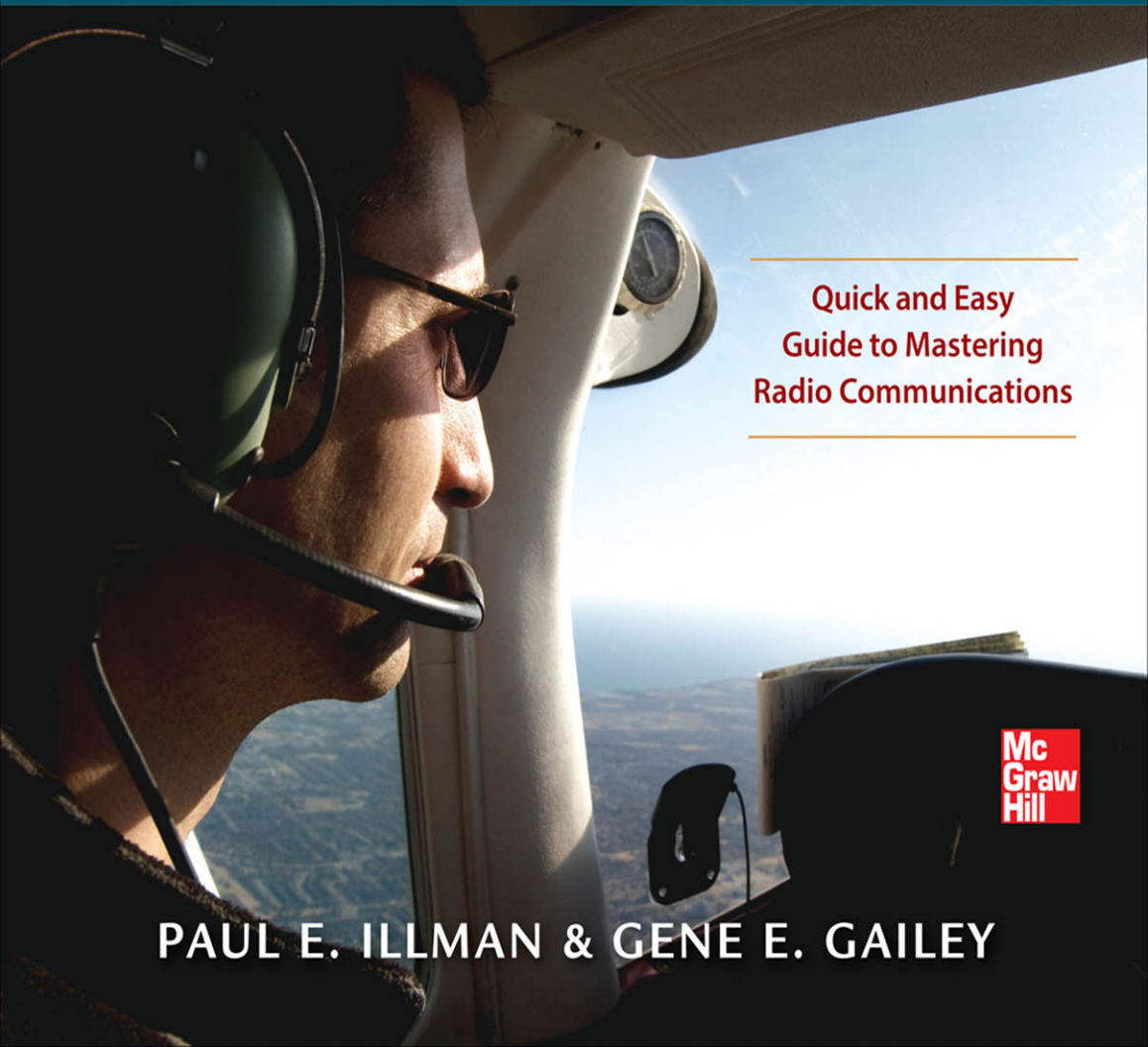
Sixth Edition

The PILOT'S RADIO COMMUNICATIONS HANDBOOK



Quick and Easy Guide to Mastering Radio Communications

PAUL E. ILLMAN & GENE E. GAILEY

McGraw Hill

The Pilot's Radio Communications Handbook

About the Authors

Paul E. Illman wrote *The Pilot's Air Traffic Control Handbook*, Third Edition, as well as *The Pilot's Communications Handbook*, Fifth Edition. An active pilot for more than 50 years, he was certified to fly single- and multiple-engine commercial aircraft. Employed by TWA for more than 30 years in various management capacities, Mr. Illman was a member of the Aircraft Owners and Pilots Association, The United States Pilots Association, and The Kansas Pilots Association.

