FLIGHT TRAINING INSTRUCTION

VOICE COMMUNICATIONS SNFO

2011

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CHIEF OF NAVAL AIR TRAINING
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Subj: FLIGHT TRAINING INSTRUCTION, VOICE COMMUNICATIONS SNFO

1. CNATRA P-806 (Rev. 02-11) PAT, "Flight Training Instruction, Voice Communications SNFO" is issued for information, standardization of instruction, and guidance of all flight instructors and student aviators within the Naval Air Training Command.

2. This publication shall be used as an explanatory aid to the Primary and Intermediate Multi-Service Navigator Training System Flight curriculum. It will be the authority for the execution of all flight procedures and maneuvers therein contained.

3. Recommendations for changes shall be submitted via CNATRA TCR Form 1550/19 in accordance with CNATRAINST 1550.6E.

4. CNATRA P-806 (Rev. 04-04) PAT is hereby cancelled and superseded.

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Chief of Staff

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COMTRAWING SIX (200)

FLIGHT TRAINING INSTRUCTION

FOR

SNFO VOICE COMMUNICATIONS

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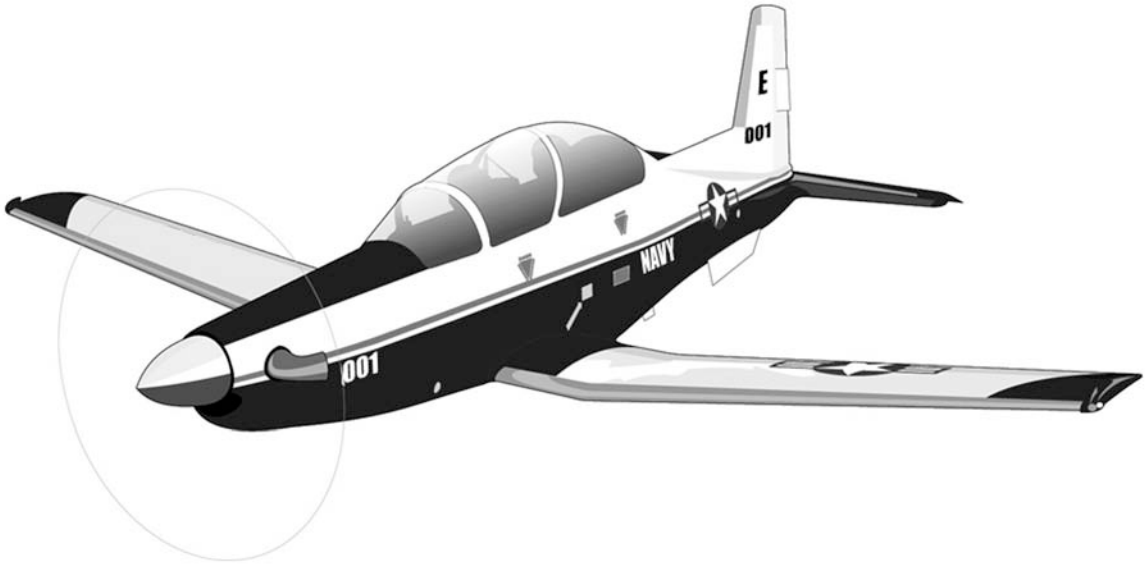

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INTERIM CHANGE SUMMARY

The following Changes have been previously incorporated in this manual:

CHANGE NUMBER	REMARKS/PURPOSE

The following interim Changes have been incorporated in this Change/Revision:

INTERIM CHANGE NUMBER	REMARKS/PURPOSE	ENTERED BY	DATE

FOREWORD

Course Objective

To provide the Student Naval Flight Officer with an understanding of radio communication procedures, techniques, and terminology. Mastery of these procedures will prepare students for primary training flights and lay the foundation for radio voice communication throughout one's military aviation career.

How to use this Student Guide

This Student Guide provides the information necessary to augment the instructor presentations. Numerous examples of standard radio communication are provided throughout the text. Appendices are included to summarize procedures concisely. When studying, it may be helpful for several students to act together as various controlling agencies utilizing the scripts provided.

