger Challenge Team contact Cdt. Major Mark Vassell for more information.

The Color Guard team is gearing off to fast start this month with it's presenting of the Colors at the formal banquet for The Society of the Sons of the American Revolution on September 18th.

Cadet Council is an elite group of cadets whose mission is to represent the Eagle Battalion and the United States Army at major social and military events. They are some of the best cadets within the ranks of Eagle Battalion and have a job which is both high in visibility and

responsibility. They often times bridge the gap between the civilian population and the military community, and most times are the only ones who can speak for the military that the local communities desire.

If any cadet is interested in joining the Color Guard contact Cdt. Cpt. Tom Wiesner or Master Sergeant Gore in the orderly room.

To all the cadets who persevered and triumphed through two of the hardest events that the Army has to offer, Airborne and Air Assault, this summer: Congratulations! The wings you now wear bring into you a special elite fold. Wear them proudly. Special congratulations to the two Air Force ROTC cadets that graduated from Airborne training school.

Later, but not least is the primary social event for the battalion this month: the Battalion Barbecue! The whole Battalion is invited to the University BBQ pit on Thursday, September 24th at the swimming pool. Plans are in the making for a relay race competition between platoons during the BBQ so dig out those kneepads and get ready make your platoon the Wally Ball Champion of the Battalion!



Two members of the Florida Army Reserve Special Forces unit exit a UH-1H helicopter in a recent rappelling demonstration on campus.

AHP Alpha Eta Rho

By Kimberly Storer
Club Writer

Welcome to Embry-Riddle Aeronautical University from the Epsilon Beta Chapter of Alpha Eta Rho, Professional Aviation Fraternity. Since our inception in 1929 at the University of Southern California, Alpha Eta Rho, the great letters that stand for AIR, have grown to become an international organization. Every chapter of Alpha Eta Rho chooses its members only from those who are engaged in the profession of aviation. As a student at ERAU, you have the opportunity to become a part of this extraordinary group of aviation-minded individuals. The alumni membership of the fraternity

is large and is distributed throughout the aviation industry both in the United States, and abroad. The fraternity serves as a contact between the students of aviation and those currently in the field giving members an advantage when entering the job market. Alpha Eta Rho also strives to instill in the public's mind, a confidence in aviation and promotes a closer affiliation between the students of aviation for the purposes of education and research.

Along with being the oldest chapter on campus, we are the newest addition to fraternity row with the opening of our new house last October. The house holds 24 brothers and a special room for our

home of the rowdiest parties this week of '87 RUSH, Friday September 18 and Saturday September 19 both starting a 8:00 p.m. Alpha Eta Rho holds a strong tradition for their hit parties.

Each chapter maintains active in numerous campus and community affairs. This idea is expressed through service projects such as local airport restoration and work with charitable organizations. Also, AHP raises funds by working the annual SKYFEST and the Daytona 500, both of which are donation status.

Aside from the many professional and community service activities we are involved in, AHP is renowned for our parties and social events. We

participate in intramural sports and attend airshows with nearby AHP chapters.

But what really makes Alpha Eta Rho stand clear above the rest, is the brotherhood that we share. As our Brothers, as you learn about our history and traditions you'll meet new friends that will last a lifetime. Alpha Eta Rho is also the only fraternity that allows females to be members. We, the Brothers and Sisters of Alpha Eta Rho hope you decide to join Alpha Eta Rho and you life here at Embry-Riddle. For more information about Alpha Eta Rho, stop by our table at C&O Day, our house at 517 S. Ridgewood Ave., or call 257-6192.

For more information on Alpha Eta Rho, visit our website at www.embry-riddle.edu/~ahp/

RIDDLE RIDERS-

By Gregory S. Elam
President

Th. Cycling Club held its first group ride on Sunday, 6 Sep 87. 16 cyclists showed up for a 30 mile round trip ride to Ponce Inlet. The ride was a success due to the fact that only four riders due to lack of experience or mechanical difficulties and gaining one rider from the Daytona Cycling Club.

Apoligies go out to those inexperienced riders. 30 miles is a long ride for a beginner and our 17.2 mph

average pace was just too much.

Sick with it though, and you will soon be riding centuries with the big guys. But you don't have to. The Cycling Club is for anyone who wishes to fellowship with other riders of different classes and their ages. All skill levels are welcome, and if you are welcomed, then look for the different class riders will soon be set up.

Those who are interested in joining the Cycling Club or have any questions are encouraged to visit our booth in the U.C. on C&O Day.

ROA Reserve Officers Association

difficulties in getting one rider up.

From the Daytona Cycling Club.