Gene E. Gailey has been a pilot for more than 43 years, including serving his local sheriff's department Aero Squadron for the past 26 years in positions of volunteer member, commander, and search-and-rescue pilot. He is also a long-time member of the Aircraft Owners and Pilots Association.

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BRIEF CONTENTS

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CONTENTS

INTRODUCTION

A pilot must have a memory developed to absolute perfection. But there are two higher qualities, which he also must have. He must have good and quick judgement and decision, and a cool calm courage that no peril can shake. —Mark Twain in *Life on the Mississippi.*

This sixth edition is an update of its predecessors, and at the same time it is combining the experience and research of Paul E. (Pete) Illman and co-author Gene E. Gailey.

The air is filled today with pilots of all levels of experience, knowledge, and training. There are those who learned to fly at some uncontrolled single-strip airport and are still reluctant to venture too far from that uncomplicated harbor. There are those who mastered the private test at a busy controlled airport. There are the old-timers who never lost the flying bug but couldn't afford the luxury until their later years. And there are the pros: the airline Captains and First Officers, the executive pilots, the flight instructors, and the commercial pilots who work charters or are involved in some other money-making enterprise.

The list is hardly complete. Suffice it to say that even with exorbitant fuel and maintenance costs there are a lot of us in the air—some good, some not-so-good, and some in-between.

What's the common denominator we all share? Probably the critical one is safety—and all that safety implies. Just below safety may be the freedom that piloting your own (or rented) aircraft brings: the freedom to go places with reasonable economy and speed, and the freedom to get from here to there unencumbered by traffic lights, speed traps, and highway congestion. Only the pilot enjoys the true freedom of space, distance, and speed in getting from Point A to Point B.

A question, though, is the extent to which we take advantage of the benefits that flying the Cessna, the Cherokee, the Cirrus, the Bonanza, the Light Sport Aircraft, and many other airplanes offer us. Said another way: how many of us find ourselves limited to the local traffic pattern or a few short hops to an uncontrolled airport because the big ones scare us? Or, how many of us use—or know how to use—Approach Control, Center, or the Flight Service

Stations? How many of us understand radio procedures and have mastered the techniques of pilot radio communications that make use of these various facilities possible?

Considering the emphasis placed on pilot training, medical qualification, aircraft maintenance, operation rules and regulations, and the like, it would seem that at least a somewhat similar emphasis should be directed to pilot radio communication skills. For whatever reason, such is not the case. The literature on the subject is too sparse, the examples of radio dialogue too few, and explanations of what to say and how to say it too incomplete.

Theoretically, a book on radio communications shouldn't be necessary; the subject should be an important part of every pilot's training. Innumerable discussions with controllers, airline pilots, instructors, and ordinary weekend excursionists, however, indicate just the opposite. According to the pros and amateurs alike, the airwaves suffer from communications misuse, nonuse, or overuse. If such is the case, there can be little doubt that a void exists—a void whether in the literature available, the pilot training process, or both.

In the effort to fill in the void, this book's primary goal has been to:

- Contribute to increased safety in flight through timely and correctly-worded communications
- Equip the student and licensed pilot with the knowledge of radio communications and the various ground facilities so that his or her flight horizons are expanded beyond the local controlled or uncontrolled airport in a safe and enjoyable manner—and to the level of mastering radio communications.

Designed primarily, but not exclusively, for the VFR pilot, this book discusses the whole spectrum of radio facilities and communication responsibilities. First, there is MULTICOM, where only aircraft-to-aircraft self-announce messages are exchanged. Then comes a similar treatment of UNICOM, followed by Flight Service Stations, Ground Control, Tower, Approach/Departure Control, and the Air Route Traffic Control Centers.

In this book, accompanying the discussion of the various facilities are explanations of what each does, how to determine the proper frequencies, and, most importantly, examples of what the pilot should say to contact each facility, what he or she should expect to hear, and how he or she should respond.

When McGraw-Hill Publishing Company's Senior Editor, Mr. Larry Hager, asked me to combine the decades of aviation flying and writing experiences of the late, Mr. Paul E. (Pete) Illman, along with my own, to update the sixth edition of Mr. Illman's book, I naturally jumped at the opportunity without hesitating.