While setting a foundation for all radio communication, this guide should in no way be the student's sole reference. All the publications listed below under "Reference Material" must be referenced in conjunction with this FTI.

Scope

This guide introduces the student to the basics of radio communication. As one's training progresses, these skills will be sharpened over time. While this guide introduces tactical military terms in the glossary, it does not illustrate tactical training examples. These skills will be developed in later stages of training.

Safety

Proper radio communications are paramount for successful and safe ground and flight operations.

Reference Material

1. FAA Aeronautical Information Manual (AIM)

2. FAA Pilot/Controller Glossary

3. FAA ATC 7110.65J

4. DoD Flight Information Publication – General Planning

5. DoD Flight Information Publication – Flight Information Handbook

6. COMTRAWING FIVE INSTRUCTION 3710.2S – Fixed Wing Operating Procedures

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TECHNIQUE AND TERMINOLOGY

100. INTRODUCTION

Welcome to the world of radio voice communications. This instruction presents a foundation for radio procedures and terminology that will be used throughout one's military aviation career. The overarching goal of radio communications is effective communication. Attributes of effective communication are clarity and conciseness.

Voice communications are a critical link in the air traffic control (ATC) system. However, failure to communicate effectively can break the link and bring disastrous results. Controlling agencies and aircrew must have a mutual understanding of each other's message. Although brevity is a fundamental part of military communications, it may not always be adequate. Therefore, use whatever words are necessary to get your message across. It is common to experience frustration with the use of this new language, but with experience, it will become second nature.

101. COMMUNICATION TECHNIQUE

There are several things to consider when using aircraft radios.

1. First, pause and listen before you transmit. This is especially important after switching radio frequencies. If you hear others talking, listen to their conversation and transmit only after their communication is completed. If you transmit before their communication is complete, it will disrupt the communication and/or jam the frequency with two transmissions at once, thus requiring the communication to be repeated. This situation is referred to as "stepping on" or "blocking."

2. Think before talking. In other words, know what you are going to say before keying the transmitter. Take one or two seconds to get your thoughts in order before transmitting. This should help prevent stuttering or forgetting what you wanted to say after keying the transmitter.

3. After your initial call, be patient for the controlling agency to respond. Give the controller a few seconds before calling again. The controller may be jotting down your call sign, looking for your flight plan, or listening on a different frequency.

4. If responding to a call from ATC, be sure to respond in a timely manner. ATC expects you to respond within a second or two, just like a normal conversation. When receiving clearances, frequencies, or other directive ATC calls, it is advisable to first repeat the information back to the controller and then write it down.

5. To avoid missing ATC radio calls, a technique that works well in the aircraft is to stop ICS communication when a controller or other aircrew talks on the radio. Initially, this is challenging but it becomes easier with practice.

6. Be alert to the sounds or lack of sounds in your receiver. If it sounds unusually quiet after having been on a frequency for a while, check your volume and frequency setting. Check your equipment to ensure that your microphone is not stuck in the transmit position. Frequency blockage can occur for extended periods of time because of unintentional transmitter operation. This situation is referred to as a "stuck mic."

7. Be sure you are within the performance range of station equipment. VHF and UHF radios are limited to "line-of-sight." Remember, as altitude increases, radio range increases. Use the chart in Figure 1-1 to approximate radio range.

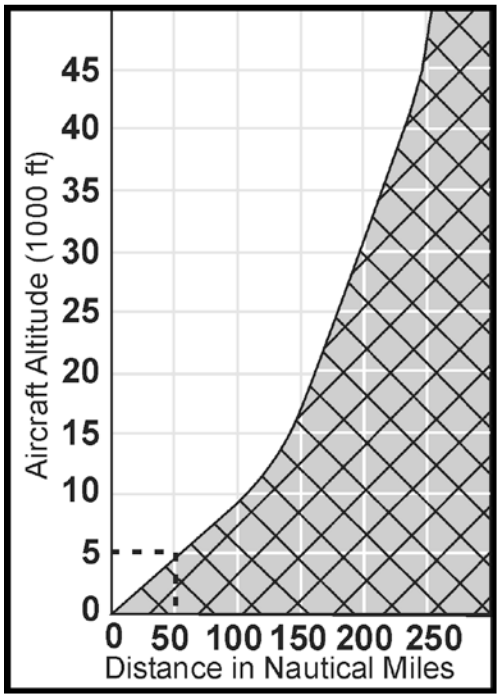


Figure 1-1 Radio Reception Range

8. Know what to expect. As you progress through each flight, it becomes easier to predict the required communication. Knowing what information to convey to ATC will result in smoother and more concise communications.

