



# Loud and Clear



## New Hawthorne Aviators

### From the President

With little more than a month remaining until the Rose Festival, we are still in the planning stage for the airport events. At this time, we have the air tours & rides, the 82<sup>nd</sup> Airborne's living history detachment from Columbia, a hot air balloon, several small exhibits, and a vendor of pilot supplies. We are also trying to line up at least one larger aircraft and possibly one or more "classic" airplanes. Additionally, John Godwin has created a flyer/mailer and sent it out to nearly 70 airports and EAA chapters to announce a "Spring Fly In" at the Orangeburg Municipal Airport during the Festival. In conjunction, Joyce Bennett & Ruth Stevenson will organize an airport food concession for the event and there will be door prizes donated by vendors.

Under the capable guidance of former builder Paul Fillman Sr., the last three Tuesday evenings have found from 8 to 12 members working on framing the walls of our future clubhouse. The construction is progressing and it would be great if we could have the walls, ceiling and hopefully some of the wiring in place for the Festival. It would also be great if we could have our EAA Chapter 1367 NHA clubhouse sign on the side of the hanger. This sign must be large enough to be eye-catching and easily read from the 5-23 taxiway as you enter the terminal area. Rod Dantzler has proposed the basic design. Joyce Bennett has agreed to do the artistic work once the panel has been constructed.... However, the progress on the clubhouse and the sign will be contingent on the city's granting the permits and approval of the construction.

The next NHA club meeting will be Thursday, the 25<sup>th</sup> of March. We will finalize our plans for the Rose Festival and discuss the progress on our clubhouse. Cecil Bennett has scheduled guest speaker Rod Stroman, a retired commercial pilot who has flown with several major airlines. We will also have Tom Smith on safety and of course the good food. And please don't forget your NHA club membership dues for 2004 - \$25 for a family membership, \$20 for a single.

We hope to see all of you at the meeting.

### News Flash

There will be Right Traffic at the Broxton Bridge Breakfast club on April 18<sup>th</sup>. This is not standard traffic but is done for safety should anyone need a highway for the forbidden emergency landing. Please keep a watchful eye and let's have a safe and fun event. Unicom frequency is 122.8. Pass this information along to your friends who plan to attend.

Volume 2, Issue 3

March 20, 2004

#### March Birthdays:

- 14th Max Hunsucker
- 15th Katherine Stabler
- 26th B.E. Stevenson
- 29th Patricia Hill
- 31st Charlie Jernigan

#### April Birthdays:

- 15th Alice Bryan
- 27th Cecil Bennett
- 27th John Rheney

#### Inside this issue:

Buying an Airplane	2-4
Hangar Bay	4
Upcoming Events	5
The Meeting Place	5

# Selecting a used Aircraft

By Tom Smith

As a practicing CFI, I find that students often have a desire to “own their own plane.” As they begin to explore the used market, it becomes evident that there are lots of choices to be made. It is hoped that this article will explain the ramifications of some of those choices and provide an overall framework for becoming familiar with what is available.

## Manufacturers

This discussion will be limited to aircraft that have an FAA “Standard Airworthiness” certificate in the “Normal” category. While building or buying a home-built is certainly an option, that subject will be left to others more knowledgeable in that area.

*“Constant speed prop = better fuel economy  
Retractable gear = higher speed  
Turbo charger = higher altitudes  
Oxygen or pressurization = necessary for  
flying at higher altitudes”*

Over the last several decades, four manufacturers have produced a lot of the used aircraft for sale today. In alphabetical order, they are Beechcraft, Cessna, Mooney, and Piper. Each manufacturer has become known for producing aircraft designs that have certain characteristics. Beech is known for quality, high priced parts, large cabins, slow speed, and being a stable company. Cessna is known for safety, low cost parts, load carrying capability, and being a stable company. Mooney is known for the smallest cabins, the greatest speed, and was recently for sale as a company. Piper is known for small cabins, speed, and a company that has been sold several times.

Certainly there are exceptions to the simplified ratings given above as one considers individual models offered by a given manufacturer. For instance, while most Cessnas have adequate cabin room, Cessna 150's and 152's are the exception.