I must admit that I was shocked to hear that Mr. Illman had passed away. For me, although I never had the opportunity to meet or talk to Mr. Illman, it was like losing a friend. For many years I have been a fan of his books, especially this one. Pete Illman had the ability to make me feel as if I was in the cockpit with him as he explained the different examples and situations related to aviation communication. I also felt as if we had so much in common, with the passion we each have known and felt for aviation in general over several years, and especially with aviation training and radio communications. I felt honored when asked if I would take on the project of updating this great book; it was a blessing.

I should add that when I write the words "we" and "our" in this book, as I refer to different situations and examples, please understand that I in no way want to construe to any reader that I have conversed with Mr. Illman about the topic at hand. Instead, I have worked to convey a point based on my own experiences along with what I have learned from Mr. Illman's writings, and believe to be his thoughts, feelings, and/or desires. One more thing, when you read text that states "we" yet pertains to the mid-west, such as Kansas, Missouri, etc., you can basically know that it is more related to Pete's experiences, whereas anything about the western states, such as California, Oregon, etc. are experiences of mine.

The hope is that you will choose to put a worthy effort into achieving your aviation goals, whatever they may be. Hopefully you have a goal to master radio communications; to see proper radio communications as an enjoyable challenge, one that is actually easy to obtain, easier than most people realize—and one that will make flying an airplane much more enjoyable for you.

As people closely acquainted with aviation understand, changes in aviation are inevitable and happen quite frequently. The FAA (Federal Aviation Administration) is well known for changing and updating policies and procedures. A writer of any facet of aviation knows that he or she must accept that fact, and be able to revise and update material as needed to stay current. To not do so, quickly leaves material outdated, and aviation material that is outdated can cause mistakes. As we all know, mistakes in aviation can have grave consequences; therefore, there is a certain responsibility placed on writers to provide current information. It is in accepting that responsibility that I've looked forward to researching and presenting this edition.

In closing, I would like to add two things. The first is that I took the liberty to make some changes (hopefully all positive) to this book. I added a glossary, three appendixes, quotes that I found interesting (and applicable), placed at the beginning of each chapter, and an additional text chapter on "Communications and Emergencies."

Appendix A consists of the "International Phonetic Alphabet," which is widely used in aviation. Appendix B, in which I added aviation-related Web sites, and more, resulted in "Abbreviations, Acronyms and Web Sites." Appendix C is "Additional Phraseology Examples" derived from tables of information in the *AIM* (*Aeronautical Information Manual*). I also revised Chapter 1 to focus on steps to mastering aviation radio communications, which is based on my own experiences along with input I received from Mr. Illman's writings.

With a solid commitment by you to devote your time and energy to following the steps in Chapter 1, there should be no doubt in your mind that you can quickly master radio aviation communications—faster than you first thought possible. I hope you are as excited as I am in knowing that your goal is within reach by following the steps provided in this book.

… and may the winds always be at your back.

Gene E. Gailey

ACKNOWLEDGMENTS

In previous editions of this book, the late author Mr. Paul E. "Pete" Illman, gave his very sincere thanks to the many people who contributed so willingly their time and efforts in making this book possible. Many of those listed were employed by the FAA (Federal Aviation Administration), which helped to establish a solid foundation for this book. I too would like to thank those contributors as I recognize that their efforts helped make this book's many editions a major success.

The book, now in its sixth edition, has been for me both challenging and rewarding. It has been challenging to write, revise, and update this edition due to the high level of achievement that was set previously with the help of so many quality people. The rewards for me have come from the many new friendships that developed along the way—and it is those relationships and friendships that make up the heart and soul of writing this book.

Besides the FAA employees and many other previous contributors, I want to thank McGraw-Hill Publishing Company's diligent staff. They include Mr. Larry Hager, Senior Editor, and his Editorial Assistant, Ms. Bridget Thoreson. They were always encouraging and supportive—there whenever I had a question. Thank you, Larry and Bridget. A special thanks also to the terrific production staff, including Mr. Jeff Weeks, Art Director-Cover.