Apoligies go out to those inexperienced riders. 30 miles is a long ride for a beginner and our 17.2 mph

Those who are interested in joining the Cycling Club or have any questions are encouraged to visit our booth in the U.C. on C&O Day.

ROA Reserve Officers Association

By Jeff Silver
Public Affairs Officer

As a cadet training to become an officer, it becomes very important during your collegiate years to get involved with clubs and organizations on campus. By doing so, you show initiative and leadership, allowing them as well as other needed attributes to grow.

The R.O.A. (Reserve Officer's Association) gives you this perfect opportunity for involvement. This fall the ROA will be under new officers with new ideas and high ambitions to make sure things get ac-

complished. What exactly is the R.O.A.? Well, it's a group of cadets from all branches of the service, from all over the country. Its goal is to improve inter-squad relations, learn more about the military, and to have a good time doing it.

If you are interested in getting involved, meeting new people and being a super-duper, number 1 cadet, the R.O.A. could be what you're looking for. Call Jeff Silver at 341-255-9547 or just look on our bulletin board in the U.C. (near Epicure) for upcoming events. Show your leadership, get involved!

FELLOWSHIP — Christian Fellowship Club

By Thomas Hyde
President

Greetings in the name of the Lord Jesus Christ! ERAU Christian Fellowship is a non-denominational fellowship and outreach group whose main purpose is to share the love of Christ with the students and faculty of ERAU.

Our meetings are held every Wed. at 6:30 p.m. in the U.C. Community Purpose Room.

Our meetings consist of singing, Bible study, sharing with open minds and great opportunities to meet new friends.

We like to emphasize that we are

not a church. But a group of Christians that just happen to be Riddle students and love to gather, and share the joy that we have found in Christ Jesus. Are you are welcome! Come as you are and you don't have to be perfect. Come as you are with a three percent attitude.

Remember, God loves you just the way you are. And he desires to be in your life. To. His Bible says:

"This is how God showed His love among us: He sent His one and only son into the world so that we might live through him. This is love; that is how God loved us, in that He loved us and sent His Son as an atoning sacrifice for our sins. (1 John 4:9-10).

Theta Phi Alpha Theta Phi Alpha

By Marnie Saban
Theta Phi Alpha Secretary

We're back! Since returning for Fall, Theta Phi Alpha has been practicing and the upcoming semester is looking great.

The girls have come up with some very imaginative ideas for our forthcoming parties and activities and we're all anxious to get things going. I know the event that all the girls are impatient for is our

first rush party. That one will prove to be very "reveling" in more ways than one.

Theta Phi Alpha would like to congratulate our sister Christi Haines for being elected Treasurer and sister Frances Lewis for being elected Fundraising Chairman. Also, Happy Birthdays for this month go out to sisters Frances Lewis and Mary Bellin.

FLIGHT TEAM

By J.P. Welsh
Public Relations Officer

Not wasting any time sitting on their laurels, the Regional Championship ERAU Precision Flight Demonstration Team is already gearing up for the second year of competition at the University of Central Florida. At the team's first meeting of the semester, Head Coach Mike Wiggins announced the team's demanding practice and tryout schedule, and introduced the new staff of team coaches. Assisting Mike this fall will be instructors John Statach, Mason Aldrich, and Stan

Rowe. These dedicated individuals will certainly have their work cut out for them as they prepare a relatively fresh team to defend our golden crown in November.

Also at the team's 2nd meeting, President Mike Rapaport announced himself and the new executive board to the general membership. In addition to Mike, the Flight Team executive board for Fall and Spring 1987 is: Greg Barklage-Vice President, Steven Haddad-Secretary/Treasurer, J.P. Walsh-Public Relations Officer, and Flip Smith-Safety Officer. Team Faculty Advisor

Bill Mason will assist the Team this year with his expertise. The executive board has big plans for our members this semester. The Team plans to participate actively in C&O Day, sponsor several guest speakers, promote the best aviation university in the world, and recruit an yet undetermined number of new members.

Speaking of recruiting new members, anyone (pilot or non-pilot) who would enjoy working towards a goal, being a member of one of the most dynamic organizations on campus, using your talents to up-

hold the great reputation of ERAU, and possibly bringing home a few trophies with airplanes on top of them, keep a close watch on this column and the AVION for information and mass briefing for Team member candidates. At the end of the semester, we will be holding a competition to become a Flight Team member, all your questions will be answered, and applications will be distributed to those wishing to repair to the Team. We desperately need talented and dedicated individuals to replace the veteran members we will lose this December and April. We want you!

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AIAA —

By Brian Johnson
Chairman

For those of you who took some or all of the summer off, welcome back. For those of you, like myself, who stayed for the whole summer... Where's the summer go? Labor Day has passed and Fall is here, ready or not. There are a few upcoming events to discuss at the first meeting this Friday, Sep. 11 at 11:00 in the Wind Tunnel Lab on Friday, Sep. 10.