Note: There are certain airframes for which parts are difficult to obtain. This should be taken into consideration before buying.

## Speed, Useful Load, & Safety

Let's get one idea out of the way immediately. Twin engine airplanes usually do not have as good a safety record as singles, and in some cases are no faster or even slower than singles. Operating costs are usually more than double that of a single.

As a rule of thumb, adding extra horsepower via a larger engine to the same basic airframe increases the useful load more than it does speed. On the other hand, the design of the airframe greatly affects speed. Example: a Mooney 231 with 210 HP can cruise around 200 at altitude while a Cessna 182 with 230 HP cruises at about 150. The Mooney goes faster on less horsepower, but the Cessna will carry more weight.

## Increased Performance Through Added Systems

As pilots demand more performance from their birds, they often purchase aircraft with added systems. For example:

Constant speed prop = better fuel economy  
Retractable gear = higher speed  
Turbo charger = higher altitudes  
Oxygen or pressurization = necessary for flying at higher altitudes

While these systems do indeed increase performance, they also increase maintenance costs, pilot workload, and usually purchase price and insurance costs.

A pilot probably needs to decide what type of flying will be done most of the time and buy an aircraft that meets the demands of that pilot's typical mission. At other times, it may be possible to rent a different type plane more suited to the mission at hand or ride with some other owner who owns a type plane needed for the mission.

Since approximately one-third the total value of an aircraft can be attributed separately to the airframe, the engine, and the avionics, a discussion of each of these is in order.

### Airframe

Airframes do wear out, but not like engines and avionics. We usually fix an airframe component either when it breaks or when it looks so bad we can no longer stand it. As mentioned under the discussion of manufacturers, some airframe components are very expensive and some are no longer available except on the salvage market. That said, most airframes can be made to look almost new with new paint and upholstery. But be aware that even these items cost more for an aircraft than they do for an automobile.

### Engines

People usually want to find a used plane with a mid-time (800 – 1,200 hour) engine. They figure a plane with a low time or new engine will cost too much and a high time engine will have to be replaced soon, resulting in expense and downtime. I don't necessarily buy this argument for two reasons.

First, if the average owner flies one hundred hours per year, an engine with 1800 hours of the 2000 hour TBO used up could still have two years flying time left before replacement. Even after TBO is reached, it is mandatory that the engine be replaced only if it fails inspection or is used for commercial purposes.

Secondly, if the purchase price of an aircraft with a high time engine is low enough, you could make the purchase and use the money saved to replace the engine.

Note: There are certain engines that have a history of being reliable or unreliable, and some very few for which replacements are largely unavailable. Be aware of these before making a purchase.

### Avionics

Avionics can be repaired or replaced with different avionics that are more functional and suited to today's navigation environment. There is a basic set of instruments required for VFR day flight and a few more required for IFR flight. Most used aircraft will have this basic instrumentation no matter how old or unreliable the instruments may be.

When it comes to IFR, the minimum requirement is a static-pitot system and transponder certification every twenty-four months and "the equipment necessary for the ground facilities to be used". In other words, if all you plan to fly is a VOR approach, the VFR day and night equipment, the certifications, and a single VOR that has been checked for accuracy is all that would be required. While this is the minimum required, one would probably not want to fly IFR with this limited capability.

Beyond this very Spartan IFR equipment, most folks feel a second nav/com with glide slope and an IFR certified GPS (or ADF if already installed) is necessary. One can go about as far with equipment as one's budget will allow: intercom, audio panel, DME, radar, autopilot, etc.

So, an approach to beginning a search would be to first decide upon the typical mission you want to fly, and then begin studying aircraft performance figures to narrow the field to a few makes and models. And by the way, there is no perfect airplane that will do it all well. But if you are like some folks, you will enjoy the adventure and challenge that comes from learning to operate different aircraft as you trade every so often.

Note: Before buying any aircraft, get a thorough pre-purchase inspection done by your mechanic and a title search. You may also want to contract for escrow services.