Additional thanks goes to the control tower staff at the San Luis Obispo Airport, in San Luis Obispo, California. The entire group is tremendous, always helpful, pleasant, and thoughtful when I called or stopped by with questions. Their consistent graciousness truly represents the many caring and thoughtful air traffic controllers that day-in and day-out carefully and professionally serve the aviation community. A special thanks to Bill, Ellen, Joe, Dylan, and John. You are appreciated.

Of course, it is with heartfelt thanks that I also express my appreciation to my supportive family, who put up with me neglecting them much too often. Yet, in spite of it all, they continued to motivate and encourage. Thanks especially to my wife, Cathy, a tremendous editor and motivator (pusher is more like it), to my two sons, Todd and Tim, who consistently provided helpful input, to my grandchildren and future pilots, London, Carson, and Triston, and to our cousin, Richard Bast, who is a terrific aeronautical researcher and true aviation fan.

Last but not least, I want to thank my good friend and fellow aviator, Ryan Godfrey, who is one of those aeronautical genius-types; the do-anything-type guy you rarely meet in a lifetime. Ryan's skills in an airplane, along with his computer desktop publishing, writing, and editing skills, are beyond amazing. Thanks Ryan for participating in this journey with me; your energy, efforts, ideas, and continued thoughtfulness are so much appreciated that words don't come close.

I hope I haven't forgotten anyone who has personally helped with this edition; if so, please forgive me. To all who have encouraged me and contributed to this effort, past and present, I would like to again send my expressions of appreciation and gratitude; thank you!

Gene E. Gailey

CHAPTER 1

Mastering Aviation Radio Communications

"Once you have tasted flight, you will walk the earth with your eyes turned skyward. For there you have been, and there you long to return." —LEONARDO DA VINCI

Proper radio procedures are perhaps the most overlooked and underemphasized subject in pilot training programs. Over the years, survey after survey has consistently confirmed that about 9 out of every 10 pilots feel that radio communications is the hardest part of flying. It would be rare to find a pilot who has not felt uncomfortable or nervous at some point when talking on an aircraft's radio. Like anything else, with a little practice those butterflies somehow seem to just disappear. Some people associate talking on the radio with speaking to a large audience, very nerve-racking to say the least.

Without exaggeration, aviation radio communications is the subject that probably receives the least amount of attention and explanation of all of a pilot's flight training. The FAA (Federal Aviation Administration) publication known as the *AIM*, or *Aeronautical Information Manual*, takes a stab at a few examples, but in our opinion, the examples are far too limited for proper procedure guidance. We will therefore do our best to teach the proper phraseology, as well as policies and procedures, by supporting our lessons with references and consistently striving to give you the best possible instruction on aviation radio communications.

The problem found with flight training is that very little time is spent on radio communication; often just the basics to get through the pending test ride are covered. When you really stop to think about it, how much time do you spend talking on the radio on a flight? There's Ground Control, maybe 20 seconds, and then there's the tower's air traffic controller (known as the Local Controller) for takeoff clearance, perhaps another 20 seconds. If you start adding up the one, two, or three

5 to 10 seconds of dialogue by you and the tower, you will find that it really does not add up to much in an hour's flight. Perhaps shooting touch-and-goes for an hour, plus taxi time, may total about 8 to 10 minutes of dialogue, but even so, the total time is minimal. Over a course of 40 flight instruction hours, you still will end up with an amount of air time that is minimal considering the level of safety involved in this aspect of flying. Communications training impacts the pilot's level of safety and overall flight professionalism to the point that it deserves to be given much more than minimal time and effort. Hopefully, instructors, new pilots, and/or experienced pilots will soon realize the need for quality effort in utilizing proper aviation radio communications after giving some thought to the subject, or perhaps after reading this book. Also a few minutes of listening on a handheld radio at an airport will quickly demonstrate to any pilot that there is a wide difference in radio communications, which ultimately reflects on the level of training received and the personal desire to strive for quality radio communications.

This is where the book comes in: to work with you and to help you by providing the important information that you will need in order to confidently maneuver your aircraft in today's airspace. Our hope is that you will feel that comfortable confidence deep inside that says you're okay with this; you've mastered aviation radio communications and you know it.

A Few Words about Phraseology

As we begin illustrating the various radio calls we want to be sure that some basic phraseology principles are understood. There's nothing difficult about it, but there is a certain standardization that is both accepted and expected. In a few cases, reasonable variations are, of course, permissible. The examples that follow in this book, however, generally reflect the approved wording and structure as mandated by the *Aeronautical Information Manual* (*AIM*) and the FAA's *Air Traffic Control Manual, 7110.65*, for controllers.

