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AERONAUTICA

Fly by Wired:

The bravest thing

By Victor Miller
Aeronautics Writer

A long time ago, back before ARSAs, when a recreational pilot was any doctor with a Mooney, Jepp charts were laid out by hand and there were still four Beatles, I was getting my instrument rating.

I had an instructor whose name was Tom. Raised as a stepple jack by his nomadic father, Tom was crowing ex-convicts on smokestacks and water towers by the age of 14. Learning to fight in Navy boiler-rooms in the early years of Vietnam, Tom wasn't afraid of anything. He even saw us through a few 'late night' battles of our own. And Tom could fly. It seemed to me that Tom had flown forever.

One of his earliest childhood memories was of hanging nose down in his father's Curtiss 'Jenny' from some telephone wires at the end of a runway, after the engine quit, again, on takeoff. I thought Tom could fly through anything. I watched him manhandle a C-206, with a tail full out of rig, back onto the ground and heard tails of landing gear failures, and being suckered by ATC into heavy ice and turbulence. He was a smooth stick with a level head, but of all his skills, experience and knowledge, what struck me most was his judgment, and his ability to exercise that judgment before trouble developed.

Tom knew how to say no. He used to talk to me of setting personal limits and minimums on my flying that paralleled my abilities. Just because it was legal, didn't mean it was safe, or smart. He told me that he got his instrument ticket with a group of guys who all took their training and check rides together. The plan was that the day after they got their tickets they were to fly north for a weekend. That day came and the weather was marginal IFR, certainly good enough for legal approaches but below what Tom had set for himself as a minimum. They all flew airplanes. Tom drove. Of course everyone got there safely, but that had nothing to do with the criteria by which Tom made his decision. This ability to limit yourself to your experience level becomes very important as you start your career flying boxes or hauling businessmen for some fearless 135 operator, or heaven forbid, a Part 91 contractor.

You'd better be ready to wear your first flight, the first day you get hired or you'll end up compromising yourself (most of us have, and most are lucky).

Tom always looked at all the factors affecting a flight and sometimes, either for his own sake or as an example for me, I'll never know, would cancel a flight I figured he could make. After watching Tom exercise such judgment, it became easier for me to take pride in being more safe than brave. When this really comes home is after being in the Goo, at night, getting your butt kicked, with ice build-ups the size of small pineapples on anything that sticks out. After using those superior abilities to get yourself out of those situations that require it, using your superior judgment to avoid them becomes that much easier.

I was coming back from a cross country with a student some time back. One of those 'Malibu-eating-thunder fronts' was moving through about half as fast as we could push our little Cherokee.

After listening to ATC suggest some weather vectors, and one of my buddies on the company frequency report to me how he made it, I still decided to land and wait out the last 90 miles of our journey. That meant a night in Jacksonville, Florida and a little ribbing when I got back. I was new to the area and to the local weather patterns. I had a student on board. With different equipment, and more familiarity with the area the decision may have been different. That student told me he learned a lot about flying from me that night. And I can remember, during that flight, thinking about what kind of example I was setting for my student. Thinking back now, I realize that Tom didn't really walk on water, but he made some good decisions. And those early impressions he made upon me still linger. I can only hope that my flying will make the same good impressions on my students that Tom made on me.



This C-141's wing is being complimented by a center wing box kit. This will increase the life of the Starlifter by another 12,000 hours.

C-141 receives new lease on life

➔ **Extended life: One hundred twenty-one Starlifter C-141 transports will be retrofitted to extend their life.**

By David Fekke
Aeronautics Editor

The C-141B Starlifter has long been a workhorse of the Air Force's Military Airlift Command (MAC). The expected life of the aircraft was originally set at 30,000 hours, but with new Center wing box kits, this has been extended to 45,000 hours.

The C-141 has been in service since the mid 60s, and the average number of hours that the fleet has is up to 33,000. This is due to extensive modifications.

The center wing box kits are being built by Lockheed Aeronautical Systems Company

(LASC), along with tooling for the conversion. LASC built installation tooling as well as a prototype center wing on a C-141B. It was all part of a contract with the Air Force worth \$140 million. They had originally intended on only 94 of the conversions for \$118 million.

According to Bob Wall, the C-141 program director for LASC, the Air Force exercised an option for another 27 of the center wing box kits, raising the number to 121. "This adds \$22 million to the contract and extends work on the program. LASC will complete deliveries of all 121 kits in November, 1993," said Mr. Wall.

The box kits were originally delivered to the Air Force at Warner-Robins Air Logistics Center, Robins Air Force Base in Georgia.

With major Pentagon budget cuts, conversions such as these are becoming more common.

With the number of hours increased to 45,000 hours per Starlifter, the C-141s will probably remain a staple of the MAC for another 10 years.

MAC will soon be introducing a new transport to its ranks, the C-17 by McDonnell Douglas.

The Starlifter played a major role in several conflicts, including Vietnam, Grenada, Panama, plus comprehensive operations in Operations Desert Storm and Desert Shield.

The four-engine jet can be used for a wide range of uses including moving cargo, passengers, dropping paratroopers, heavy equipment, air-drops as well as aeromedical evacuation.

Italy to receive Harrier II Plus

McDonnell Douglas Press Release

ST. LOUIS, Feb. 18, 1992 — The Italian government has taken the lead in finalizing a trilateral memorandum of understanding (MOU) on production of a radar-equipped AV-8B, known as Harrier II Plus. Pending signatures from the other collaborative partners — the United States and Spain — the agreement clears the way for new orders of the Harrier II Plus to be built in cooperation by industrial partners in the United States, the United Kingdom, Italy and Spain. The Italian government signed the MOU Feb. 7.

The production MOU is a government-to-government agreement which sets forth program management, contract procedures and work share directives regarding Harrier II Plus production and support systems. The agreement is a follow-on to a 1990 MOU among the three nations which authorized radar integration and development for the Harrier II Plus.

"This signature is an important first step in sealing the international Harrier II Plus program," said Patrick J. Finneran, AV-8B general manager at McDonnell Douglas. "Through our partnership with British Aerospace, the Harrier II program has set the standard for international partnerships. We're very excited and proud to be expanding that partnership to

include two of our NATO allies, Italy and Spain. The program will tremendously benefit all four countries involved."

The Harrier II Plus program will maintain current industrial partners McDonnell Douglas, British Aerospace, Rolls-Royce and Smith Industries, while adding Hughes Aircraft Co. for the APG-65 radar, Alenia in Italy and Construcciones Aeronauticas, S.A. (CASA) in Spain. Italy and Spain will each receive a 15 percent stake in total program value, including the aircraft, support systems, training and maintenance.

To date, 24 Harrier II Plus aircraft are under contract with McDonnell Douglas for delivery during 1993-94. The Spanish Navy, which currently flies EAV-8B Harrier II aircraft, has expressed interest in eight Harrier II Plus and one TAV-8B trainer aircraft. The Italian Navy has indicated an initial need for at least 16, with an option for eight more. In addition, the Marine Corps and the Spanish Navy are interested in a remanufacturing program to bring current Harrier II fleets up to Harrier II Plus standards, with radar and night attack systems.

Italy has already received two TAV-8B Harrier II trainer aircraft to prepare its naval aviators to fly the Harrier II Plus. The two aircraft landed aboard the Italian aircraft carrier Giuseppe Garibaldi for the first time on Aug. 23, 1991, during a

ceremony at Norfolk Naval Station, Va. The TAV-8Bs entered the chronicles of Italian naval aviation history as the first fixed-wing aircraft to be flown by the Italian Navy since 1923. The landing also marked a historic moment for the Harrier program, as Italy became the fourth nation to fly the Harrier II. The Italian Navy began shipboard operations of the TAV-8B during the transatlantic return to Italy. The Garibaldi, equipped with a six-degree ski jump, had sailed to the United States to undergo qualification testing for the aircraft.