9. Use proper formats and terminology to assist you in making brief and concise transmissions. Good phraseology enhances safety and is a mark of a true professional. Knowledge of the FAA Pilot/Controller Glossary in the Aeronautical Information Manual (AIM) is a cornerstone to effective communication.

10. It is essential to keep transmissions as brief as possible. With that in mind, you will come across many phrases that convey no specific meaning or are redundant. Your goal is to never take up any extra transmission time. Here are a few examples of undesirable phrases to use on the radios.

1-2 TECHNIQUE AND TERMINOLOGY

- "Airborne"
- "With You"
- "Checking in"
- "Roger THAT…"
- "…feet…" (of altitude)
- "gear in transit"

102. PHONETIC ALPHABET

The International Civil Aviation Organization (ICAO) phonetic alphabet (Figure 1-2) is used to clarify communication. If control agencies have difficulty in understanding aircraft call signs during initial check in calls, aircrew can use the phonetic alphabet to spell out the call sign. Additionally, use the phonetic equivalents for single letters and to spell out groups of letters or difficult words during adverse communications conditions. When referring to NAVAIDs or airfields, it is recommended to use either the name of the facility or the phonetic spelling of the identifier. For example, the VORTAC at Mobile Downtown airport should be called "Brookley" or "Bravo Foxtrot Mike" instead of "BFM."

Radio communications have progressed to the point that numbers can be pronounced as you would in normal conversation. However, if you are transmitting on a garbled or static filled frequency, the numeral pronunciations in Figure 1-2 may clarify communication.

ICAO INTERNATIONAL PHONETIC ALPHABET/MORSE CODE

A	.–	Alfa	(**AL**-FAH)	S	...	Sierra	(SEE-**AIR**-RAH)
B	–...	Bravo	(**BRAH-VOH**)	T	–	Tango	(**TANG**-GO)
C	–.–.	Charlie	(**CHAR**-LEE) (or **SHAR**-LEE)	U	..–	Uniform	(**YOU**-NEE-FORM) (or **OO**-NEE-FORM)
D	–..	Delta	(**DELL**-TAH)	V	...–	Victor	(**VIK**-TAH)
E	.	Echo	(**ECK**-OH)	W	.––	Whiskey	(**WISS**-KEY)
F	..–.	Foxtrot	(**FOKS**-TROT)	X	–..–	Xray	(**ECKS**-RAY)
G	––.	Golf	(GOLF)	Y	–.––	Yankee	(**YANG**-KEE)
H	....	Hotel	(HOH-**TELL**)	Z	––..	Zulu	(**ZOO**-LOO)
I	..	India	(**IN**-DEE-AH)	1	.––––	Wun	
J	.–––	Juliett	(**JEW**-LEE-**ETT**)	2	..–––	Too	
K	–.–	Kilo	(**KEY**-LOH)	3	...––	Tree	
L	.–..	Lima	(**LEE**-MAH)	4	....–	Fow-er	
M	––	Mike	(MIKE)	5	.....	Fife	
N	–.	Novem-ber	(NO-**VEM**-BER)	6	–....	Six	
O	–––	Oscar	(**OSS**-CAH)	7	––...	Sev -en	
P	.––.	Papa	(PAH-**PAH**)	8	–––..	Ait	
Q	––.–	Quebec	(KEH-**BECK**)	9	––––.	Nin-er	
R	.–.	Romeo	(**ROW**-ME-OH)	0	–––––	Ze-ro	

Figure 1-2 Phonetic Alphabet/Morse Code

103. VERBALIZATION

1. **Call Signs**

a. **Controller Call Signs**

Use the full name of the station on initial contact

Example:

"SHERMAN CLEARANCE"

"RANDOLPH GROUND"

"ATLANTA CENTER"

b. **Aircraft Call Signs**

Annunciate each digit of your call sign

Example:

KATT 604 "KATT SIX ZERO FOUR"

NOTE

Throughout this instruction, numerous examples are presented that detail radio communications exactly as they are to be annunciated. The exception to this is aircraft call signs. Because of the numerous examples in this instruction, aircraft call signs have been left as "KATT 604," "BUCK 317," etc. However, they shall still be spoken as "KATT SIX ZERO FOUR," BUCK THREE ONE SEVEN," etc.

Improper or abbreviated aircraft call signs can result in aircrews executing a clearance intended for another aircraft. You must be certain that aircraft identification is complete and clear before taking action on an ATC clearance. At NAS Pensacola, beware of similar call signs. Many times a controller will tell you that an aircraft with a similar call sign is on your frequency.

Example:

CONTROLLER: "KATT 604, be advised KATT 614 is on the same frequency."

2. **Time**

FAA uses Coordinated Universal Time (UTC) or "Zulu" time for all operations. The word "local" shall be used to denote when local time is used during radio and communications. Time may be stated in minutes only (two figures) when no misunderstanding is likely to occur.

3. **Figures**

a. Numbers indicating hundreds and thousands in round numbers up to 9999 shall be spoken as follows:

Example:

500	"FIVE HUNDRED"
4500	"FOUR THOUSAND FIVE HUNDRED"

b. Numbers above 9999 shall be spoken by separating the digits preceding the word "thousand."

Example:

10,000	"ONE ZERO THOUSAND"
13,400	"ONE THREE THOUSAND FOUR HUNDRED"

c. All other numbers shall be transmitted by pronouncing each digit.

Example:

10	"ONE ZERO"

4. **Radio frequencies**

Radio frequencies contain decimal points, which may be referred to as "decimal" or "point"

Example:

322.1	"THREE TWO TWO DECIMAL ONE"
135.27	"ONE THREE FIVE POINT TWO SEVEN"

5. **Altimeter settings**

Altimeter settings contain a decimal point. The decimal point is always left out.

Example:

29.92	"TWO NINER NINER TWO"

6. **Altitudes and Flight Levels**

On initial contact, inform the controller of the aircraft's altitude preceded by the words "level," or "climbing to," or "descending to." In the U.S., the standard unit of measure for altitude is feet, so it is not necessary to annunciate the unit.

Up to but not including 18,000 feet MSL state the separate digits of the thousands, plus the hundreds, if appropriate. Altitudes will be stated to the nearest 100 feet.

Example:

12,000	"ONE TWO THOUSAND"

At and above 18,000 feet MSL, state the words "flight level" followed by the separate digits of the flight level.

Example:

19,000	"FLIGHT LEVEL ONE NINER ZERO"
19,700	"FLIGHT LEVEL ONE NINER SEVEN"

Report vacating an altitude. It is not necessary to report reaching an altitude unless this is requested of you.

Example:

DEPARTURE:	"BUCK 311, climb and maintain flight level two one zero."
SNFO:	"BUCK 311, leaving flight level one eight zero for flight level two one zero."

When making an initial check-in call while in a climb, you should acknowledge the altitude passing and the altitude cleared to by the previous controller.

Example:

You are passing 6000 for 9000:

SNFO:	"Pensacola Departure, BUCK 311 passing six thousand for niner thousand."

1-6 TECHNIQUE AND TERMINOLOGY

7. **Directions**

State the three digits of all magnetic courses, bearings, headings or wind directions. All are assumed to be magnetic.

Example:

(magnetic course) 005	"ZERO ZERO FIVE"
(wind directions) 360	"THREE SIX ZERO"

8. **Airspeeds**

State the separate digits of the speed followed by the unit. Unless directed otherwise, airspeed in radio communication should always refer to indicated airspeed (IAS), and may be expressed as knots or Mach number.