Take some time while reading this section to review the following appendixes at the back of the book:

- Appendix A—International Phonetic Alphabet
- Appendix B—Abbreviations, Acronyms, and Web sites
- Appendix C—Additional Phraseology Examples

You will note that at times we use the aircraft's type and full N-number, such as "Cherokee One Four Six One Tango." On other occasions, it's "Cherokee Six One Tango." What's the difference? When making the initial contact with each controller

(Ground Control, Tower, Approach and Departure facilities, each Center sector, etc.), the type of aircraft should be identified and its full N-number given (just in case the controller is handling another aircraft with a call sign of "Six One Tango," a distinct possibility in congested areas). The FAA mandates in the *AIM* that you may shorten the call sign such as "Cherokee Six One Tango" *after* the controller does. Once the controller abbreviates your call sign, there's no point in giving the complete identification in subsequent calls to the same controller. However, many pilots do not properly follow this mandate, and will shorten their call sign before the controller does, and also at UNICOM and MULTICOM airports, even though the FAA specifically demonstrates in several examples in the *AIM* that the entire call sign is not to be shortened after an initial call to the field, but that proper phraseology calls for it to remain as a complete call sign number and letters. The FAA also mandates in the *AIM*'s Section 4-1-9-h-1-c that pilots are to "speak slowly and distinctly . . . in communicating with a UNICOM station. . . ."

Yes, many pilots believe that a fair amount of verbal shorthand is acceptable, knowing at the same time that it is not necessarily correct. Old habits are hard to break, which is why we emphasize not to get started by using slang. Despite this phraseology latitude exercised by pilots (and perhaps even tolerated by the FAA), we have chosen not to take such liberties in the communication examples. The idea is to present the correct wording and phrasing here. The examples of phraseology we discuss are not suggestions for pilots; they are mandated standards that you should use. You will find that proper phraseology will quickly become very comfortable to you.

Additionally, we should point out that some information will be repeated in the book, perhaps a couple of times. Hopefully you will understand that repetition is a tool used to more easily learn and remember the information.

Foundation for Radio Communication

We are now at the point where we will discuss the "steps" to mastering aviation radio communication. Hopefully you either have had flight training or are working constructively on that goal. Radio communication is a major goal within itself, and we hope to help you establish a solid plan in setting and accomplishing that goal.

You should quickly know how to build upon what is verbally needed and expected from you while understanding what you verbally need and can expect from others. A pilot must know the *what, when, how,* and *why* of communication in order to master it. Pause for a moment and think about how they will apply to

your communications goal. The foundation necessary to learning how to master radio communications begins with learning, knowing, and applying the following sentences:

WHAT — needs to be said.
WHEN — it needs to be said.
HOW — it needs to be said.
WHY — it needs to be said.
WHAT — to expect to hear from others.
WHEN — to expect to hear it from others.
HOW — to expect to hear it from others.
WHY — to expect to hear it from others.

Making Radio Calls

Typically, anyone who starts using an aviation radio to transmit and receive the necessary calls for flying is going to be uncomfortable at first. Almost everyone has qualms when they make those first tentative calls, and almost everyone has messed up a transmission at one time or another. So what? Mistakes in flying an airplane can be fatal; mistakes on the radio are usually no more than embarrassing—if that. If you learn what to say, how to say it, and aren't apprehensive about asking a controller to "say again" or to "say it more slowly" when you haven't understood, you'll find that your flights will be safer, and you will feel more secure and confident. This will result with you having the confidence to venture into that tower-controlled airport you perhaps have been avoiding.

Mastering radio calls begins with knowing and applying that knowledge in a logical sequence so that you can say what you want to say and get off the air. Once the knowledge is acquired, the next step is practice, followed by more practice, until what you know intellectually becomes an ingrained habit. Knowledge coupled with practice will calm nerves and conquer whatever microphone fright you might experience. It comes down to walking before you can run. Before long you will come across as a professional.