In addition, 11 Italian Navy pilots have completed training programs in the AV-8B with the U.S. Marine Corps. During the four and one-half-month program, the Italian pilots initially trained with VMAT203 at Marine Corps Air Station (MCAS) Cherry Point, N.C. The pilots then were assigned to operational squadrons at MCAS Cherry Point or MCAS Yuma, Ariz. Currently, five of the Italian pilots are flying the Italian TAV-8Bs in Italy, and six are stationed in the United States.

Italy's Gruppo Aerei Imbarcati squadron, based at Naval Air Station Grottaglie near Taranto Naval Base in southern Italy, will fly the Harrier II Plus.

The Harrier II Plus full-scale development aircraft will be delivered to the U.S. Marine Corps this fall. Production deliveries will begin in the spring of 1993.



The Harrier will be upgraded to the Harrier II Plus for nations such as Spain.

New theme for Oshkosh

By Bryon Gross
Aeronautics Writer

The annual Experimental Aircraft Association (EAA) Fly-In convention at Oshkosh recently announced the theme for this year's event. Tom Poberezny, convention chairman, believes that Oshkosh, "... serves as a gateway to aviation for many people ... (who's) interests focus on designing, building, owning, flying or enjoying airplanes. ..."

The 40th annual Fly-In will officially begin on Friday, July 31 and run through Thursday, August 6. It will be held at Witman Regional Airport in Oshkosh, Wisconsin.

Several "showcase events" have already been planned. The "Doolittle Raid" on Japan will celebrate its 50th anniversary. Several surviving members of the raid will attend along with several North American B-25 "Mitchell" bombers that were the same type used during the raid.

Another event will bring aircraft from the Commonwealth of Independent States (formerly the Soviet Union). An Antov AN-225

"Mryia," the world's largest airplane, will bring along several homebuilt aircraft from that country. Also, a Sukhoi SU-27 "Flanker" might make an appearance as well.

A major feature of the Fly-In is the "hands on" educational opportunities available. Yet, exhibitions of aircraft, participation from top FAA officials, a comprehensive NASA pavilion and the "Fly Market" are other activities that enhance the overall convention experience.

Oshkosh has been described as the "focal point for new and innovative ideas." Airplanes of virtually every size, shape, and description can be seen at one place, at the same time.

"What makes EAA Oshkosh special is the participation of so many different people who bring such a wide variety of interests and talents to our event," says Poberezny.

Last year over 815,000 attended the seven day event. Thirteen thousand airplanes were also present. From veteran pilots to student pilots to an enthusiastic public, Oshkosh offers something for every interest.

MD-90s pave new era for McDonnell Douglas

McDonnell Douglas Press Release

SALT LAKE CITY, Utah, Feb. 19, 1992 — The first fuselage section for a new model twin jet airliner was shipped out of the McDonnell Douglas plant here today, headed for the final assembly line in Long Beach, Calif.

Utah Governor Norman Bangert was on hand at an informal send-off celebration for the 50-foot long center segment of the first McDonnell Douglas MD-90.

He was joined by Al Egbert, general manager of the Salt Lake City plant, with Preston Henne, MD-90 program manager at the Douglas Aircraft Co. in Long Beach, and a throng of local McDonnell Douglas workers who built the aircraft section.

The MD-90 is an advanced mid-size, medium-range airliner designed to meet the needs of operators and airport communities for aircraft that are quieter, more fuel efficient and more environmentally acceptable than previous jetliners.

As a new addition to the McDonnell Douglas twin jet family, the MD-90s will be produced in conjunction with the company's current series of MD-80 transports, which also use fuselages and other components from Salt Lake City.

The first MD-90 subassembly is 50 feet long, almost 11 feet wide and nearly 13 feet high. It was loaded on a truck at the McDonnell Douglas factory adjacent to the Salt Lake City airport and will be transferred to a special railroad car for its

journey to California.

Egbert said the forward fuselage for the number one MD-90 is nearly complete and will be shipped next week, with the aft section following in early March.

Henne said construction of the first MD-90 is moving on schedule. The wings arrived at Long Beach last month from the McDonnell Douglas plant in Canada. Wing and fuselage joining, the first major milestone in final assembly of the new aircraft, is scheduled for late March.

McDonnell Douglas launched the MD-90 development program in November 1989 and certification by the Federal Aviation Administration is expected in late 1994. First in the MD-90 series, the MD-90-30, will be capable of carrying 153 passengers in a mixed class seating, over a range of 2,600 statute miles. As airline needs evolve McDonnell Douglas will offer other variants including the MD-90-50 and the MD-90-55.

Length of the MD-90s is 152.7 feet, five feet more than the MD-80. Wing span is 107.8 feet, the same as the MD-80. The cockpit will be similar to that of the MD-88, the most advanced MD-80 type.

MD-90s will be powered by two International Aero Engines V2500 turbofan engines, rated at 25,000 pounds of thrust for the MD-90-30 and at 28,000 pounds thrust for the MD-90-50. The engines will make the MD-90s the quietest aircraft in their class, and offer major reductions in emission of air pollutants such as oxides of nitrogen.

Aeronautica needs writers!!!

If you are interested in writing for Aeronautica, please come and visit us at our 7:30 p.m. meeting on Wednesdays. Or come up to our office and visit.

Sneak Preview: Windows 3.1 to hit stores soon with host of new features

By Joe Cambron
Data Technology Editor

With the countdown until the release of OS/2 2.0 at less than 30 days, Microsoft is hoping to steal IBM's thunder with the latest improvement to its best-selling Windows operating system. The Avion has obtained an advanced copy of this program, and here is the inside scoop on Windows 3.1.

Speed

The biggest problem that Microsoft's programmers needed to address with the release of a new version of Windows was speed. Apparently, they were successful. As a result of more efficient coding of the program, the program now runs faster on an 80386-based computer at 33 MHz than the previous version ran on an 80486 at 50 MHz. The overall improvement is close to 50 percent in screen redraw time. The change was startling even using some of the more taxing Super VGA video modes.

It is unclear, however, whether the increased speed extends beyond the video redraw. Manipulation of graphic images, a calculation-intensive application, seems to be about 20 percent better. Similarly, spread-

sheet recalculation is only somewhat quicker. Programs running in DOS windows ran about twice as fast as before, however.

Nevertheless, screen speed has always been Windows' Achilles' Heel, and this dramatic improvement is extremely welcome.

Do You Need It? (10-Definitely, 1-No) 9.5

Fonts

Microsoft has finally unleashed its long awaited True-Type font technology on users. Microsoft essentially is trying late in the game to gain a foothold in very profitable typeface market after it has already become the nearly exclusive territory of Adobe and its de facto standard-Postscript. Since Adobe Type Manager became available for Windows 3.0 a couple of years ago it has become standard issue for desktop publishing, but its \$100 price tag has scared away everyday users. Now, Microsoft has decided to provide a set of four scalable typefaces free of charge to buyers of Windows 3.0. Luckily, they can coexist with Adobe fonts, but all are duplicates of common Adobe fonts.

Do You Need It? 10 If you do not have Adobe Type Manager, 0 If you do.

Screen Saver

On another battlefield, a cottage industry has grown up around the lack of a built-in Windows screen saver.

Screen savers, for those who do not know it, blank the screen to prevent a monitor's electron gun from burning a permanent image in the screen's inner phosphorous coating.