Example:

250	"TWO FIVE ZERO KNOTS"

104. BASIC COMMUNICATION PROGRESSION

Every conversation with a controlling agency or service provider follows a specific progression. This section serves as an introduction to the standard flow of radio calls. Chapters 2 and 3 will further expand on typical radio calls during your primary training at NAS Pensacola.

An initial radio call begins with properly addressing the controlling agency you are trying to reach. After the controlling agency is identified, the rest of the radio phraseology follows a standard flow. This flow exists for all radio calls, and can best be remembered as the "3 Ws"

WHO-WHERE-WHAT

WHO- Your call sign.

WHERE- Your position.

Your position will need to be reported in different degrees of detail. The level of detail depends on different factors, but generally speaking, homefield communications require less detail.

Example:

"Sherman Ground, KATT 615, ..."

Whereas if away from homefield, especially at a busy airfield, your position would need to be more specific:

"Randolph Ground, BUCK 350, transient ramp, ..."

Now let's take a look at some examples of initial calls in the air. For airborne calls, your position again will need to be reported in different degrees of detail. If you are being handed off from one controller to another on an IFR clearance, the position normally is limited to altitude, since you are being continuously tracked by radar.

Example:

"Atlanta Center, KATT 615, one seven thousand."

If you are on a VFR flight and are contacting ATC for the first time, your call would need more detail, since the controller needs to know where to look for you on his radar scope.

Example:

"Mobile Approach, KATT 650, eight thousand five hundred, ten miles east of Brookley."

WHAT – Either a request, a report, or intentions. Examples are requesting taxi clearance, requesting changes in assigned altitude, or reporting intentions.

Example:

"Randolph Ground, BUCK 350, transient ramp, taxi with Juliet."

"Mobile Approach, KATT 650, eight thousand five hundred, ten miles east of Brookley with information Delta. Request direct PRICH for the full procedure turn VOR Rwy 18, then flight plan route."

Lengthy calls like this may need to be broken up into two parts. The "who" and "where" first, followed by the "what" after the controller identifies you on radar. Use good judgment to determine how busy the radio traffic is and do not overload the controller.

Example:

SNFO:	"Mobile Approach, KATT 650, eight thousand five hundred, ten miles east of Brookley with information Delta, request."
APPROACH:	"KATT 650, squawk 1128, say request."
SNFO:	"Squawk 1128, request direct PRICH for the full procedure turn VOR Rwy 18, then flight plan route."

Example:

SNFO:	"Jacksonville Center, KATT 650, request."
APPROACH:	"KATT 650, say request."
SNFO:	"KATT 650, request climb to Flight Level One Niner Zero."

105. CREW RESOURCE MANAGEMENT (CRM)

Today, virtually all military aircraft have at least two different types of radio receivers/transmitters, and operational aircraft often have more than two. Therefore, it is critical to ensure the crew knows which radio is primary for communications. The primary radio may change multiple times during the course of a mission, from UHF to VHF, and vice versa. Always announce these switches to the crew.

Example (After switching from Pensacola approach on 270.8 to Jacksonville Center on 134.3)

"Sir/Ma'am, Victor (or VHF) is primary."

Despite which radio is primary for communication, always ensure that both UHF and VHF guard frequencies are being monitored. In other words, turn the volume of your non-primary radio down instead of turning it off.

106. COMMUNICATION TYPES

There are basically two types of communications in aviation- ***directive and informative***. It is imperative to understand the difference between the two.

1. Directive communication requires the aircrew to perform specific actions and therefore requires a positive, specific response confirming the receipt of the directive communication. Examples of directive communication include changing frequencies, altitudes, and/or headings.

2. Informative communication provides specific flight information. Examples of informative communication include airport information and traffic advisories. In most cases informative communications only require a simple acknowledgement. This acknowledgement can be done by repeating your call sign, or the use of "Roger" or "Wilco." For more information, see the glossary for more understanding on when Roger or Wilco is appropriate.