Steps to Mastering Radio Communication

Becoming proficient at radio communication starts with having the right tools on hand. The following supplies and subscriptions are recommended to any pilot interested in truly mastering aviation communication:

Necessary Pilot Supplies

- *An FAA Sectional Chart (for the area in which you live)*: This chart provides extensive information related to airports, the ground and overall area around a selected area of airports, airspace, restricted areas, etc.
- *An FAA Terminal Area Chart (TAC)*: This chart provides detailed Class Bravo airport and airspace information for a specific Class B airport that is not available on the sectional chart.
- *An FAA Enroute Low Altitude Chart (E.L.A.C.)*: This chart provides information not found on sectional charts and terminal area charts such as Flight Service Station frequencies, VOR (Very high frequency Omnidirectional Range) airways, mileages between VORs, certain airport information, radio aids, and miscellaneous navigation information.
- *An FAA Airport/Facilities Directory (A/FD)*: The *A/FD* provides airport information not found on sectional charts such as an airport's mileage from the airport's city, runway lighting data, services available including fuel and repair capabilities, and traffic pattern altitudes.
- *A subscription to a couple of the most popular aviation magazines*: The subscription to these magazines provides a wealth of information on everything from communication to tips for smoother landings and will keep you up-to-date on new developments in the aviation community.
- *A Sporty's Pilot Shop catalog (www.sportys.com):* This free catalog is a good reference to the different supplies available to pilots to enhance their flying and serves as a great reference even if you don't plan on buying anything.
- *A subscription to airport-type publications:* These handy booklets provide detailed information on airports, approaching the airports with reporting points, what to expect on runway assignments depending on your location, taxiways, and businesses on the airport.
- *A membership to AOPA (Aircraft Owners and Pilots Association)*: This terrific association supports general aviation by providing many services to members, safety foundations, and discounts on products and insurance services, magazines with great training articles, etc.
- *A tri-fold kneeboard*: The tri-fold kneeboard provides a great platform for jotting down frequencies, altitudes, etc., and typically has side pockets for storing charts, notes, pens, pencils, small flashlights, etc.
- *A small voice recorder*: A great tool which allows for recording radio communications between ATC and pilots. The radio calls can be played back, serving as an excellent tool for studying and learning proper radio phraseology.

- *A handheld aviation transceiver radio*: An aviation transceiver radio will serve any pilot as a tremendous asset, especially if he or she experiences radio failure. It's also great for learning radio phraseology by monitoring airport frequencies.
- *An FAA Federal Aviation Regulations/Aeronautical Information Manual (FAR/AIM)*: This is a great FAA dual-publication that provides the pilot with the official federal aviation regulations along with detailed description of the national airspace system, procedures for conducting flight operations in the United States, and flight safety information.

Whatever time you spend looking over the charts and books listed above will come back to you tenfold in benefits. Of course, there is an endless list of items to consider obtaining, with some additional items that you will need and/or want to shop for, such as headsets and DVD training courses, which adds to the fun of being a pilot.

Visit Your Local Airport

Actually, visit several airports, several times—if you can. Hopefully you are not too far from a *controlled* airport, which is an airport with an operating control tower, and an *uncontrolled* airport, which is an airport without an operating control tower. Our suggestion is that you take a comfortable chair and ice chest with food and drinks, binoculars, handheld radio, kneeboard, voice recorder, note pad, and pens and pencils, and visit both types of airports.

First, focus on a particular set of activities if there is a lot going on at the airport. For instance, at a controlled airport, concentrate on taxiing aircraft. Listen to what Ground Control tells the pilots, depending on where they are taxiing from and to, and where their flight destination is. Then, perhaps on a different day, focus on planes taking off and what they are being directed to do depending on their direction of departure.

Perhaps on a later day, focus on arriving airplanes. You will soon notice that planes arriving from the south are repeatedly told one set of instructions, while planes from other directions are routinely told a different set of directions. What you will again notice after some time is that you will basically hear the same instructions over and over. Another day, focus on planes in the pattern. Again after a few hours, you will notice a specific set of instructions. Later when you listen to your voice recorder, the phraseology will be reaffirmed and you will become comfortable with it that much sooner. If you are able to monitor an Approach and Departure Control frequency, you will learn much from listening to it also.

