

The Flight Line

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DECEMBER 2002



AIRPORT AUTHORITY MEETING

By now many of you have read the November 19, 2002 St. Augustine

Record article by Peter Guinta related to the hiring of a contractor to complete the airport terminal. There was considerable discussion at the meeting by the general public, the newly elected AA, and current AA members about the issue before the agenda items were addressed. Please refer to the article, there is too much detail to put in this short report.

Action Items

1. Release of Retainage - AA voted to release \$39,957.30 to AJT and Associates for equipment for the tower.

2. Design Build Team Selections - A 9 member qualification committee reviewed and ranked 11 proposals dealing with 4 projects. The AA approved the top 3 remaining and made the bulk hangar the first priority.

3. Utility Easement - North GA area - AA approved staffs recommendation of easement.

4. Short Term Lease - SK Logistics - The proposal presented by staff was for SK Logistics to have a 6 month short term lease (starting December 1, terminating where a certificate of occupancy is received for their new hangar under construction) for a hangar possibly due for litigation. Discussion was raised dealing with the process followed and to give an opportunity for all current businesses at the airport to make a bid when such a situation occurs. The AA requested staff to review the procedures currently used.

5. Project Update - ILS/VOR - As of the meeting date, the VOR was considered out of tolerance and a NOTAM published. The ILS also needed to be flight tested. The FAA plane and flight crew were at SGT at the time and were requested to do both checks while they were there. As of last

week, in a discussion with Bryan Cooper, he indicated neither one is operational.

Other Business

1. Northeast Area Construction - Progress is being made. Trees will be replanted where appropriate.

2. New AA Member - Wayne George said he is working with various individuals to prepare a packet to promote SGJ for Fly-Ins.

3. Board Meetings - December 9, January 7, February 10, 4pm.

4. TV Coverage - AA member Ciriello made a request of staff to look into the possibility of TV coverage for AA meetings. It could be a means to inform the public about Airport issues.

5. Appreciation - Outgoing AA members thanked Mr. Ed Wuellner, staff and others for their efforts during their tenure on the authority. They also welcomed the new members Bob Cox, Wayne George and Jack Gorman.

NEXT SAAPA MEETING - SATURDAY DECEMBER 14, 2002. 9AM

Action Items Christmas Party

- We understand SAAPA member Henry Warner will be joined by 3 other barbershop singers to entertain us at the party. The quartet (What's The First Word) will arrive between 7:30 - 8:00pm. Also, there may be raffle tickets for sale for prizes at a price of \$5/6 tickets, \$10/14 tickets.

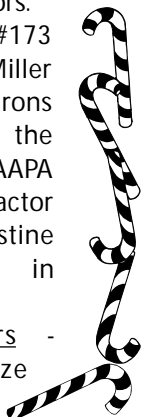
Club House - The SAAPA Clubhouse is being used a lot and it is important to keep it clean and neat. Please, all of us do our part. Thank You.

Thank you - editor, Robert Fleming wants to extend his personal thank you including that of the SAAPA members to Len Tucker for his continued, generous contribution by publishing our newsletter. The newsletter is very important to the success of SAAPA. It informs our members about schedule of events, fly-in experiences, Airport Authority business, etc. Robert also extends his thanks to Lisa Lange and the Graphic Dept. at Leonard's for their wonderful help. Last but not least is our thanks to Henry Warner for what he did

during Roberts absence and to all of last years newsletter contributors.

CAP - Squadron #173 Commander Russ Miller extends his and the squadrons appreciation for allowing the squadron to meet in the SAAPA clubhouse. It is a major factor in helping the St. Augustine unit fulfill it's role in community service.

Directory Advertisers - Remember to patronize our advertisers.





THE MAINTENANCE LOG

RADIO FREQUENCIES

By N B (Marty) Martindale

I know the name of this column is "The Maintenance Log," but I thought it would be nice to take a break and talk about something else for a change. So, this month we will discuss radio frequencies used for communication and navigation.

Before starting our discussion I would like to take a moment to thank Allen Arnold for the pictures he has furnished for the past columns. Allen has this great digital camera, and computer program he can do wonderful things with, so next time you see him shake his hand and tell him he is doing a great job.

Now to the radio frequencies. The frequencies used in aviation are divided into three basic groups.

- 1. Low Frequencies (LF)
- 2. High Frequencies (HF)
- 3. Very High Frequencies (VHF)

The Low Frequencies (LF) used in aviation are from 190 to 535 kilohertz (KHz) and are used for navigation with Non directional Radio Beacons (NDB), the trusty ADF. NDB's are not used much any more, but one important function for the NDB still remains. When a radio beacon is used in conjunction with an Instrument Landing System marker, it is called a Compass Locator, and is used to find the marker.

The High Frequencies (HF) are used for long distance

communications, require special equipment, and the average general aviation pilot does not have use of them unless he does a lot of over water flying, or flies outside the US.



Number 3 VHF, the group of frequencies (we use most of the time) fall in this group. They range from 108.000 Megahertz (MHz) to 148.150 MHz, and are used for both navigation and communication. To the casual observer it appears the assignment of the frequencies is haphazard. Fear not, there is a method to the madness. The band is divided into sub groups. Let's see how this works. Starting with the lowest frequency, 108.000 MHz up to 117.950 MHz we have the VOR's. This sub group is further divided to allow for ILS localized frequencies, in the range 108.100 to 111.950 MHz. An interesting thing about the ILS frequencies is they all end with odd numbers, that is all the numbers after the decimal point are odd numbers. Since the VOR and ILS frequencies are interspersed it makes an easy way to separate them. When Differential GPS is put into service, it will also fall in this sub group and be assigned frequencies from 112 to 118 MHz.