107. MANDATORY READBACK ITEMS

In general, repeat back all DIRECTIVE CALLS. Examples of directive calls are

Directive Call	**Response**
"Taxi to Runway 19"	"Taxi to one niner"

"Runway 25L, Cleared for takeoff"	"Cleared takeoff Two Five Left"
"Runway 25R, Cleared to land"	"Cleared to land Two Five Right"
"Hold Short Runway Seven Left"	"Hold short Seven Left"
"Turn right, heading 180"	"Right One Eight Zero"
"Climb to Flight Level 220"	"Climb Flight Level Two Two Zero"
"Contact Pensacola Approach on 119.0"	"Switching One One Niner Point Zero"
"The Dothan Altimeter is 29.94"	"Two Niner Niner Four"

A helpful memory aid to help you remember some mandatory readback items is:

CHAAF

Clearances **H**eadings **A**ltitudes **A**ltimeter settings **F**requencies

108. MANDATORY REPORTS

Additionally, the Flight Information Handbook (FIH) requires the aircrew to initiate communication in certain instances. The following gives a partial list. For more information, refer to the FIH, Position Reporting Procedures Section.

1. When vacating any previously assigned altitude/flight level for a new altitude/flight level.

2. When unable to climb/descend at a rate of at least 500 fpm.

3. When an actual (not simulated) missed approach has been executed.

4. When an altitude change will be made if operating on a clearance specifying VFR-on-top.

5. Change in the average TAS (at cruising altitude) when it varies by 5% or 10kts (whichever is greater) from that filed in the flight plan.

6. Any information relating to the safety of flight.

7. Any loss in controlled airspace of VOR or TACAN capability or impairment of air/ground communications capability.

CHAPTER TWO
FLIGHT COMMUNICATIONS: GROUND PROCEDURES - DESCENT

200. INTRODUCTION

This chapter is presented to familiarize the student with the various controlling agencies they will communicate with on a typical training flight. As you read through this chapter, note the slight differences between homefield communication and communications away from homefield. As discussed in Chapter One, homefield communications generally allow more brevity because the controlling agencies are familiar with your mission. In any case, use whatever words are necessary to ensure your message is understood.

Voice communication is initiated or received during the ground and departure phase in the following order at Sherman Field:

1. ATIS - Listen and copy all information.

2. CLEARANCE DELIVERY - Call for and receive clearance immediately after receiving ATIS and while still in the chocks.

3. BASE (VT-10 or VT-4) - Inform the duty officer that you are leaving the ramp.

4. GROUND CONTROL - Call for taxi when pulling out of the line area and prior to getting on the taxiway.

5. TOWER - Call for takeoff when at the hold-short, checklists completed, and ready for takeoff.

6. DEPARTURE CONTROL - Call after takeoff when told to switch by Tower.

PENSACOLA NAS, (FORREST SHERMAN FLD) FL **KNPA** N N30°21.16' W87°19.12'
30 UTC-6(-5DT) **H-5D, L-18E**

(B) **RWY-01** L5,51	(7137x200 ASP PCN 44 F/B/W/T)	L5,51 **RWY-19**
HOOK E28(B) (1544')		HOOK E28(B) (1100')
RWY-07L L5,51	(8002x200 ASP PCN 48 R/C/W/T)	L5,51 **RWY-25R**
HOOK E28(B) (1200')		HOOK E28(B) (1300')
RWY-07R L2,5,11,51	(8001x200 ASP PCN 50 F/B/W/T)	L5,51 **RWY-25L**
HOOK E28(B) (1300')		HOOK E28(B) (1450')

SERVICE - LGT - Mobile OLS 3.25° avbl all rwy. **A-GEAR** - Rwy 01, 07L-25R and 07R-25L apch end E-28(B) A/G always de-rigged; Rwy 19 apch end E-28(B) A/G always rigged. **JASU** - 5(NC-8) 6(GTC-85 Navy F4 emerg start only) 3(NCPP-105) **FUEL** - 100LL, J5, J8 **FLUID** - SP LHOX LOX OXRB Acft nitrogen and oxygen svcg avbl 1400-2200Z++ wkend and hol. **OIL** - O-128-148-156 **TRAN ALERT** - Tran svc avbl 1300-0500Z++ Mon-Fri; 1400-2200Z++ Sat; 2000-0400Z++ Sun and hol; OT no tran acft auth. Exp extv svcg delays dur Tran Alert hr.