Pending faculty approval, we will host a small Open House in the Wind Tunnel Lab on Friday, Sep.

18. Included in the event will be demonstrations of the smoke tunnel, a display of what is created in the classroom, education, and upper classes for questions and answers. The purpose of this event is to allow new students a good understanding of what to expect during their education.

Don Wallace, Vice Chairman

took it upon himself to build the new bulletin board over the break. It has not been hung up yet, but we should have that taken care of by C&O Day. Thanks Don!

Bill Mason will assist the Team this year with his expertise. The executive board has big plans for our members this semester. The Team plans to participate actively in C&O Day, sponsor several guest speakers, promote the best aviation university in the world, and recruit an yet undetermined number of new members.

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DRILL TEAM

Precision Drill Team

By Heidi L. Stewart
Assistant NOCO

What could you possibly think of that you'd rather do than march for four straight hours Saturday and Sunday in freezing degrees weather? Over one hundred people didn't agree with you. This semester's tryouts for Special Operations went

very well. Out of those 107 people that tried out, 28 were chosen to participate on the precision drill team.

This semester's team is the biggest the drill team has ever had. It will consist of two subteams: a parade team which will have 24 people and a performance team which will

include all 28. This is a little different than the way it has been done in the past.

It will be a very busy semester for everyone involved. Each person is responsible for their own drill and their own placement here. Some of the events planned are: the Bethune-Cookman Parade, a Veteran's Day perfor-

mance, a performance for the Special Olympics and Pass and Review.

Our first performance will be a parade in Hillyard on Sep. 19. Everyone is invited to attend.

I'd like to thank everyone who showed up. It's going to be a great semester.

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ATTENTION

**ERAU
JUNIORS,
SENIORS,
AND
GRADUATES**

An organizational and interest meeting of the ERAU student and Alumni Association will be held in the FSL at 8:30 P.M. on Thursday, September 17. If you are a Junior, Senior or an ERAU graduate living in the Daytona Beach area and have an interest in creating closer-ties to ERAU alumni, BE THERE!

As a crew member you can earn up to
\$4.05/hr. \$ AND MORE

EPICURE

Meal Plan Sales

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9/13-9/19	210.74	375.86	504.19	549.38
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9/27-10/3	178.32	317.60	425.83	463.82
10/4-10/10	162.11	288.47	386.65	421.04

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Friends don't let
friends drive drunk

Fridays and Saturdays
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8:30 P.M. on Thursday, September 17.

If you are a Junior, Senior or an ERAU graduate living in the Daytona Beach area and have an interest in creating closer-ties to ERAU alumni, BE THERE!

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- Are you self motivated?



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Tues. Pizza Thurs. Spaghetti

Fri.

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NOTICES

■ COMMUNITY RELATIONS

There are needed at Holly Hill Elementary School in all subjects—Grades kindergarten through six. If you can volunteer your time from 2:45 - 3:45 on Tuesdays and Thursdays please contact the ERAU Community Relations Office at extension 6360.

■ FAA EXAMINATIONS

Embry-Riddle Aeronautical University will administer FAA Pilot and/or Instructor Written Examinations for the following:

1. (PA) PRIVATE PILOT-Airplane
2. (CA) COMMERCIAL PILOT-Airplane
3. (FA) FLIGHT INSTRUCTOR-Airplane
4. (FOI) FUNDAMENTALS OF INSTRUCTING-Ft. & Ground Instructor
5. (IGI) FUNDAMENTALS OF INSTRUCTING-Basic
6. (AGI) FUNDAMENTALS OF INSTRUCTING-Advanced
7. (ATP) AIRLINE TRANSPORT PILOT-Airplane (FAR part 121)
8. (AO) AIRCRAFT DISPATCHER
9. (ATA) AIRLINE TRANSPORT PILOT-ATP Airplane (FAR 133)
10. (RA) INSTRUMENT RATING-Instrument Pilot Airplane
11. (DI) INSTRUMENT RATING-Flight Instructor-Airplane
12. (GII) INSTRUMENT RATING-Ground Instructor-Instrument
13. (FEB) FLIGHT ENGINEER-Basic
14. (FEI) FLIGHT ENGINEER-Turbine
15. (FEX) FLIGHT ENGINEER-Turboprop/Basic

September 26 Saturday, 0830 H-113, GRW Complex
September 29 Tuesday, 0830 H-111, GRW Complex

Six tents intending to take an FAA Pilot Written Examination are required to sign up in Office D-200 or call extension 6800 prior to examination day.

