FINAL DRAFT		F. MERCURIO

ANNOUNCER:	Welcome to Sporty's program on what you should know about VFR Radio Communications. If you are new to flying you probably already realize that you are not only learning to fly but you are also learning a new language - the language of aviation.
:	If you are an old hand at the aviation game, then you realize that nothing stays the same. This is true of communication techniques as well. As new technologies are developed and implemented, there is a need to learn new terminology and new ways of communicating.
	You are about to go on three individual flights with three, well qualified, general aviation pilots. By the end of the program, you'll be prepared to professionally communicate in any VFR flight situation.
	Your host is Rob Reider. Rob is an instrument rated pilot and an aviation enthusiast. He serves as announcer for various air shows and also hosts many other Sporty's programs, including the What You Should Know private pilot series.
	So, sit back and enjoyour program of actual VFR Radio Communications.
ROB:	Hi, I'm Rob Reider. Welcome to Sporty's program on VFR Radio Communications. In this program we will explore what makes up good radio communication. You will ride along with three VFR pilots as they fly in the real world of general aviation. You will see and hear them demonstrating proper communication communication techniques at various airports and in different cross country situations.
	But first, let's begin with an overview of good radio communication procedures.
	The idea is to be able to speak clearly and avoid misunderstanding. The following discussion outlines the key ingredients necessary for good communication.
	Have you ever heard a pilot make an initial call up something like this? "Aahh Cincinnati Approach, aahh, this is november 702 sierra papa, ah, were about 20 miles east of the airport, ah, landing."

Remember the four Ws: who you are calling, who you are, where

The proper way to initiate communication with ATC is to give your location, aircraft type, altitude, what you want to do, and if you have ATIS.

Eliminate unnecessary words like, 'ah', 'this is', 'at', 'over', and the like.

The correct way to make initial contact with ATC might go something like this; "Cincinnati approach, Aztec 702 sierra papa, 20 miles east, two thousand five hundred, landing Lunken with uniform." Don't say it like a chattering machine gun. Speak clearly!

ATC will be much more likely to assist you, especially in busy times. They realize, by your good communication technique, that you will not mess up the system. You communicate like a professional.

A high-quality headset is an invaluable tool to help achieve good communication. It allows you to hear the transmission without all the background noise that the normal flying environment generates. A good head set, with a boom mike, makes speaking all the easier since it eliminates the pilot having to reach for and hold the mike. A good headset will also provide hearing protection, saving you from possible hearing problems in the future.

There is a proper way to pronounce the letters of the alphabet and numerals. For example, when giving your aircraft number use the phonetic alphabet constructed by ICAO, the International Civil Aviation Organization. At first this may sound strange to you, but it really helps to reduce misunderstanding, especially during adverse communications conditions.

Each of the letters of the alphabet has a corresponding phonetic to help clarify it. For example, a, b, c is pronounced "alfah, brahvoh, charlee." The list of alphabet and numeral phonetics can be found in the Aeronautical Information Manual.

All U.S. registered aircraft numbers begin with an 'N'. For brevity, the 'N' is eliminated in your transmission. The proper way to say the registration number for N702SP would be "seven zero two sierra papa."

Another way to help avoid confusion in communication is to obtain a copy of the Pilot/Controller Glossary, often found in the back of the Aeronautical Information Manual. This will familiarize you with many of the common words and phrases that are used in the world of aviation.

Here are a few important behaviors to note in order to improve your communication skills:

When you are ready to transmit, listen for a few seconds before you key the mike. Another communication on your selected frequency may be in progress. If you call when the frequency is occupied, you will be doubling with the other operator and thus interfering with his communication.

Think out what you want to say before you initiate the call. This will prevent hesitation, unnecessary words, and will clarify your ideas prior to making the contact.

Whatever type of mike you are using, keep it close to your lips. This will help to block background aircraft noises from distorting your communication.

If you don't get an immediate response to your call-up, wait a few seconds before trying again. The person on the other end may be occupied at the moment.

In sections of our program that follow, we'll introduce you to our three general aviation pilots.

Let's begin with one communicating at and around the local airport.

George is a retired airline pilot. For years he flew for the major air carriers. Since retiring, he enjoys flying his 1954, green and grey Piper Pacer around the local area. George says it's fun to fly without a schedule. He likes to cruise at a lower altitude so he can enjoy the countryside.

The peaceful, late summer morning seemed to invite a pre breakfast flight. The day is clear. The winds, calm. Ground fog fills the river valley.

Before arriving at the airport, he checked out the morning TV news to catch the local weather. Everything looked good for the day with no chance of IFR weather or strong winds.