After Dark is currently one of the most popular of these programs; but like many Windows programs-it is huge. Weighing in at over two full megabytes, the new screen saver

number to over 600K, but it would not work properly with the program, causing it to crash before starting. QEMM was not even mentioned in the program's release notes. (Experimentation revealed that the line x=b100-bfff added to the QEMM line in the config.sys fixed the problem.)

Do You Need It? 0

Disk Caching

This version of Windows includes a completely new and much faster version of Smartdrive. This new

... screen speed has always been Windows' Achilles' Heel, and this dramatic improvement is extremely welcome ...

Do You Need It? 8, 10 If you do not currently have a screen saver.

Memory Management

The "release candidate" version of Windows 3.1 tested in this review did a relatively poor job managing memory. Using MS-DOS 5.0, the program would not allow over 585K of conventional RAM with a mouse installed. Normally Quarterdeck's QEMM 6 can be used to push that

is that whatever is left in the write cache when the computer is turned off is destroyed. A read cache is simply a duplicate of what is already on the hard drive, but a write cache contains the only copy of recently changed information. For this reason, most people choose to disable write caching whenever possible.

The problem is that the version of Smartdrive included does not yet offer the option to discontinue write

caching. Hopefully this problem will have been fixed by the time the program hits shelves.

Do You Need It? 3

Sound

Remember the days before wallpaper (an image imposed on the back of the screen beneath your work that may be any digitized picture)? Windows developers have given users a new toy to play with that has existed in a limited form on high end Macintoshes for years. If you have a Soundblaster/Adlib or a Roland sound card, or any other Digital Audio Chip equipped sound card, you may now use custom sound effects in Windows.

These may be heard at start-up, when an error occurs, when you quit, when you are posed a question, or any of several other times. Up to seven sounds may be used to signal different happenings at any time. These may even be changed using the Control Panel.

Best of all, if your sound card has sampling capability (like the Soundblaster) you can record your own sounds and use them. This innovation reduces the tedium of computer operation while making your computer more user friendly.

Do You Need It? 9

Errors

"Unrecoverable Application Error, close all windows, exit, and reboot." This message should be a thing of the past with Windows' new fault tolerance. So far, so good, is all we can report. Using software drivers from Windows 3.0 has not even caused too many problems, with only some exceptions. Adobe Type Align crashed repeatedly and when images created with it were printed they were speckled and hollow.

Printer drivers from previous versions of Windows must be updated to work properly. Luckily, a generous number of new drivers is included with Windows 3.1. Old video drivers seemed to work perfectly.

Once everything is configured correctly, problems are few in coming. If one application should crash, Microsoft promises that others will continue to operate unaffected.

Do You Need It? 10

Conclusion

All in all, this maintenance release of Windows is a major improvement that will make a dent in the marketing efforts of OS/2 2.0.

Buying a PC clone? Don't be bewildered by an ocean of performance options

By Joe Cambron
Data Technology Editor

If you are buying a new or used PC the number of technical terms involved in buying a computer can be baffling. Megahertz, caches, static memory, nanoseconds, SIMM modules, milliseconds and density level are just a few of the terms you will need to know in order to purchase today's PC intelligently.

The CPU

The CPU is the computer's brains, its Central Processing Unit. Currently, a crowd of no-name companies manufacture the older slower chips that were once the Cadillacs of computer technology. These chips are the 8086, the 8088 and 80286.

These days, all three of these chips are only truly usable if you will limit your computer use to word processing. Even most games will challenge the 80286 and the 8088/8086 are almost totally useless.

Intel builds the vast majority of top-of-the-line CPUs for IBM computers, although Advanced Micro Devices line of AMD386 chips have recently come available.

386 and 486 CPUs

80386SX-16 - The -16 indicates that it operates at 16 megahertz, an indication of relative speed. Megahertz is only relevant, however, when comparing chips in the same family, like the 80386SX family or the 80486DX family. The SX, by the way, indicates the width of the data path between the memory chips and the CPU. The wider the

data path, the faster most actions can be performed by the CPU. The 80386DX data path is twice as wide as the SX data path. This particular chip is manufactured by Intel, the developer of the chip and the company with the best track record in CPU production.

AM386SX-20/25 These two chips operate more quickly (20 megahertz or 25 megahertz) than the 80386SX-16, but are made by AMD. AMD is less well known, but has so far received good reviews since it debuted its 80386 clones last year. The relatively small price increase for the AM386SX-25 over the model 16 makes it the best deal in the 386SX family.

80386DX-25/33 - These two chips feature the DX design with the improved memory data path, and the corresponding increase in speed

(about 30 percent). Both are made by Intel. The 80386DX-33 is usually sold with a memory cache (to be discussed later) which provides an additional performance boost. Many people think an 80386DX-33 with a cache is faster than an 80486DX-25.

AM386DX-40 - This chip by AMD is the fastest 80386 and should be bought with a cache to maximize its performance. Generally the price increase from the other 80386DXs make it the best deal.

80486SX-25 This crippled chip has the internal cache of the 80486DX (previously mentioned) caches are external to the CPU and are therefore slower) but not the math coprocessor. The result of this and its relatively slow clock speed make it a poor deal despite Intel's

heavy marketing.

80486DX-25/33/50 - These Intel chips are the most powerful currently available and will remain so until Intel delivers the 80586 late this year. The model 25 is usually close enough in price to the model 33 that buyers should not even consider it. The model 50 is the current king of the mountain and thus demands a price premium over all other chips.

Memory and Caches

Memory chips have undergone as much of an evolution as CPUs over the years. Older DIP type DRAMs (which came in nine pieces that were extremely difficult to install and remove) have mostly been supplanted by SIMM and SIPP modules which simply snap into an empty slot inside the computer.

When purchasing a computer, buyers should question whether the computer is expandable with SIMM modules, whether the memory chips are 80 nanoseconds or faster (lower numbers are faster), and the maximum number of SIMM modules that the "motherboard" may hold (eight or more is good).

A RAM cache contains a duplicate of the information included in regular RAM, except that the memory that holds it returns data at a rate of 25 nanoseconds instead of 80.

One megabyte is a minimum amount of RAM these days. Two megabytes is a minimum for using Windows, but four megabytes is average.

Remember, you cannot ask too many questions when buying a computer. Next time we will attack monitors and hard drives.

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Titan III rocket arrives at Cape Canaveral AFS

By Gregory Rezendes
Space Technology Editor

The Titan III rocket which will launch the Mars Observer spacecraft on an interplanetary trajectory later this year was offloaded from an Air Force C-5A transport plane on Cape Canaveral Air Force Station (CCAFS) last Friday.

The booster, which was built by Martin Marietta in Denver, is targeted for liftoff at the start of the Mars planetary launch window which opens September 16.

Mars Observer is the first mission to that planet since the Viking program in 1976 which was also launched by a Titan III rocket.

It is the initial spacecraft in a series of lower cost "observer class" planetary missions developed by NASA's Jet Propulsion Laboratory.

These probes will explore objects in the inner solar system such as Venus, the moon, Mars and near-Earth asteroids and comets.

The Titan III launch vehicle will be moved to the Vertical Integration Building (VIB) on Cape Canaveral Air Force Station for prelaunch processing.

Early in July, the vehicle will have two solid rocket boosters attached and then be moved to a completely rebuilt Launch Complex 40.

The Titan III rocket also launched the Voyager space probes.



Skylab was a manned space station that orbited the Earth from 1973 to 1979. It reentered the Earth's atmosphere two years before a rescue mission was scheduled. Skylab could be a cost efficient alternative to the space station *Freedom* project which is running over budget.

Skylab alternative to space station *Freedom*

By Ronald Hess
Space Technology Reporter

Space Station *Freedom* has been under a lot of flak since its proposal. Complaints have been coming from those who think that a space station is not necessary or is too costly at this point in time.