At the time of the examination, each student must present a receipt for pilot exam fee validated by the Cashier's Office; a written authorization form signed by an appropriate Aeronautical Science department ground instructor, or the failed results of a previous FAA written examination, and present as personal identification an Airman Certificate, driver's license, or other official documents.

Explanation of appropriate forms and procedures will be given at 0830. Immediately thereafter, testing will commence and unless prior arrangements have been made, late examinees will not be permitted to enter the examining area while testing is in progress.

■ C&O DAY

The Student Activities Office will sponsor Clubs & Organizations Day on Wednesday, Sep. 16, 1987, from 10 a.m.-4 p.m. in the U.C. Club booths will be set up along the perimeter of the U.C. cafeteria throughout the day. Give away prizes will be awarded to some students. Free popcorn will be available!

There's more to ERAU than just classrooms! Get involved! Join a Club or organization! C & O Day... Check it out!

■ BOWLING LEAGUE

Date resuming and prospective members:

The ERAU Bowling League welcomes you to sign up for the Fall Semester league. Our meeting times are Sunday evenings at 9 p.m. at La Paloma Lanes on Ridgewood Avenue in South Daytona.

We only have enough room for approximately 20 teams, so please sign up as soon as possible. The deadline is September 20. There is a sign-up sheet in the Recreation Office.

■ STUDENT EMPLOYMENT

Because of the new Federal Immigration & Naturalization Services regulation, all student employees must provide proof of identity and employment eligibility in order to work. Student employees who work on campus must stop by the Student Employment Office in order to complete an I-9 form. Please bring your driver's license or student I.D., and your original social security card or birth certificate. Foreign students must bring their permanent resident card or alien registration card to be obtained in the Social Security Office located at 115 N. Ridgewood Ave. Forms verifying non-residence for the duplicate may be used until the new card is received. I-9, passports may also be used. Off campus employers will be completing I-9 forms for their businesses. Please contact the Student Employment Office with any questions.

■ ATTENTION SPRING GRADUATES

We suggest that you fill out your graduation application as soon as possible in order to get a "PRELIMINARY GRADUATION EVALUATION". This will help make your completion a smooth one.

■ Orthokeratology Seminar

Dr. Leonard E. Indiana will speak in the U.C. on Oct. 8 at 8:30 on Vision Improvement through Orthokeratology.

■ RAPE CRISIS VOLUNTEERS

The Rape Crisis Center of Volusia County is offering a training program for volunteers who are interested in helping victims of sexual assault. The four week training will be held on Saturday evenings from 7 p.m. to 10 p.m., beginning September 18. Volunteers are needed to provide telephone counselling on the RAPE HOTLINE and also to work directly with victims at the Rape Crisis Center. There is a special need for persons to help staff the Center on weekends, both during the day and at night according to Kathy Wilkes, Executive Director of the Center. Previous experience or specialized skills are not necessary, but a warm, caring personality is vital.

The training will include information about the crime of rape and the effects it has on the victim, listening and counselling skills, the medical examination, collection of evidence and judicial procedures in a sexual assault case.

Interested persons may register for training program by contacting The Rape Crisis Center at 254-4106.

■ DECEMBER GRADUATES

FRIDAY, October 9, 1987 is the deadline for December 1987 graduation applications. Please be advised that the DIPLOMA will be enclosed if this application is filled and processed in the Registration and Records Office. Incomplete graduate forms are required to make formal application for degree completion and e-mailed Alumni form.

The Student Activities Office is accepting names of December Graduates who are interested in being on the Senior Class Council. The Council consists of approximately 13-25 volunteers from the Graduating Class who raise funds for the Senior Class Project and Party. They decide on a class project and secure a location for the class party. They also secure discount hotel/motels for guests of the Graduates to stay at while here for Commencement.

For those interested in running for Senior Class President or Vice President, please contact the Student Activities Office at ext. 6039, to schedule an appointment to meet with Laurie Ranieri, Senior Class Advisor, before September 25, 1987.

■ INTERNATIONAL DAY

This year's "International Day" will be held on Saturday, Oct. 24 at 1 p.m. in the U.C. To make this year's event as successful as last year's, and even better, we need your help.

We are looking for international students who would be willing to become part of our entertainment for the day. If you, or any of your friends from other schools or the community, can sing, dance, play a musical instrument or perform in any way, we would be very happy to hear from you.

Please call Doris in the Dean of Students Office, ext. 6356 or Mary in the Chancellor's Office, ext. 6520 and join us in the fun and excitement.

It is a special day for all our international students. Show off your talent and your heritage. Get involved and have some fun!!