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George keeps his pacer based at Clermont County airport located in Batavia, Ohio. He likes the modern facilities and the friendly folks who run the airport.

On arrival, to assure himself that his earlier weather conclusion was correct, he calls flight service for a weather briefing.

Even though the weather looks great outside, its a good idea, before every flight, to check with flight service for at least an overview of the present and future conditions and the possibility of any TFRs. Looking out the window can work in some cases, but it's not a good habit to get into. It doesn't take much time to call the toll free, FSS phone number, 1-800-WX-BRIEF, for an analysis of the local conditions. Even if you're only doing touch and goes, make it a practice to call.

A Temporary Flight Restriction, or TFR, is a type of NOTAM. It defines an area restricted to air travel due to a hazardous condition, a special event, or a General warning for the entire FAA airspace.

The text of the TFR contains the fine points of the restriction. You can find the list of TFRs on the FAA's website, or get them through a standard briefing.

It's also important for you to learn as much as possible about weather interpretation. You do this by taking time to observe weather phenomena and then comparing what you see with the actual METARs and other weather data available at that moment. This knowledge will make you a safer and more confident pilot.

After starting the pacer, George sets up the radios for the local area. Before taxing out to the active, he monitors the local CTAF frequency, 122.975 at Clermont County airport, to be alert to what other aircraft are doing in the vicinity. He then calls on the frequency for a radio check.

CTAF is an acronym for Common Traffic Advisory Frequency. It allows pilots to communicate their intentions in the environment of a non-towered airport.

At some airports, CTAF and UNICOM is the same frequency. The CTAF frequency on the sectional is indicated by a circle with a "C" in the center. To give an advisory of your intention and position, call on CTAF by starting your communication with "Georgetown

traffic". If you want information regarding the airport and its environment, call on the UNICOM frequency with the phrase, "Georgetown UNICOM."

The CTAF frequency is not for casual chatter between the pilots of different aircraft or personnel on the ground. Non-essential communication on this frequency may block an important radio call that is critical to someone's safety.

Never engage in idle chit-chat on any ATC frequency.

Before departure, George verifies his transponder is set to one two zero zero, the VFR code, and turns it on.

The transponder is a great communication device. It provides your aircraft with a higher degree of safety in an increasingly complex environment. Your transponder makes your aircraft much more visible on a controller's radar screen. He can easily track and alert you or other aircraft to the whereabouts of nearby traffic.

Traffic information can also be sent directly to the cockpit of a properly equipped aircraft.

Run-up complete, George calls again on 122.975. George repeats who he is talking to at the end of his transmission to ensure that everyone in the area realizes where he is located. This is an optional addition to your call. If the communication is long, it may be best to omit it for the sake of brevity.

It's a good idea to announce your intentions after takeoff. Are you remaining in the pattern? Are you departing the area? Since George is going out to the local practice area he makes that call.

It's interesting to listen to and observe the various communication situations that arise in the vicinity of an airport.

Returning to Clermont, and about ten miles east of the airport, George radios his intention for a full stop landing.

Two miles from the airport George announces that he is entering left downwind to runway two two.

He continues to announce his position on base and final as well.

Off the active, George announces he is clear of the runway. He then taxis to the refueling area.

Correct communication is safety insurance. Adhering to the proper communication protocol, tells everyone you are a knowledgeable and professional pilot - a good example to all around you.

In our second flight, you will ride along on a cross country from a tower controlled airport to a non towered airport. The latter is sometimes referred to as a pilot controlled field.

David, a pilot based at Lunken airport in Cincinnati, wants to fly to Georgetown Scott County Marshall Airport to visit family. His mom and dad live in Georgetown, Kentucky. David owns a Cirrus SR 20.

The Cirrus is equipped with an Avidyne Flightmax EX5000C, a fully integrated multi-function display. It can show multiple information systems such as: terrain awareness, satellite weather, lightning information, engine instruments, electronic approach plates, traffic information and topography.

Along with the EX5000C, the Cirrus is equipped with the Flightmax Entegra primary flight display. The liquid crystal display shows all the various flight instruments.

David's Cirrus also includes a suite of Garmin avionics.

Before his flight, David checks out the weather with his home computer on DUATS.

If you have an internet connection, you can access a weather briefing, do your flight planning, and file your flight plan on DUATS, an acronym for the FAA's Direct User Access Terminal Service for pilots.

The service allows you to obtain a self briefing and file your flight plan prior to flying....And it's free To qualified pilots.

There are two separate DUAT vendors providing this service for the FAA. Check them out on the internet for more information and to sign up.