The European Space Agency (ESA), who is in partnership with NASA, is also complaining, mainly because of the NASA budget cutbacks that they must endure.

An anonymous proposal was submitted, suggesting that NASA should send the backup Skylab, which is on display in the National Air and Space Museum.

This proposal unearthed a serious debate, centered around NASA's reasons for not continuing the Skylab project.

Some scientists believe that if Skylab had not ended, many experiments projected for the 1990s might have been carried out a decade sooner.

Skylab was a manned space station that orbited the Earth from 1973 to 1979.

The space craft began as a modified upper stage of a Saturn rocket, refitted with two solar panels, an airlock module, a multiple docking

adapter and a solar telescope for observation.

From 1973 to 1974, a trio of three men, crews spent 28, 59 and 84 days in orbit, studying the sun and Earth.

The third and final mission ended on February 8, 1974. The space platform was retired, and the remaining equipment would break up on its return through the atmosphere.

Unfortunately, Skylab's return to Earth was accelerated due to intensified solar radiation. Radiation expanded the upper atmosphere, causing drag to slow the craft's orbit.

The creation of the space shuttle program provided a means to return

Skylab to a new orbit. A few modifications would allow Skylab to be accessed by shuttle systems.

These modifications would be difficult because

Skylab was never intended to be resupplyable.

Skylab's decaying orbit placed more emphasis on a return mission via a shuttle, but the shuttle program encountered difficulties of its own.

The proposed return mission, STS-2, was not launched until November 12, 1981, over two years after the charred remains of Skylab landed across Australia on July 11, 1979.

Skylab's return to Earth was accelerated due to intensified solar radiation.

Kennedy Space Center to end biomedical research

Associated Press

Research to prepare people and plants for long space trips will cease at Kennedy Space Center later this year unless agency administrators grant a reprieve, agency officials said.

Dr. Paul Buchanan, director of biomedical operations and research at Kennedy, said Wednesday plant and muscle deterioration studies at Kennedy will be transferred to other NASA centers or eliminated altogether unless funding is restored in

the upcoming fiscal year.

Buchanan said the projects will be phased out beginning in August and be abolished by Oct. 1, the start of the new fiscal year. He expects that will result in 20 to 30 layoffs; the biomedical operations and research office at Kennedy currently employs 135.

The cutback is part of an overall effort by NASA to streamline operations and save money.

"It (research) is being consolidated and redirected to the lead centers that are doing the research," said

NASA spokesman Michael Braukus.

Life sciences projects at Kennedy involving shuttle operations and employee health will remain intact, and some laboratories will remain open, Buchanan said.

More than \$8 million is being spent on medical operations support and life sciences at Kennedy this fiscal year.

Slightly less than half that amount represents life sciences research and includes such efforts as a two-story plant chamber that uses liquid nutri-

ents instead of dirt, transforms condensation into water and recycles water and oxygen. Researchers contend such a greenhouse would be necessary for trips to Mars.

"If you believe it is vital to understand what countermeasures are needed for space station and the exploration program, then you also have to believe this will put us down anywhere from two to five years depending on how rapidly one of the other centers is willing to pick it up," Buchanan said.

Georgia firm awarded contract for radar guns

Associated Press

A Gwinnett County company has won a contract from NASA to make radar guns designed to help the space shuttle avoid collisions with satellites.

The hand-held "rangefinders" will be aboard the shuttle mission scheduled for July, said Mark Samuels, president of Laser Atlanta, a maker of laser equipment like that used by traffic police.

The equipment allows astronauts to target objects floating in space. Specifically, the laser guns will be used to aid the shuttle in docking operations.

Each gun costs \$20,000 to make, Samuels said.

"What we have done is taken one of our earthbound laser rangefinders and modified it for space travel," Samuels said. "NASA was looking for a way to dock with sensitive communications satellites and other objects in space."

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Criteria

In order to be considered as a candidate for the Jack Hunt Aviator Scholarship, students must meet the following criteria:

1. Be enrolled in a flight degree program.
2. Have attained a minimum cumulative grade point average of 3.5 in flight courses.
3. Be a junior or senior in the program of study.
4. Have demonstrated the strong leadership qualities exemplified by the University's first president.
5. Preference given to students employed during the academic year.

Awards

Awards will be available to students attending either the Prescott or Daytona Beach campuses. Selection will be made by the respective campus Scholarship Committee.

Women in Aviation Week, March 9-14

Starting on March 9, Embry-Riddle will be holding its first Women in Aviation Week. The event is sponsored by the Admissions Department and the Women's Programming Board.

This event is an effort to raise the awareness of the roles women have played in aviation history and their continued contribution to industry. The dates were chosen to specifically coincide with the Women in Aviation Conference held in Las Vegas from March 12 - 15. March is also recognized as Women in History month. Putting these two events together, Admissions and the Women's Programming Board decided to promote women's history and aviation all in one.

The week will be filled with prizes, activities and guest speakers. All of the women's organizations on campus are participating in the week and will also be sponsoring events in the John Paul Riddle Student Center (JPSC). Female faculty and staff have been invited to a "Women's Hour" in the JPSC to mingle with current female students on an informal basis. In addition, Admissions will be sending invitations to local high schools inviting prospective female students to hear our guest speakers.

The listing of events and times will be coming soon, so be looking for posters and fliers in your boxes.

Ladies, let's get involved and show our spirit for the women in aviation history and today who paved the way for us, by celebrating Women in Aviation Week!

Mock trial to be held

The Pre-Law Association of Aviation Students will host a mock trial against the University of Florida, on Saturday, March 28 at 12:00.

The trial will be held at the Volusia County Courthouse at 125 East Orange Street, Daytona Beach.

The case being tried revolves around a fictional high school student who has been removed from his high school basketball team because he has been infected with the AIDS virus. Embry-Riddle will play the part of the plaintiff, and U of F will play the defendant. All students, staff and faculty are welcome. For further info, contact Jon Jackson at 756-5678.

Jobs for the class of '92

For the third consecutive year, new college graduates face a tighter job market. According to a survey of 4,850 employers conducted at Michigan State University, an overall decrease in hiring quotas of 10 percent is projected.

A drop in campus recruiting results, because employers receive so many unsolicited resumes directly from new graduates, and are easily able to recruit without travelling. A 25 percent decline in on-campus recruiting is expected, after similar drops last year. Those who do visit college campuses will be more selective in their hiring criteria. GPAs are especially important to high technology organizations with positions in research and development, engineering and accounting.

Embry-Riddle has fared well in continuing to attract top employers to campus, which can be attributed to a number of factors. Employers report that in selecting college campuses for recruitment activities, they take into account the national reputation, prestige and quality of an academic program, faculty at the institution, the geographic location or proximity of the school to an employer's facilities, the number of offers extended and accepted from previous recruitment activities there, past history of success with previous graduates, and the quality and professionalism of the placement office staff and operations.

The large number of experienced professionals who have been laid off, and their willingness to accept lower paying jobs, also increases the competition for management trainee and entry level positions. Employers in the survey identified several noticeable shortcomings of today's college graduates in comparison to those of previous years. They are troubled by the unrealistic expectations of college graduates, and the attitude that they have already paid their dues and that the employer owes them something. When reporting on shortcomings of today's college graduate, employers also cite mediocre writing and public speaking skills, lack of tenacity and commitment and a marginal work ethic.

Those who want to be competitive must strive harder for good grades, gain work experience through cooperative education or internship programs, and learn how to "sell themselves." Employers advise students seeking employment in this tough economy to do their homework. Take the time to define your career goals and the opportunities you want. Show your enthusiasm and sincere interest in the company (and not just in the paycheck they can offer) by researching the organizations in advance of an interview. Be prepared to discuss your fit within an organization and what abilities you can contribute.