■ GRADUATING SENIORS CEREMONY

In accordance with University policy as stated in the Graduation Requirements as section of the Embry-Riddle Aeronautical University Catalog, effective immediately all students will be required to successfully completed all of the required courses and financial obligations before they will be allowed to participate in graduation ceremonies. This includes all degree required flight courses. A student's last flight course must be completed prior to the date and time that senior grades are due in the Office of Registration and Records in order for that student to participate in the graduation ceremony. Students completing any required courses (flight or academic) after that time will be eligible to participate in the next graduation ceremony. Those students completing after the specified deadline will follow the schedule below for ceremony participation:

COMPLETION TERM	CEREMONY TERM
Spring Summer Fall	Summer Fall Spring

COMPLETION TERM	CEREMONY TERM
Spring Summer Fall	Summer Fall Spring

On Friday, Sep. 18, 1987, from 10 a.m.-4 p.m. in the U.C. Club booths will be set up along the perimeter of the U.C. cafeteria throughout the day. Give away prizes will be awarded to some students. Free popcorn will be available!

There's more to ERAU than just classrooms! Get involved! Join a Club or organization! C & O Day... Check it out!

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Daytona's original SUPER-CLUBS

SEPTEMBER PARTY SCHEDULE

MONDAY

FOOTBALL on 9 giant screens \$1 margaritas \$1 Coronas \$1 Cuervo shots

TUESDAY

STUDENT'S NIGHT DBCC, Embry Riddle show school ID and drink \$1 drinks and \$1 imports all night

WEDNESDAY

LADIES' NIGHT Penrod's Beach Club and The Plantation Club - Ladies drink free and pay No Cover 9-12 \$1 imports and 2 for 1 drinks all night

NEW WAVE NIGHT Penrod's Beach Club - Daytona's Original Wave Night \$1 imports and 2 for 1 drinks all night

THURSDAY

STUDENT'S NIGHT DBCC, Embry Riddle show school ID and drink \$1 drinks and \$1 imports all night

21 and over pay no cover or you can pay \$10 cover and drink free all night long

FRIDAY AND SATURDAY

2 for 1 clubs free drinks from 9-11 2 for 1 drinks 11-close Imported beer specials

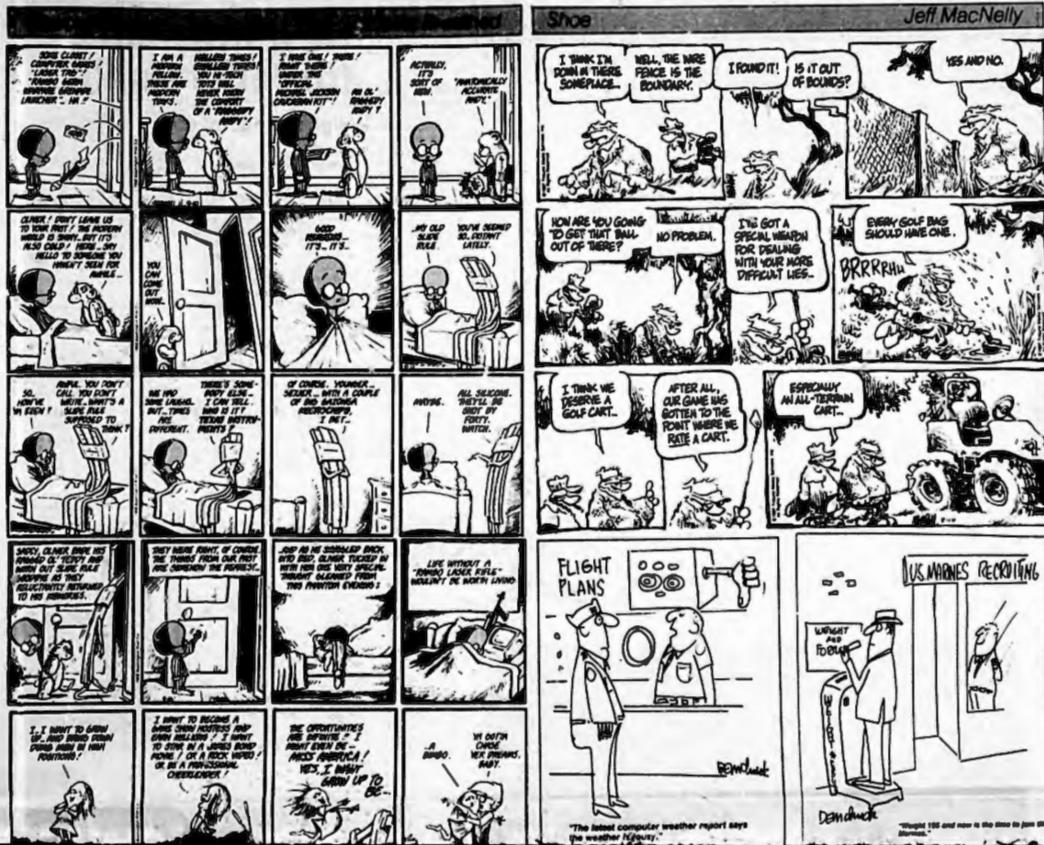
SUNDAY

LADIE'S NIGHT ladies pay no cover and drink free 9-12 \$1 imports and 2 for 1 drinks