REMARKS - Opr 1300-0500Z++ Mon-Fri; 1400-2200Z++ Sat; 2000-0400Z++ Sun, hol by NOTAM. **RSTD** - PPR all acft exc AIREVAC. Ctc Base OPS DSN 922-0111, C850-452-0111 for Nr other than Base OPS. Ctc Base OPS for PPR Nr DSN 922-2431, C850-452-2431. **CAUTION** - Ints VFR trng tfc. Vcnty OLF Saufley extv flt trng. **TFC PAT** - Ldg/taxi lgt rqr all ldg when wx cond permit. Wheels Watch not on stn. See Mandatory IFR Arr Pro-FLIP AP/1 Supplementary Arpt Rmk. Reduced rwy separation std in eff CNATRA acft only. Multiple apch severely ltd dur single rwy opr. **NS ABTMT** - Req all acft remain at or abv 500' and 0.5 NM off-shore fr Navarre Beach to W of Johnson Beach due to nesting of protected species Apr-Oct. **CSTMS/AG/IMG** - CSTMS, AG avbl if prior arng made with min 24 hr advance ntc.

COMMUNICATIONS - SFA ATIS - Opr 1100-0200Z++ Mon-Fri; 1200-2100Z++ Sat, Sun, hol. 267.6 **APP - (R) (E)** 120.65 270.8 *REMARKS:* (Class C Airspace 120.05 376.8) **SHERMAN TWR - (E)** 120.7 340.2 **SHERMAN GND** - 121.7 336.4 **DEP - (R)** 125.35 372.0 **SHERMAN CLNC DEL** - 134.1 268.7 *REMARKS:* Dep acft ctc CLNC DEL prior taxi. **PMSV METRO** - 359.6 **SHERMAN BASE OPS** - 312.1
FSS-GAINESVILLE GNV-DL-NOTAM PNS

Figure 2-1 IFR Supplement

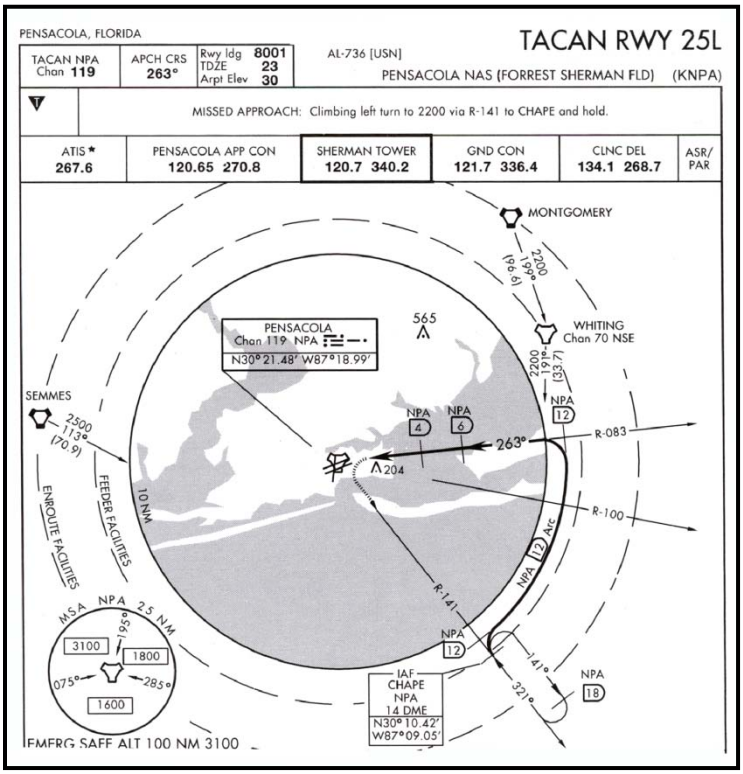


Figure 2-2 Approach Plate

2-2 FLIGHT COMMUNICATIONS: GROUND PROCEDURES - DESCENT

201. FREQUENCIES

On approach plates, applicable frequencies are normally listed in the top section (Figure 2-2). They are also listed in the DoD FLIP IFR Supplement. Traditionally, most military airfields favor communication on UHF frequencies, and civilian fields favor operation on VHF. However, both fields usually have both UHF and VHF capability.