Substance Awareness Week

Wednesday, March 4

Substance Awareness Information Table - Student Center Lobby Area. All Day.

Health Fair - "Choose not to abuse ... your body"

11:00 a.m. - 2 p.m. on the flight deck. Health and fitness testing and information will be available. Wellness materials and professional consultants will be on hand. Check it out!

Thursday, March 5

Substance Awareness Information Table - Student Center Lobby Area. All Day.

Movie - New Jack City - J. P. Riddle Student Center

Beginning at 8:30. Free gifts to the first 250 who attend.

Friday, March 6

Substance Awareness Information Table - Student Center Lobby Area.

The \$10,000 Pymmid Team Competition - Dorm 1 Lobby. Beginning at 7:00 p.m. Come watch teams work their way into the final competition.

Lazer Vaudeville show

On Saturday, March 14, Daytona Beach Community College will present *Lazer Vaudeville* in two performances at 3:00 and 7:00 p.m. This show, recommended for the entire family, will be presented at the Theater Center, Bldg. 8. Tickets are \$3.00 for reserved seating and can be purchased at the Theater Center Box Office, Monday through Friday from 11:30 a.m. to 2:30 p.m., or one hour before showtime.

The 3:00 p.m. show for younger children will be approximately one hour long. The 7:00 show will last about 90 minutes.

Lazer Vaudeville is a modern show that combines lasers with magic, and the results are astounding. There's something for everyone - magic, juggling, comedy, knife-throwing and acrobats. A few audience members participate on-stage while everyone else keeps laughing.

Kids and adults alike will become entranced as one wizard from the future floats another in mid-air, then vanishes him. Meeting "Alfonzo," the Fluorescent Fire Breathing Dragon with his great sense of humor, is something everyone will enjoy! The clever acrobatic comedy that is the finale is a crazy cross between *The Three Stooges*, the Chinese Acrobats and European Clowns.

Pulitzer Prize winner to speak

Daytona Beach Community College is proud to present Pulitzer Prize winner and Poet Laureate of Illinois, Gwendolyn Brooks, in an evening of poetry reading. The program will be held at the DBCC Theater Center at 7:00 p.m. on Monday, March 2. There is no admittance charge for this event.

The most exciting and inspirational program presenter on today's platform, Gwendolyn Brooks is a superb reader of her own poetry - and that of contemporaries. She is a responsive, concerned woman who establishes a firm rapport with students, faculty and community.

Gwendolyn Brooks won the famed Pulitzer Prize in 1950 for "Annie Allen," becoming the first black writer to win this award. In 1968 she was named Poet Laureate of Illinois, succeeding the late Carl Sandburg, and holds that post to this date.

Ms. Brooks was named Consultant-in-Poetry to the Library of Congress, 1985-1986, and was the first black woman to be so honored. She is the recipient of over 70 honorary doctorates and in 1980 was appointed to the Presidential Commission on the National Agenda for the Eighties, by President Jimmy Carter.

She has been honored with The Shelley Memorial Award by the Poetry Society of America, and many other awards and honors. She has contributed to numerous anthologies, publications and broadsides, and her poetry is frequently commissioned for special occasions.

Gwendolyn Brooks presently serves as writer-in-residence at Chicago State University.

In addition to the Poetry reading at 7:00 p.m., Ms. Brooks will hold workshops throughout the day on Monday for students from DBCC, UCF, BCC, ERAU and Stetson University.

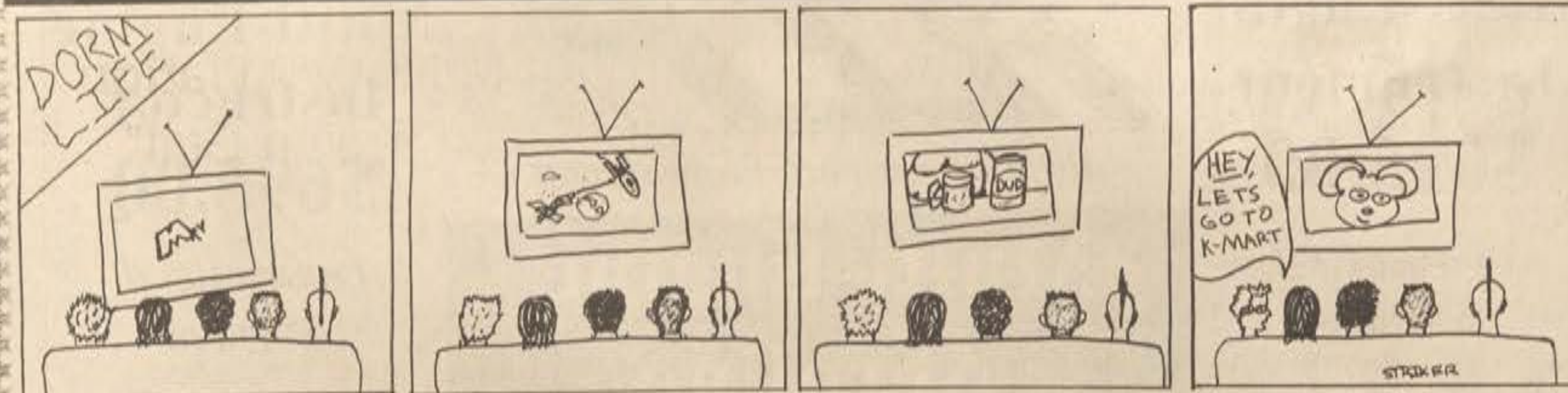
Riddle Riders host Nick Ienatsch

With all the racing that is going on at Daytona International Speedway, who could be a more appropriate guest speaker than a 250 GP racer, bike test rider and senior editor of *Motorcyclist Magazine*. Nick Ienatsch will be meeting with us to share some of his racing and street riding experience. All are welcome to attend.

THURSDAY at 8:00 p.m. in room A-109.

Solow

by D. Striker



Ever Get Somebody Totally Wasted

TAKE THE KEYS.
CALL A CAB.
TAKE A STAND.



TAKE THE KEYS.
CALL A CAB.
TAKE A STAND.

FRIENDS DON'T LET FRIENDS DRIVE DRUNK

THE AVION

things got a little tense in the office.
What can be expected? We aren't paid,
though we are
compensated in several ways. Getting
the paper ready for the printer can be quite
pressured...

But this is college. We're all here for the extra points and experiences to help us in the real world. You get a lot of that at the Avion. There's no membership fee, you can finally get a picture of what's really going on in this place, and you grow to resent apathy in most of its forms.

We need volunteers to write, take pictures, and help produce the newspaper!

Jason Piper
Club Reporter

Greetings brothers and friends of Alpha Eta Rho. This past week has been an interesting one. The pledges have been busy getting to know the brothers.

They deserved the vacation to F.I.T. I heard it was a good time for all. Unfortunately, I was sick and couldn't go. Glad to hear that Grimace finally made it back.

CFC

Dennis J. Martinez
Club Reporter

In response to the article in the February 19 issue of the *Avion* concerning "updating our ideas about religion," it saddens my heart as a Christian to think the Bible can be so misunderstood. The article holds the Bible accountable for the actions of Catholicism, which is only one representative of Christianity.