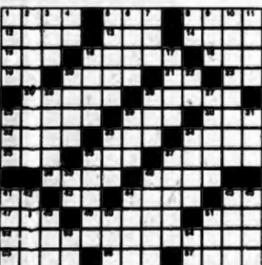
18 and over with proper ID

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Students over 21 Free VIP card. Students under 21 ask for your VIP card at the door



The Puzzle

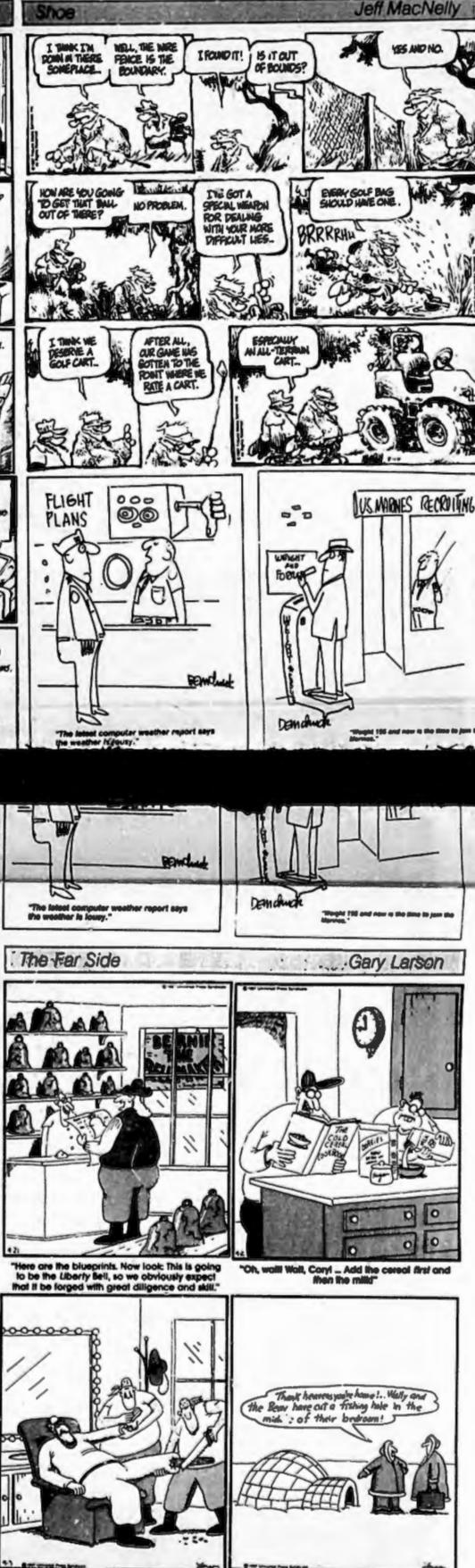


COLUMN PRESS SERVICE

See SOLUTION, page 11

- ACROSS**
- 1 Quarrel
 - 5 The grid
 - 8 Automobile
 - 12 Dry
 - 13 Defense
 - 15 Measure
 - 16 Chef's partner
 - 18 Animal code
 - 19 Ready till
 - 20 Part of measure
 - 20 Part of window
 - 21 Fireman
 - 25 Myself
 - 26 Animal
 - 28 Standing abruptly
 - 29 Shiny flavor
 - 30 Metal lens
 - 31 Dismayed
 - 32 Art
 - 33 Small bump
 - 34 Part of stove
 - 35 Poem in hexameter
 - 36 Large quantity:
 - 37 Fergie
 - 38 Eggplant
 - 40 Cruckards
 - 41 Hebrew month
 - 42 Date of birth
 - 44 Ocean liner
 - 45 Compass point
 - 47 Ornithology
 - 48 Painting study
 - 50 Be in debt
 - 52 Beyond normal
 - 53 Weight of India
 - 55 Weight of India
 - 57 Devotion