Starting at 118.000 and going all the way to 148.150 MHz are the communications frequencies. The communications sub band is also divided with frequencies grouped together that are used for the same purpose. We find that

the majority of ground control frequencies are in the 121.6 to 121.9 range. SGJ ground control at 121.175 Mhz is an exception to this rule. The Unicom frequencies are also grouped together at 122.700 to 123.075 MHz. The majority of the rest of the frequencies are used for air traffic control. However, there are two exceptions that are of interest to general aviation pilots. One is the emergency and distress frequency of 121.5 MHz and the other is the private fixed wing aircraft air-to-air communications at 122.750 MHz.

This overview of frequency assignments is intended to show how they are assigned for various uses. How they are actually used will be the subject of another article.

Before closing, I need to mention that there is another frequency band used in aviation. The UHF or ultra high frequency band. This band is used by the military, but it also has some frequencies used in civil aviation. Primarily it contains the glide slope frequencies used with ILS landing systems. We do not need to be concerned with these, because glide slope receivers are channeled by the selection of a ILS frequency. One other UHF frequency of concern to general aviation is 243.000 MHz, another emergency and distress frequency. Notice it is twice 121.5 MHz. In radio talk that is known as the second harmonic.





PERSONAL "VTOL" AIRCRAFT IN OUR FUTURE?

■ DAVIS, CA. Moller International (MLER) is in the latter stages of development of a number of innovative aviation products expected to enter the market in the coming year. For over 30 years founder, Dr. Paul S. Moller, has been engaged in research and development activities aimed at designing and producing an aircraft that combines the speed and efficiency advantages of the fixed-wing airplane with the vertical take-off and landing and hovering capabilities of the helicopter. These innovations will deliver to a wide range of conventional aircraft operators a new level of utility and economy for a variety of aerial applications.

M400 Skycar®



Moller's principal product will be the M400 Skycar® vertical take-off and landing ("VTOL") aircraft. The concept of the Skycar® as a personal transportation vehicle is that it would be so practical and affordable that it could become a preferred mode of transport, simultaneously replacing the automobile and the private or commercial airplane for many trips.



The table below shows the M400 target design and performance specifications for the 4-passenger aircraft, including pilot.

Certain design features of the Skycar® will facilitate its eventual acceptance as an alternative vehicle of mass transportation. These features will include:

- Computer-augmented flight stabilization system
- Fly-by-wire control systems (electrical wires take the place of mechanical cables) and on-board computers which can interface with and be controlled by remote ATC system computer and navigation resources
- High-speed capability, which maximizes the benefits of personalized air travel
- Hover or low speed capability, which provides the ability to cue up for entry to or exit from highly controlled air-lanes
- Ability to climb, descend, accelerate and decelerate rapidly to enter and exit air-lanes quickly
- Relative insensitivity to gusts and wind shear that makes tightly constrained flight possible
- VTOL ability to land anywhere which allows emergency exit from air-lanes
- Small size which reduces required vertiport infrastructure dimensions

Nevertheless, the utility of the Skycar®

in mass transportation will be limited unless existing laws and regulations are modified. For example, Federal Aviation Regulations ("FARs") prohibit operation of civil aircraft within certain airspace, and require minimum altitude above, and horizontal separation from, obstacles on the ground and in other airspace. In addition, much of the airspace in and around major metropolitan areas requires that pilots operating in such areas hold special qualifications. Although the Skycar® will have the capability to travel from "garage to garage," in urban and suburban areas, existing laws and regulations will preclude most such "off-airport" operations.

"SATS" by 2008

Moreover, mass transportation using the Skycar® would likely have to rely on some future navigation system such as NASA's (National Aeronautics and Space Administration, an agency of the federal government) proposed Small Aircraft Transportation System ("SATS"), which is funded with \$69 million of public funds over the next five years. NASA predicts demonstration of a "Highway in the Sky" system by the year 2008.

Investment Opportunity

Please direct inquiries about investing in Moller International (MLER) to James O'Connor, RichMark Capital, Irving, Texas. Phone: 888-906-1366.

Email: joconnor@richmark.net
Website: www.richmarkcapital.com.

RichMark Capital makes a market in Moller International stock.



M400 Design and Performance Specifications

Passengers	4
Cruise speed@20,000'	355 mph
Top speed@20,000'	395 mph
Maximum rate of climb	6,125 fpm
Maximum range	900 mi
Payload excluding fuel	735 lbs
Fuel consumption	30+ mpg
Operational ceiling	29,000 ft
Gross weight	2,400 lbs
Engine power (2 min rating)	1200 hp

Dimensions (LxWxH)	19.5'x 8.5'x 7.5'
Takeoff and landing area	35-ft dia
Noise level at 500 ft (goal).....	65 dba
Critical failure components	none
Complex moving parts	few
Piloting difficulty	low
Vertical takeoff and landing.....	yes
Garage parking/road ability.....	yes
Uses automotive gasoline	yes
Emergency parachutes	yes



1967

CESSNA 150

1/5 share of a Cessna 150.

Good flying aircraft.

Bottom cost for flying low cost 2 place aircraft.

Hangared at F-2 SGJ .

1967 with transceiver, transponder.

Fun flying!

Contact : Henry Warner:

461-3245

\$2500 or best offer.

1980

PIPER ARCHER

For Sale

1/2 Share of 1980 Piper Archer II
N8098M IFR Certified, Air conditioned,
Standby Vacuum, Loran Engine Monitor,
Auto pilot NDH, Hangared at KCRG

\$35,000

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St. Augustine
Airport



Pilots Association

c/o Robert Fleming, Newsletter Editor

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