We need to realize that the Bible doesn't represent churches. The Old Testament is well noted for its historical information. It stands as a foundation of God's promises and actions. The New Testament introduces Christ to support the Old

AX

Roger Waters and Albert Hoffman
Club Reporters

Well boys and girls, I've finally returned from my extended leave of absence (wow, dude). As always, we've had an extraordinary weekend at our domicile. The Zeta's appeared to have a most excellent time at Friday's social, and we look forward to their many returns. The lush was in his usual inebriated state, while working with others on the "committee" to provide us with the necessary social lubricants. We all commend their stellar performance, especially in lieu of the absence of the notorious Mouth.

The next standards meeting should prove to have quite a turnout. Team sandblast is looking at completion by the end of the week, so all

A big Happy Birthday goes out to Matt Hopkins. The one he's been waiting for, the big 21. Congratulations!

Just a few reminders: Track is Thursday through Sunday. After that we don't have to work anymore, so, everybody pitch in and it will be easy. Yeah right! Many more events coming up: Dodgers vs. Mets, soaring trip, etc.

Until next week just kick back and relax. Don't let the GPAs slip too bad during Spring Break.

Testament, not to overwrite it. Religion has already been updated. Read it for yourself, in the Bible.

Christians are not asked to sacrifice themselves for the good of their fellow man. They are asked to glorify themselves unto God [to build self-respect] (1 Cor. 10:31). The world-wide concern of Christianity far surpasses that of Amnesty International. Christians do get involved!

Let's update our own lives, habits and personal faults to improve. Attacking churches isn't the answer, and assaulting the Bible only tears down faith in the Lord, and in ourselves. So find out the facts! Read the Bible for yourself.

of you boys with the girly-man bikes better look out.

The Adopt-a-Highway program has finally produced some concrete results. Incredibly enough, we have the stretch of Clyde-Morris between Volusia and Beville. The sign should be up by April 1, so the pledges better strap on their running shoes to start their careers as "Waste Collection Service Associates" (trash collectors).

Quad-Sport Challenge is coming quick, so let's get motivated. Special congratulations go to Jason Lantier for making a complete and total jackass of himself in front of just about every female at last Friday's social. And last, but not least, the lifetime achievement award goes to one of this articles authors, for making our weekend as interesting as it could be.

AAAAE

Michael S.Stellwag
Club Reporter

March Madness has arrived for the American Association of Airport Executives organization! We have a great group of activities lined up for our members. This Thursday, March 5, Danny Borg, the American Airlines Station Manager at Daytona Beach will be speaking to us. Then, Friday the 6, we will be taking a tour of Simcom in Orlando at 4 p.m.

The following Friday, March 13, we will head to Orlando again for a full airport tour of MCO, including a question & answer session with

Clubs Policy

- ➔ All articles must be type-written, double spaced or on disk format (unformatted in Word Star or Microsoft Word).
- ➔ Deadline for submission of all club material is **Wednesday at 5 p.m.**, one week prior to publication.
- ➔ Photos may be submitted with club articles.
- ➔ All submitted material becomes property of the *Avion* with the exception of disks.
- ➔ The *Avion* reserves the right to edit all submitted copy.
- ➔ For more information stop by or call the *Avion* office at (904) 226-6079.

Precision Flight Team

Robert E. Blitzer
Public Relations

Well PFT fans, once again it's time for another chapter in the life of our hero Biff. Today we find Biff sitting at a table in the UC, but he is not alone. Biff is surrounded by a mob of voluptuous women all wanting to hear about how he single-handedly led the team to their 2-0 standing in intramural softball. "It was nothing really. I mean, even with this broken leg and bruised arm I got ejecting from my F-16 the other day. ..."

Oooohs! and Aaaahhs! could be heard throughout the UC as Biff continued his story of courage and airmanship. Later Biff was spotted fighting his way to his Ferrari (through the mob of Flight Team groupies - with a special young lady at his side. Who is this lucky mystery Vixen? We'll see next week.

Naval Aviation Club

John F. Potzau
Club Reporter

As we come upon the halfway point of this semester, the Naval Aviation Club would like to congratulate the elections of Joe Sabin as president and Chris Hymer as vice president. New officers were chosen on the February 11 meeting as current President Vincent Stefano stepped down. Vinnie was recognized for his three years of dedication as president of the club, and for a job well done. Other officers selected were Eric Heinzer for secretary and Rich Bailey for treasurer.

On February 18, nine NAC members enjoyed four hours in the P-3

AXA

Eric Samowski
Club Reporter

Note to Associate Members: Get going on those interviews, don't get behind and in a jam come the vote. Thanks for the Bar-B-Que.

Also, Sigma Football is in full swing and I have not received anything.

If you still are not sure of your team, check the board; if you're still not sure of your grades, drop the course.

NO, just kidding, if that happens, show up to Brother Tom Mule's Help Session - academic healing at it's finest, date and time to be announced.

Word on the street is that the chapter consultant will be coming round the mountain when he comes, and it looks like that will be about the second week of March. Let's all be on our best behavior and beat this probation thing, it's getting to be a drag.

Last but not least, I'd like to make this sound like one of Marcus's articles, so: I'M GOING TO METAL-LICA AND YOU'RE NOT.

ESAC

Lisa Combs
ESAC Secretary

Embry-Riddle's Engineering Student Advisory Council (ESAC) needs council members and officers for the upcoming (Summer) semester.

Our next meeting will be held on Thursday, March 12, 1992, at 5:30 p.m. in rooms 157A and 157C in the Jack R. Hunt Memorial Library. Everyone is welcome so please attend!

SKYFEST
DAYTONA

Featuring:


Tora Tora Tora
- a Re-creation of Pearl Harbour

- * South's largest display of military aircraft
- * Military jet fighter demonstrations
- * F-117 Stealth Fighter
- * Gene Soucy / Teresa Stokes, Showcat Wingwalking
- * Sean D. Tucker, Power Aerobatics
- * Bud Light Micro Jet, World's Smallest Jet
- * Fina Pitts, Jan Collmer
- * Mikoyan Mig-17, Doug Schultz
- * P-51 Mustang, Lee Lauderback
- * B-17 and B-25 Bombers
- * AT-6 Texan, Gene McNeely
- * B-1 Bomber - Sunday only
- * F-16 Demonstration

Central Command Special Operations Parachute Team
ERAU Parachute Team
Masters of Ceremonies, Larry Rutt and Jordan Bowman Jones

Salutes 50 Years of Military Aviation
"Pearl Harbour to the Persian Gulf"

April 4 and 5



Special discount for ERAU students only!
\$7 advance - \$12 at gate
(limit 2 tickets per student)
Now on sale at Cashiers' Office, Spruance Hall

On Display:

KC-135
C-141
C-130
P-3
S-3
A-6
EA-6
A-10
OV-10
E-2
AH-64
HH-3
C-21
HH-53

F-4
F-14
F-15
F-16
F-18
F-111
AV-8B
T-34
T-2
T-37
T-38
TA-4
UH-1
and more...

➔ Autos for sale

1988 Nissan Sentra. Good miles, looks and runs great. \$2500 or best offer. Call 248-2473.

1988 Ford Ranger XL/T. Red, A/C, new tires, excellent cond. inside and out. \$3400. Call 248-2473.

1986 Camaro Z28. Auto, A/C, tune port V8. 44,000 original miles!!! Looks and drives like new. Sacrifice for only \$5200. Call Robert for details, 760-4895.

1986 VW Cabriolet. Auto, A/C. Red with black top. Excellent Condition. New tires and brakes. \$5900/OBO. Call 756-8338.

1986 Chevrolet Cavalier. Automatic, air, stereo, power steering and brakes, excellent condition. \$1650/obo. 239-0913.

1986 Camaro. red, excellent condition, auto, air. \$2800/OBO. Call 239-0913.

➔ Miscellaneous

LEARN TO FLY!!!
Get your pilot's license or continue with your flight training. Quality and experienced instruction at low rates. Train at a local airport. Contact Jack at 756-1494 or leave a message. CFI/MEI.