The information David receives is encouraging. Conditions will remain VFR with an overcast sky. Visibilities are predicted to be good throughout the day. He notes that the wind will remain brisk but should not present a problem at either Lunken or Georgetown. David files his flight plan with DUATS as well.

Since his Cirrus is equipped with a GPS system, he decides to fly from Lunken direct to the Georgetown area.

Communication is made easier if you are thoroughly prepared for the flight. Even though he has a full complement of electronic tools at his disposal, David uses a sectional and the runway diagrams found in the Airport/Facility Directory to keep himself oriented at all times to what is going on.

With the taxi diagram in hand, it is much easier to understand and follow the directives of ground control.

After a thorough preflight of his Cirrus, he monitors Lunken ATIS.

Satisfied that his preparation is complete, David contacts ground, which also functions as clearance delivery at Lunken. He informs the controller that he is ready to taxi and requests flight following en route.

Not all of your requests to ATC will be immediately granted. Various factors go into the controllers decision making. In this case, ground control doesn't confirm David's request for flight following but let's him know that he can expect flight following after he is airborne.

Ground control gives David directions to the active runway. The directives were complex, and not wanting to make a mistake, David requests clarification.

Don't hesitate to ask the controller to repeat any part of a clearance that is not completely understood.

As he taxies, David continues to monitor ground in case there are any further instructions. Unexpectedly, ground decides to amend his initial taxi instructions.

Besides using the taxi diagrams in the Airport/ Facility Directory, David's Cirrus is equipped with electronic taxi diagrams on his multi function display. It can also provide all the aircraft's checklists as well.

Runup complete, David activates his flight plan with the Dayton RCO on 122.4.

An RCO, a Remote Communications Outlet, is a local facility that will connect your radio to flight service via a telephone line. This enables a pilot located on a satellite airport to easily talk with flight service.

Check your sectional or Airport/Facility Directory to see if there is an RCO in your area.

David changes to tower prior to takeoff for permission to depart.

Tower clears David to cross runway 25 and to depart on runway 21 left.

Lunken lies under the Cincinnati Class B airspace. The base of this airspace is 3,500 feet over Lunken, but changes to 5,000 feet ten miles south of Lunken. By climbing slowly to 3,500, David can easily stay out of the Class B. Nonetheless, he must have an operating Mode C Transponder, because he is within the 30 nautical mile radius of Cincinnati.

After departure, David requests tower for a change of frequency to Cincinnati approach. He realizes that the tower did not relay his request for flight following.

David calls up Cincinnati approach and requests flight following.

Cincinnati approach acknowledges his call and gives him a transponder code.

Approach contacts David and gives him a position report and reminds him to remain VFR.

Just out of the Cincinnati controlled air space, approach contacts David and cancels flight following.

South of Falmouth VOR, David decides to contact Louisville flight service for a weather update. To do this, he turns up the volume on his VOR receiver and calls on 122.1. This is a receive only frequency for flight service. They will answer him over the VOR frequency of 117.0.

Georgetown has an AWOS, an automated weather observing system. David tunes in the frequency and monitors the information.

Many airports in the U.S. Have automated weather information

available to the pilot. Depending on their complexity, the facility may be classified as either an ASOS, AWOS or the newer AWSS system.

About ten miles out, David dials up Georgetown on 123.0 and requests an airport advisory.

David calls Georgetown CTAF and reports that he will enter the downwind to runway 3.

David enters left downwind to runway 3 and calls his position.

He continues to make the standard position calls on base and final.

On landing, David clears the active and taxis to the fixed base operations area where he will top off the Cirrus.

After shutting down the engine, David calls flight service on his cell phone to close his VFR flight plan.

If you call the 1-800-WX-BRIEF number on your cell phone, you will be automatically connected to the closest flight service station in your phone's registered area.

However, if your cell phone is registered in Cincinnati, Ohio and you are in Denver, Colorado, calling the universal phone number will connect you with Dayton, Ohio flight service, not Denver.

If your cell phone is not registered from the area in which you are calling, you can call an individual Automated Flight Service Station toll-free number. This allows you to reach any specific AFSS with your cell phone.

You can find the toll-free phone number of a flight service station in your area in the appropriate Airport/Facility Directory. If you are an AOPA member, you can access the number via their Online Airport Directory.

It's always a great feeling when a flight comes off the way it was planned. But a flight's success is no accident. David knew where to find all the necessary information to make a good go-nogo decision. He communicated with, and received information from all the pertinent sources, to guarantee his success.

In our third flight, the pilot will fly from a Class B airport to a Class C airport.

John intends to fly from Cincinnati/Northern Kentucky International to Indianapolis International. He owns and operates a local department store and needs to conduct business In the Indianapolis area.