- DOWN**
- 1 Intellectual
 - 2 Answered
 - 3 Goat
 - 4 Football score:
 - 5 Small fish
 - 6 Meeting room
 - 7 Blot
 - 8 Dog
 - 9 Pantomime
 - 10 Insisted
 - 11 Unintelligent
 - 12 Dock
 - 17 Basoning
 - 18 Sarcasm
 - 19 Computer terminal
 - 22 Green letter
 - 25 Vapor
 - 26 European
 - 27 European song
 - 28 Brush
 - 29 Flag
 - 30 Flap
 - 31 Abstract being
 - 32 Sarcasm
 - 34 Solemn vow
 - 35 Chilly
 - 36 Even
 - 39 Negative prefix
 - 40 Brainchild
 - 41 Geographical name of Europe
 - 42 Revealed
 - 43 Small amount
 - 45 Octopus
 - 46 Lampreys
 - 47 Organized
 - 49 Federal agency:
 - 51 After
 - 52 Middle-Saison
 - 53 Symbolic
 - 54 Pronoun



TCAS system soon to be mandatory

By Mary Smith
Avion staff reporter

The House Sub-committee on Aviation met Wednesday, September 9 for debate of a recent FAA *Notice of proposed rule making*. A bill has been introduced in the house requiring TCAS, Traffic and Collision Avoidance System equipment to be installed on all air carrier and commuter aircraft. TCAS is the new computerized system which would alert the pilot of an aircraft of the threat, as well as the required action to successfully avoid a mid-air collision.

The bill, as it stands, will require all U.S. air carriers to install and use TCAS within three years of ratification, and all turbine powered commuter aircraft with more than 30 seats must have TCAS within four years. On smaller carriers with 18 seats or more would have five years to comply with the mandatory installation.

According to FAA Administrator Allen McAnor, this time frame would not overburden the airlines economically, as the system costs

expected to cost between \$100,000 to \$200,000 per aircraft.

Public attention has been focused on mid-air collisions and near misses in recent months. McAnor noted that, although increased reporting has caused some rise in the number of these incidents, a serious deficiency in the system results from the lack of new airport facilities. All ATC and Control facilities to keep pace with the increase in operations, which resulted from deregulation. He also noted that many of the problems in the original collision avoidance equipment have been solved in the TCAS II system.

The TCAS II system provides pilots with threat alert information. TCAS 2 provides a computer solution in the form of patch command to a pilot, in addition to information provided in a TCAS I system. The ATC system will require that each TCAS 2 system installed be compatible with TCAS 3, which would provide additional azimuth commands, and is still under development.

McAnor pointed out that much had been learned from experiments

in which TCAS 2 was installed and operated on a Piedmont 727. He proposed an accelerated schedule of testing and development of TCAS 3. One of the problems he addressed was that because TCAS relies solely on aircraft equipment, it will use an aircraft's mode C transponder to determine the threat. Therefore, new legislation will be needed to increase the requirement for mode C transponders in general aviation.

Representative Dan Glickman (Dem., Iowa) suggested using the huge aviation trust fund to subsidize the airports' costs of installing mode C equipment, thereby reducing noncompliance.

National Transportation Safety Board Chairman James Burnett made a report and recommendations to the committee, which cited the fact that there has resulted in recent increases in the incidence of near collision. He stated that the situation could be alleviated if statistics were kept to help identify and prevent overflying and prevent coordination with ATC facilities.

Burnett suggested that upgrading the current computers used in the system would help guide routing and holding assignments and noted that the current system gives no traffic information to the pilot and VFR and tracked traffic.

According to Burnett, the only long term solution to the problem will be more airports, expansion of VFR systems, and better enforcement of existing airspace rules. He stated that it will be necessary to deter unintentional airspace violators from repeating their errors, but that more was needed for intentional violations.

Under a joint program involving the FAA, United and Northwest Airlines, more extensive testing of TCAS will continue in 1987-88. A United spokesman stated that the comment period on the *Notice of proposed rule making* has ended. In this instance, no shaft information gained in the research would not go unheeded. The current comment period would expire in December of 1987.

New tire made for MD-11 ship

Highest load of commercial jets

Goodyear Press Release

AIRKON, Ohio — A new tire with many miles and a gentle touch is being created by Goodyear's Aviation Products Division for the main wheels of the new McDonnell Douglas MD-11 commercial airliner.

The tire for the new wide-bodied jet will have a static load of more than 68,000 lbs at speeds up to 235 miles per hour.

"The new tire's load carrying capacity is the highest of any commercial aircraft tire on the market today," said Joseph M. Glago, Vice President and General Manager of the Goodyear division's global operations.

The MD-11 has four-wheel main landing gear assemblies and one two-wheel centerline landing gear, which all use the same tires. The 10 tires are mounted in pairs on five axles. McDonnell Douglas has

specified a design requirement, where if one tire fails, the paired tire can support the original two-tire load.

The latest in bias aircraft tire design technology was employed in creating this tire," Glago said.