Reasonable Flight Instruction!!! Private, instrument, commercial. Best rates around the area. Flexible schedule. Contact Tom at 677-6895. CFI.

The Florida Squadron of the national ANGEL PLANET volunteer organization is in need of pilots to aid in its cause. For further information, write JRAU box 4395.

Cars and Trucks Wholesale! Buy any year/make car or truck at absolute wholesale!!! Call Robert for details: 760-4895.

I Buy Cars and Trucks for Cash. Out of State titles O.K.!! Call Robert 760-4895 today!

Hate to type? Let me do it for you. I will type or print your report, essays, term papers and homework. Original must be legible. Reasonable rates. 24 hour service. Call Diana at 760-1440.

Great Career Opportunity! Exclusive flight school contract for sale in beautiful Winterhaven, FL. Terms negotiable. Call Chris at 813-293-6186.

Top Cash prices for your car! Any year, make, model or condition. Call Dean 239-0913.

We are still looking for more reptile and amphibian enthusiasts to start new club. If interested call Scott at 322-0844 or box 6071

Anyone going to Tampa? Need company? If so call Eric Roy at 255-4079. Will pay half of gas.

➔ Roomates & Rental

1 or 2 people needed to help share driving and gas and rental of cargo van going to southern NY (Rockland County). Leaving 4/28 or 4/29. Approx. cost for 3 people is \$150 each. Contact Box 1334.

Super House - Great Location. 3,000 sq. feet modern ranch, 4 bedroom on Ormond Beachside. Pool with slide, patio and BBQ. Washer & dryers - no more laundromat. Pool table! Satellite dish for sports net. Great deal for clean non-smoker at \$185 + 1/4 utilities. Call Ed at 441-5070. Avail. Mar. 1 or Apr. 1.

Roommate Wanted. Two bedroom, two bathroom apt. in Pelican Bay overlooking lake. Washer and dryer. Very nice and quiet. Pool. Must be non-smoker, responsible, very clean male or female. \$300 + 1/2 Utilities. If interested please call Pete at 767-7649 after 9:30 p.m.

➔ Misc. for sale

For Sale: IBM PC Convertible with printer, \$500. General Electric Clothes Dryer (White), \$125. One 19" Sears Color Television, with stand, \$100. See Wanda in SH 104 or Call Ext. 6117.

For Sale: Refrigerator. Emerson, excellent condition. Used one year only. Bought new for \$90. Asking \$65. Call Bob at 239-0314 afternoons and evenings, or leave a note in Box #5958.

Computer- 16 Mhz 286 at. IBM compatible, includes 3.5" and 5.25" HD floppy drives, VGA, 40MB hard drive, math co-processor, 2MB extra ram, mouse, and lots of software including Windows, Word Perfect 5.1 and word for windows! Asking \$995. Box 9023 or call Chuck at 760-3490.

For Sale: Surf Gear, Spring suit - Peak. Large. Excellent condition \$55. Travel bag - Island Style 6'3" Black 6'3" Car speakers for sale. Pioneer TS-1609s 6 1/2 180W \$65. Kicker's 6" woofer w/ passive radiator and horn tweeter. \$100 or best offer.

Midland 12 volt power supply. Great for CB or HAM. \$15 IF! amp/power meter \$15. RAM card and math card for TI-74 only \$15. Call 760-3219.

Tandy 2800 HD notebook computer 286 SX, 20 MB Hard drive, 40 MB with stacker! MB ram, 2-3 MB with above disk. Programs include: DR Dos 5.0, Word Perfect 5.1, Lotus 2.2, Excel, Harvard Graphics, AutoCAD 10, \$1250 OBO. Call: 756-1098 after 8:00 p.m.

Graduation Sale:
Car cover- fits mid to large car \$40.
Telescope- Bushnell Sky Rover \$50.
PUSH Bicycle- 12 speed racer \$170.
Motorcycle Tank bag- \$60.
Jensen Car Speakers- 6x9" speakers with enclosure \$25.
Metal Detector- Whitehall \$30.
Refrigerator- Top of the Line- Gili, Ice and water dispenser \$500.
Table- Wood nightstand \$15.
Nissan 240SX Nose Bar- Fits '89-90, never used \$70.
Call 788-1240, ask for Keith.

A1000 owners: make your system IBM compatible with the sidecar. One .25 percent drive, separate power supply and 3 expansion slots. Sidecar used to sell for \$800, but need to sell now - only \$200. Call 760-3219.

Motorcycle accessories for sale:
Bell aerostar helmet \$120, Simpson Bandit helmet \$180. Black racing jacket \$140. Call Robert 760-4895.

Kingsize waveless waterbed mattress and box spring, excellent condition. \$250, call 255-9277

For Sale: Four tickets to see METALLICA in Jacksonville on March 15 at 8:00 p.m. Will consider selling tickets separately. \$21.00 each! Contact Marco at 673-6341 or Jack at 756-1494.

Gun for sale: Uzi carbine 9mm, new in case, extra clip and display barrel. No longer available in the U.S. \$950. Call Rob: 760-4895.

CLASSIFIED AD POLICY

- ➔ Non-commercial classified advertising and personals are **free** to the student body, faculty and staff of Embry-Riddle with 35 word limit.
- ➔ All other non-commercial advertising is \$10 with a 35 word limit. Each additional word is 10 cents.
- ➔ Commercial advertising is available through the Avion advertising department, at 226-6051.
- ➔ Classified advertising is carried out by filling out a classified ad card in the Avion office.
- ➔ Only one classified ad per card. Name and address of advertiser must be included for the ad to run.
- ➔ Only paid ads will run for two issues and may be renewed by filling out another classified ad card.
- ➔ No classified ads will be accepted over the phone.
- ➔ For more information, stop by or call the Avion office at (904) 226-6049.

For Sale: Amiga 2000 Computer with IBM Bridgeboard. Several extras. \$1800 OBO. Call 253-7354 after 5:30 p.m.

Canon T-90 Top professional 35 mm camera, Canon 300TL Top pro flash, Canon 50mm lens. All in excellent condition. \$490. Omega C760 xl color darkroom enlarger \$300 IBM PC original PC with monitor. Perfect for typing papers \$100. Call Pete at 767-7649 after 9:30 p.m.

Attention A1000 owners. Tired of a slow machine? Add 16 Mhz and math co-processor slot for only \$175 (new sold for \$200). Add internal battery backup clock, only \$15. Genlock for Amiga \$70. Call 760-3219.

Beretta 92F 9mm. 3 clips, case and holster, also custom laser sight. 6 months old. All for \$900. Call Robert: 756-8338.

Sega-Genesis Games, walkman Tape-player and radio, CB radio with antenna, 10 speed bike. All prices reasonable and subject to best offer. Call Dan at 257-4095 and leave message.

Car Speakers for sale: Pioneer TS-1609s 6.5" 180W \$65, Kicker's 6" woofer with passive radiator and horn tweeter \$100 OBO.

Surf Gear- spring suit peak lg, excellent condition- \$55, travel bag, Island style 6'3" black 6'3". Call Von 767-9950.

➔ Personals

FUBAR PRIDE:
A tradition of excellence.

HEY KIDS
Third west knows softball. This wing's the coolest.
LOVE, GUMMI

SPECIAL K
Love you.

RED ZR-1 'VISTE
Nice try, for a second I thought I was going to have to down shift and punch it, but I was wrong. If you really want to lose, be at the Student Center water tower midnight Sunday.
BONDO BANDIT

HEAD RESIDENT APPLICANTS
This school needs more dorms. Best of Luck.