Practicing Radio Communications

A very effective learning method is to use your voice recorder and do some role-playing. Write out a typical airport dialogue for the airport near you, or the one you fly out of. You can also use dialogues read from this book. So, sit in a chair, perhaps in front of a mirrored closet door. Put your headset on, along with your kneeboard. Practice dialogues just as if you are sitting in an aircraft, perhaps pretending as if you are the pilot and controller all in one. Make your initial call to Ground Control, and answer yourself as the controller would. Or pretend that you're in flight and want to land at your home airport for starters. Go through the same process, using your knowledge of radio procedures, and act out a series of scenarios on a mythical flight from the first contact with Ground Control until you have "landed," are off the active runway, and have called Ground again for taxi clearance. Perhaps you can get a friend or family member to read the controller's dialogue. When you have finished, play the tape back if you recorded your dialogues. Be your own worst critic. Be objective about the "dialogue." Ask yourself: "If I were a controller or another pilot listening to me, what would my impressions be?" If you're not satisfied, pick up the microphone and do it again. Even if you are satisfied, pick up the microphone and do it again. It will only help that much more.

If you practice enough, it won't be long before you will be getting the message across in the fewest possible words, with maximum clarity and proper phraseology. You might feel a little uncomfortable at first, sitting there talking to yourself, but that feeling will soon pass. Even if not, it's a small price to pay for greater confidence and increased expertise. The more you put into this and other methods, the more you will get out of them, and the sooner you will master radio communications.

Conclusion

We really don't think we're exaggerating the case and the need for greater communication skills among the pilot population. All one has to do is fly a few hours a week and keep an alert ear to what flows through the frequency. On any given day around a busy airport you will hear poor radio phraseology, everything from a terse "Okay," to a rambling recitation of totally unnecessary trivia.

When flight instructors (certainly not all, but entirely too many) fail to teach more than the absolute basics of radio procedures, it is probably due to the following reasons:

- The instructor isn't as confident about radio phraseology as he or she should be. This should be an unlikely reason, but, as just an example, many years ago,

when getting back into flying after an absence of a few years, co-author Pete Illman was told by a young CFI (Certified Flight Instructor) to always to begin his radio calls with "This is November 1461 Tango" and conclude with "Over." This was a shocking statement from a flight instructor, who really should know better. (So that we don't leave you wondering, "November" is typically used only by controllers when the pilot calling in hasn't identified his or her aircraft type, in which case the controller usually will come back with something similar to "November 1461 Tango, say type of aircraft." The principle here is: Always include your make of aircraft in at least the initial call-up, such as "Santa Barbara Approach, Cherokee One Four Six One Tango. . . ." The word "Over" is rarely used, but it can be helpful to indicate the end of an unusually lengthy transmission. Otherwise, it's not necessary, and you almost never hear it in normal pilot-controller dialogues.)

- The instructor should be professional when it comes to radio communications, but teaching the subject of communication takes time—mostly ground time, which is often neither profitable nor exciting for an instructor, so students too often learn just enough to get by and are left on their own to hopefully learn more of what is needed.

Mastering radio communication is a necessary effort, and the typical controller expects you to strive toward a high level of radio competence, just as you are striving to excel in other areas of your flying. Tape recordings comparing transmissions by professional pilots and inexperienced or inadequately-trained general aviation pilots illustrate the need for effective radiotelephone technique. A pilot, novice or experienced, can easily forget to tune his or her radio properly before transmitting, interrupt other transmissions, repeat unnecessary data, forget essential information, request instructions repeatedly, and create a general impression of cockpit disorganization. However, practice can make a big difference in your results. Obviously, most of us are not going to sound like the professionals who are flying almost daily, but we still need to strive for that professionalism level. Actually, in listening to professionals, you will soon realize that some don't set the best examples. Too often they take such incredible shortcuts that you will quickly realize that they are not even close to the level of clarity and true professionalism that the *AIM* directs us to be at. Learn from other's mistakes—and keep striving to be the very best you can be.

Many of us piloting aircraft in the air today sound good on the radio, but many also sound very bad, and of course, some are just okay. Which are you, or better yet, which do you want to be? Would you like to totally understand aviation radio

communication to the point that you know you have mastered it? Do you want that feeling of satisfaction that you feel deep inside when you know you've completed something to the best of your ability? Well, here's your chance to completely master aviation radio communication—and to enjoy that feeling of satisfaction deep within. Don't blow it; just set your goals and move forward; you can do this—and honestly, with a dedicated desire, it is going to be easier than you think. Enthusiasm makes the difference.

The sky is for all of us to enjoy. For those who like to venture forth, do it with confidence and professionalism. Radio skills are just one part of the flying experience that adds to your competence and, quite logically, creates an enjoyable level of professionalism that brings inner satisfaction for years to come, and that adds even further to the joy of flying.