Among the features of the MD-11 tire is a high flotation characteristic. "It will operate at relatively low inflation pressures," Glago explained. "Lower pressures keep the tire softer, so it protects the pavement on the world's airport runways and taxiways."

Production of the new aircraft's tires will be at Goodyear's Danville, West Virginia, tire plant. They will be made in size H54 x 21.0-24 in a 34 rating.

The more fuel-efficient MD-11, with capacity for up to 405 passengers in one mode, is expected to be in use by airlines around the world during the 1990s.

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As your 1986 U.S. National Aerobatic Champion, I'm joined by my teammates in asking you to consider again your tax-deductible contribution to our team.

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Baker critical of policies

AOPA Press Release

FREDERICK, Md. — The president of the nation's largest civil aviation organization yesterday called for the resignation or removal of Transportation Secretary Elizabeth Hanford Dole. Speaking at a Los Angeles press conference, John L. Baker, president of the 260,000-member Aircraft Owners and Pilots Association, said that since Secretary Dole's appointment in 1982, the national aviation system has been "grossly mismanaged," and that Dole should either relinquish or be removed from her post.

Baker cited a five-year trail of mismanagement that has failed to improve the safety or efficiency of the nation's air traffic control system; has driven out two competent FAA administrators and replaced Donald Engen with an individual lacking civil aviation experience; has created a public crisis of confidence in air travel; and, has invited

congressional legislation to remove the FAA from her control.

Baker also chided the Secretary for "acquiescence in the mismanagement of the Aviation Trust Fund," which currently carries an unappropriated surplus of near \$6 billion.

Baker also cited Secretary Dole's mismanagement of the National Aerospace System Plan (NASP). "Major portions of the plan have been delayed by as much as seven years, and the projections of already overburdened air traffic controllers. He charged that such proposals will divert limited air traffic resources from terminal areas where they are needed most."

Baker was critical of Secretary Dole's failure to establish national priorities so as to address the causes of accidents that have killed hundreds in recent years. "More than 600 people have lost their lives in air carrier accidents caused by severe weather conditions in the air traffic control system since 1982," he said.

Baker also criticized Secretary Dole's persistent resistance to providing the resources necessary to modernize and staff an air traffic

control system that remains undermanned and continues to utilize technology developed in the 1960's.

Baker explained that airspace proposals originating in the Secretary's office did not increase air safety but in many degraded the safety of the system. "The risks of already overburdened air traffic controllers. He charged that such proposals will divert limited air traffic resources from terminal areas where they are needed most."

Baker was critical of Secretary Dole's failure to establish national priorities so as to address the causes of accidents that have killed hundreds in recent years. "More than 600 people have lost their lives in air carrier accidents caused by severe weather conditions in the air traffic control system since 1982," he said. "And, approximately 40 percent of all general aviation accidents continue to occur because of inadequate dissemination of severe weather information."

ZERO

(Continued from page 1)
 board, gross came up to 1873 lbs., a full 427 lbs. below max takeoff weight of 2300 lbs. Climbing performance at 1000' was impressive, nearly 1000 FPM. The C-120 was quickly and acquired a healthy amount of right rudder to counteract the P-factor.

After spotting some shower activity on the 290 departure, I thought I'd check those barnacles first, at Ormond. I deliberately kept the approach high. Over the fence at 500 feet, throttle to idle and point the nose where you want to go, straight down. What might have caused a go around in other A/C was easily managed with the right degree of flap. The pitch forces are somewhat stiffer, as the flow over the elevator is somewhat obstructed, but the 172 isn't a finger tip airplane anyway.

In spite of the 15 to 20 degrees of nose-over, the aircraft never budged over 65. When the time came to find a spot to play in and make the most of nearly 3300 lbs. of maximum stall performance, I was hard pressed to find a hole just north of Ormond, and climbed. Two clearing turns later I decided to find the pitch effects of those flaps in a power-off stall.

The airspeed was on the stop and full back pressure was required to get the break. It was a non-event. I anticipated a requirement for considerable pressure as I brought in full flaps. The aircraft responded to little difference in the performance of the aircraft, a far cry from C-150 training. To play the devil's advocate, I left full flaps in during the recovery and was surprised to find a healthy

400 FPM climb near the bottom of the green arc. The book procedure is clear however, and flaps should be retracted to 10 degrees until a positive rate is established.

Next came time to descend without busting cloud clearance minimums. Twenty-two degrees nose down pitch was required with power at idle to come anywhere near the 80 knot maximum flap speed. One of the planes is not certified for 10 degrees of flaps above 80 knots. It seems to be more of a certification issue than a structural difference, but either way it's not legal.

During a stabilized approach to Daytona I was able to put it right on the numbers. We hope this will help ERAU's flight team this year.



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