AC
If you pass me, one of us dies. (I'm not sure who yet.)
PC

RANDOM VIRGINS
Could you lower my truck? But not into a ditch please, please.
ENTROPY

KAREN D.
Pass out, that's right, pass out. Think about it.
Ha Ha.
RIC

RANDOM VIOLENCE
The Lynch Mob is watching you like a hawk. Many we are, but act like one. Watch what you say, for you could be talking to one of us.
THE LYNCH MOB

DIE! DIE!
So I'm thinking. The "Roses are red..." poem was weak. Can we talk?
IAN

CHEESEHEADS
Even though you're in Daytona you're still CHEESEHEADS
"NAUGHT BOY" NATE - THE MOB

JOE
Who do these 3 things remind you of?
1. Grape Jelly
2. A dislocating hip
3. A nose ring

HALF PINT
I wonder if Homer is excited about his speech lessons this weekend?
After Sunday we will have to ask him.
PAW

BAGMAN
Save me..... or Marry me!!!
Nah...Just save me.

MIKE L.
You R such a "Golf" Pro!!
Duh!

HOLLIS MIYNEILL
I've been waiting at the train station. When are you?
MOVCHIT

SBOS
Hope you realize you're just another of the flavors of the month. You already have two strikes against you, Three strikes and you're out!!
THE TWEN T'S

DANETTE
Roses are red,
Violets are blue
I really miss those daisies!
DARWIN and his WAITING ROOM

To Eva M.:
We will all find, as we wander through this world of transient hearts, that good love has communication and undying faith; time, distance, money and fear are the thieves of love.
I miss you... but I'll get by.

DREAMER
Thanks for the tape! I love that song. It's strange how you know how to spell my name. You said you think you are the best for me, I think I will make that decision. Yes, I do have a wonderful girlfriend, but all relationships start at "friend" level.
BAPFIED

F A S T

FUNDRAISING PROGRAM

Fraternities, sororities, student clubs. Earn up to \$1000 in one week. Plus receive a \$1000 bonus yourself. And a FREE WATCH just for calling 1-800-932-0528 Ext. 65.

OPEN CASTING CALL

1992 CALENDAR GIRL CONTEST

OVER \$40,000 IN CASH & PRIZES

Sponsored by:

WAVES, XL-106, Daytona Beach Jaycees, Louie Lizard Wear, Casablanca Modeling, and Aurora Promotion Agency.

All proceeds to benefit the AIDS Foundation.

Each Wednesday Night in WAVES

- Categories -

Evening Wear, Beachwear, Personality, and Customer Applause!

- Prizes -

Weekly Winners receive \$100 cash and roses. Monthly Winners receive \$100 cash and a modeling scholarship from John Casablanca Modeling in Orlando. Final Winner receives a complete modeling portfolio, \$500 cash and an all expense paid trip to Jamaica.



5 Best Dressed in WAVES Each receive \$ 100 Cash Ask your server for details and entry form.

Calvin and Hobbes

by Bill Waterson



WHAT'S WRONG WITH EASTER ISLAND? I LIKE EASTER ISLAND.



HELLO. IS THIS THE HARDWARE STORE? YES, I'M WONDERING IF YOU SELL CATAPULTS.

NO?? WELL, I'M LOOKING FOR SOMETHING THAT CAN DELIVER A 50-POUND PAYLOAD OF SHON ON A SMALL FEMININE TARGET. CAN YOU SUGGEST SOMETHING?

HELLO?

I DON'T UNDERSTAND HOW SOME OF THESE PLACES STAY IN BUSINESS.



I DON'T THINK YOU HAVE ENOUGH TO DO.



I WON! I DID IT! I WON! I WON! I WON!

I'M THE CHAMPION! I'M THE BEST THERE IS! I'M THE TOP OF THE HEAP! HA HA HA!

IS THIS ALL THERE IS?



IF THERE ARE NO QUESTIONS, WE'LL MOVE ON TO THE NEXT CHAPTER.

I HAVE A QUESTION.

CERTAINLY, CALVIN. WHAT IS IT?

WHAT'S THE POINT OF HUMAN EXISTENCE?

OH.

I MEANT ANY QUESTIONS ABOUT THE SUBJECT AT HAND.

FRANKLY, I'D LIKE TO HAVE THE ISSUE RESOLVED BEFORE I EXPEND ANY MORE ENERGY ON THIS.



EWWW

EWWW

EWWWWWW

EWWWWWW!


SCURRY FLITCH BLIP

FLIP FLUMP FLAP


FLUMPTUM TAVITY FLUP

Far Side


by Gary Larson



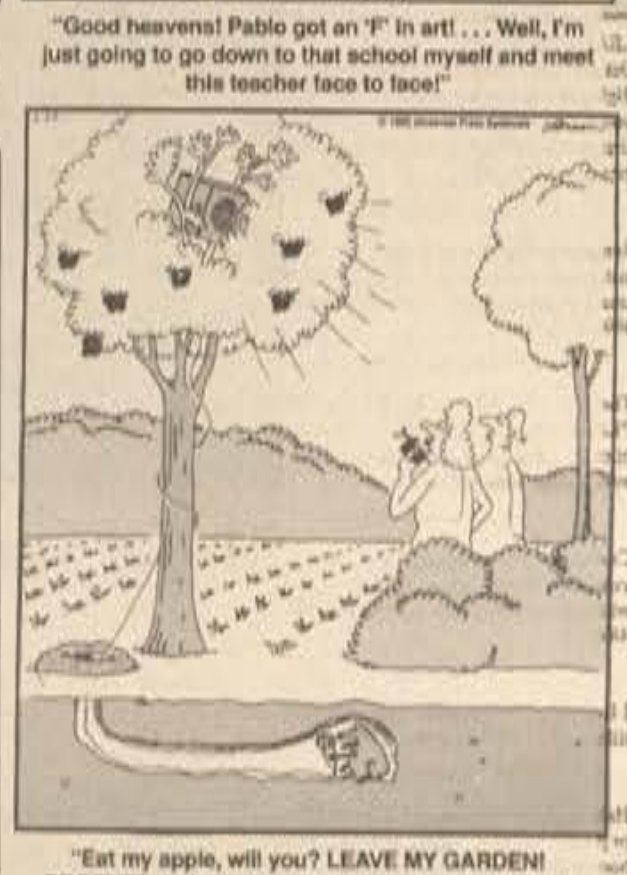
"Raised the ol' girl from a cub, I did. ... 'Course, we had to get a few things straight between us. She don't try to follow me into town anymore and I don't try and take her food bowl away 'til she's done."




"Good heavens! Pablo got an 'F' in art! ... Well, I'm just going to go down to that school myself and meet this teacher face to face!"



"Eat my apple, will you? LEAVE MY GARDEN! BEGONE! ... And take all the mole traps with you!"



Centaur rodeos



Scorpion school

Mister Boffo

by Joe Martin



DON'T YOU RECOGNIZE MY VOICE?? I WAS YOUR BROOKER!



A TIME TO WORRY

GOOD NEWS, BAD NEWS AND GOOFY NEWS!



FINALIST... WORST SLOGAN COMPETITION

8DEEFS

THE CEREAL THAT USES THE REST OF THE FISH!

Mother Goose and Grim

by Mike Peters




GRIMMY... DID YOU TRACK MUD THROUGH THE HOUSE?

NO!

DID YOU GET INTO THE GARBAGE?

NO!

I WISH SHE'D LET A LYING DOG SLEEP.



HERE, SPOT! HERE, SPOT!



GRIMMY... YOU'VE GOT TO DO SOMETHING ABOUT YOUR MORNING BREATH.



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