He owns a well equipped Cessna Centurion 210 which he bases at a greater Cincinnati FBO facility.

At home, before the flight, john gets a standard weather briefing by calling 1-800-WX-BRIEF.

He also files his VFR flight plan.

Arriving at greater Cincinnati, he again checks the weather on the FBO's commercial weather service.

After a thorough preflight, he activates his flight plan on his cell phone with Louisville FSS.

John filed vector 97 to Shelbyville VOR direct to Indianapolis.

With his in-cockpit preflight completed, he prepares for departure by monitoring ATIS.

Having copied the necessary information from the ATIS, john calls clearance delivery to obtain his clearance. He sets the runway heading into the HSI.

Ready to taxi, John contacts ground for instructions and directions to the active runway.

Ground instructs John to taxi to runway 27.

In a large airport, it's not always easy to find your way around. If you think you are going to have difficulty, ask the controller for progressive taxi instructions. If you don't understand his transmission completely, ask him to clarify or repeat his directive.

Prior to takeoff, John conducts a complete runup using his checklist. That being completed, he calls tower for clearance to takeoff.

Tower clears him onto the runway but not to depart. Other traffic is landing on an adjacent runway.

With the arriving traffic out of the picture, tower clears John for takeoff.

Climbing out, tower hands him over to Cincinnati departure.

Departure gives him further instructions.

John's 210 is equipped with a pair of Garmin GNS 430s. He enters direct to the Shelbyville VOR to proceed on course. The secondary GPS is set to the map display function showing his route of flight.

Level at 6500, John pulls out his sectional and selects the Shelbyville VOR frequency, 112.0. He then adjusts the OBS on the VOR head to his course heading of 305 degrees. This provides a navigational backup should a GPS problem occur.

Approaching Shelbyville, John decides to check the local weather on ASOS. Using the Garmin 430, he selects Shelbyville airport and looks up its airport information.

He keeps the volume up on his primary radio so he can hear any directive air traffic control might have for him.

Using the Airport/Facility Directory for Indianapolis International, John goes over again some of the pertinent information about the airport.

Satisfied, he monitors Indianapolis ATIS.

Shortly after, John is handed off to Indianapolis approach on 124.95.

He contacts approach who gives him further information and directives.

Indianapolis approach hands him off to the next sector controller who gives him vectors for the approach to the airport.

The controller alerts him to traffic in the area.

John is handed off to Indianapolis tower and cleared to land on runway 23 left.

On the way in, the controller communicates instructions to other aircraft in the system. It's important to listen carefully to all the communications so you know what is going on. Also, you don't want the controller to have to call you twice because you weren't paying attention.

Having landed, John is asked where he wants to go on the airport and to contact ground.

On contacting ground John asks to taxi to the general aviation FBO. He also requests that his VFR flight plan be closed with flight service.

The directives from ground to taxi to the FBO are complex. It's always a good idea to have a pictorial diagram of the airport to help you find your way around.

Arm yourself with a legible diagram. You can find diagrams for many airports in the Airport/Facility Directory. Taxiway diagrams can also be downloaded for free from the National Aeronautical Charting Office website. AOPA members can download them as well from their website. Check around on the internet for other good sources.

John arrives at the FBO where he is ushered to a tie down spot.

The smoothness of his well planned and executed flight is the result, in part, of his thorough knowledge of proper radio communication procedures.

A successful flight is always the product of good preparation and attention to detail. John is a fine example of an all around VFR pilot - well versed in every aspect of the aviator's art.

You are on a cross country flight and ATC tells You to contact approach on a different frequency. After tuning it in you get no response. What to do?

Check your audio panel to ensure you are on the proper radio.

Go back to the previous frequency.

If both procedures fail, further troubleshoot the system by checking for a stuck mike and that the radio volume is turned up.

If your radio has completely failed, divert to a pilot-controlled field unless other circumstances require a landing at a towered field.

If your destination has a control tower, follow the procedure set out in the regs for getting their attention and follow the light gun signals to a landing. If your radio fails while en route to a pilot-controlled field, continue on, but be extra alert when entering the pattern. Remember, twoway radio communication is not required.

This scenario brings up an interesting point - the use of a handheld aviation transceiver.

In a communication out emergency they are worth their weight in gold. Now-a-days, these transceivers are reasonably priced and could certainly get you out of a touchy situation.

Well, that concludes our discussion of VFR Radio Communications. If you follow the guidelines presented in this program you will be able to communicate in a professional manner. Remember that good communication skills will not only give you confidence in flying the system, but will help keep you, and others, safe....Until next time I'm Rob Reider...So long.