*" Before buying any aircraft, get a thorough pre-purchase inspection done by your mechanic and a title search."*



*Aircraft For Sale*

The largest listing of used aircraft is probably found in [Trade-a-Plane](#). If you like pictures, look at [Aero Trader](#). If you are into computer searches, here are some websites that you may want to take a look at:

[www.aircraftdealer.com](http://www.aircraftdealer.com)

[www.aso.com](http://www.aso.com)

[www.traderonline.com](http://www.traderonline.com)

Tom Smith is an independent flight instructor at Orangeburg Municipal in Orangeburg, SC.

## The Hangar Bay

Good day Hawthorne Aviators, today we will discuss a few brief maintenance items that will help add some service life to your aircraft.

### Struts;

Inspect any strut that has an oleo for dirt, dust, sand, or an accumulation of oil. These foreign matter tend to cling to the chrome and will eventually work its way into the O-rings and cause them to become damaged, cut and eroded away over time. This type of debris will also cause internal damage to the struts cylinder walls. The quickest way to prevent damage is to wipe your struts with an approved hydraulic oil (MIL-H-5606 A or b) after each flight. This will remove any particulate matter and extend strut life tremendously. Also check your service manual for proper strut inflation. Too little air and your strut will damage itself internally by metal to metal contact. Too much air and you may blow your seals out.

*"One other thing, in most cases nitrogen is the recommended medium for struts and tire servicing. Nitrogen is an inert gas that is **not affected** by temperature and climatic conditions."*

### Tires;

Before each flight check for proper tire inflation with a tire gauge. Even being two or three pounds too high or too low will have a detrimental effect on wear and can lead to a replacement that could have been avoided by a five minute ground check.

Again, your service manual or your tire itself will have the inflation ratios that should be used on the tire assembly. One other thing, in most cases nitrogen is the recommended medium for struts and tire servicing. Nitrogen is an inert gas that is **not affected** by temperature and climatic conditions.

### Drains and Ports;

The temperatures are already rising, spring is here and so are the little winged critters that like to make a home in any open drain or port. A thorough inspection by you will prevent most occurrences of unwanted habitation. If you are able, supply your aircraft with a cover or sock for each drain, vent or port which is open to the bug critters.

That's all for now folks, see you in the hanger later.  
Dave Ward-Pathfinder Aviation Maintenance



## Upcoming Events

Just around the corner are several big events. Sun-n-Fun kicks off on April 13<sup>th</sup> and runs through the 19<sup>th</sup>. This is always a premier event and there is rumor that several of the members are going to make the trip. Hopefully we will get some pictures to look at when they return!

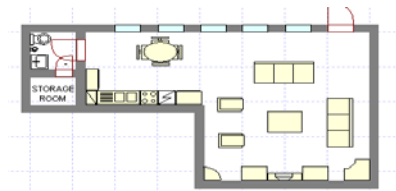
April 24<sup>th</sup> and 25<sup>th</sup> will be the Rose Festival weekend in Orangeburg. We have a lot planned and hope to draw a crowd from the gardens out to the airport. This will give us a chance to raise some money through airplane rides and selling food. Also donations will be greatly appreciated so spread the word and lets get everyone out to enjoy the weekend.

Don't forget the Breakfast clubs at Georgetown on April 4<sup>th</sup> and at Broxton Bridge on the 18<sup>th</sup>.

## The Meeting Place

If you haven't made it out to help with the construction of the clubhouse, here are a few pictures from the first work party! Every Tuesday afternoon from 6:00 until 8:00 PM is a work day for members to help with the construction. After 2 hours, there tends to be more talk than work so we set the limit there. After 2 evenings work, we have four of the six walls framed up and in position.

We need all the help we can get so don't feel like you would not be appreciated. Remember this is a place for all of us to have so let's ALL be a part of the construction.



*Our future Clubhouse*  
Design by John Godwin



Below is a preliminary idea of what we may end up with. Member ideas and suggestions will be discussed at the next meeting so please try to make it and make your voice be heard. The shaded part is where our room ends. The next meeting is at the airport on Thursday, March 25<sup>th</sup>.



# Loud and Clear

The newsletter of

*The New Hawthorne Aviators!*

1811 Airport Rd.  
Orangeburg, SC 29115

*New Hawthorne Aviators*

*Loud and Clear*

*122.7 on your avionics dial*