202. AUTOMATIC TERMINAL INFORMATION SERVICE (ATIS)

1. ATIS provides continuous broadcast of recorded airport information. It includes:

   a. Information ID/Time of report

   b. Ceiling

   c. Visibility and obstructions to visibility (if applicable)

   d. Temperature & Dew Point (if available)

   e. Wind direction (magnetic) and speed

   f. Altimeter setting

   g. Pertinent remarks and NOTAMs

   h. Instrument approach and runway in use

2. The following is an example of an ATIS broadcast:

   "Sherman Field ATIS information ALPHA, 1200 Zulu. Ceiling one thousand scattered, two five thousand broken, visibility Seven, temperature two five dew point two zero, wind zero six zero at one zero, altimeter two niner niner four, Runway Seven Right and Seven Left in use. Expect PAR Runway Seven Left approach. Advise on initial contact that you have received information ALPHA."

3. You will be responsible for copying the ATIS information prior to contacting ground (on departures) or approach control (for arrivals). A phonetic letter (alpha, bravo, etc.) identifies each broadcast. ATIS broadcasts will normally be updated upon receipt of any official hourly weather or if weather or field conditions change. The ATIS tape is continuous and can be listened to again in case pertinent information is missed the first time. After recording all applicable information, switch to the next frequency automatically. Inform Ground or Approach Control upon initial contact that you have received the ATIS information.

4. If the service is not available, report "negative ATIS" to ground or approach control.

203. CLEARANCE DELIVERY

At many busy airports such as Sherman Field, Clearance Delivery has been established on a separate radio frequency. At airports without a Clearance Delivery, ATC clearances are normally relayed to aircrew by ground control. Clearance Delivery and Ground Control are physically located in the control tower. They have a communication link with Departure Control, Approach Control, Air Route Traffic Control Center (ARTCC), and Flight Service.

1. VFR Missions

For VFR departures, include direction of flight and time enroute when requesting clearance.

"Clearance delivery, call sign, VFR, direction of flight, time enroute."

Example:

SNFO: "Sherman Clearance Delivery, KATT 610, VFR to the west, one plus three zero enroute."

2. IFR Missions

Requesting an IFR clearance differs slightly based on the type of mission profile. At Sherman Field, as well as many other military airfields, base operations maintain several standard flight profiles called "canned routes." Canned routes have a specific code to identify them, like NPA 630, NPA 641, etc. They eliminate the need for aircrew to file a DD-175, as Base Operations implements the route into the ATC system automatically from the flight schedule, or upon request. Remember canned routes will only be used when departing from homefield.

Example:

SNFO: "Sherman Clearance, KATT 610, NPA 630, ready to copy."

As training progresses, students will file DD-175 flight plans with Base Operations. During "out and backs" and cross country missions, students may also file flight plans with Flight Service Stations (FSS). In any case, the call to request clearance should follow the format.

"Clearance Delivery, Call Sign, IFR, destination, ready to copy."

Example:

SNFO: "Sherman Clearance Delivery, KATT 612, IFR, Navy New Orleans, ready to copy."

Example:

SNFO: "Jacksonville Clearance Delivery, BUCK 312, IFR, Navy Pensacola, ready to copy."

204. RECEIVING YOUR CLEARANCE

The statement "ready to copy" after requesting your clearance enhances radio efficiency. Without that statement, ATC's next call would be "KATT 612, I have your clearance, advise when ready to copy." General Planning, chapter 5, states that IFR clearances to departing aircraft will be issued prior to takeoff and will include the following items as appropriate in the order listed:

1. Aircraft identification
2. Clearance limit or approach procedure
3. Departure procedures or SID
4. Route of flight
5. Altitude data in the order flown

Copy the clearance from the controller. You will be expected to read back the clearance verbatim to ensure that you understand it completely. Some amount of secretarial speed and skill will be required for you to correctly copy all of this information. This will be especially evident on cross countries or stopovers at other airfields. It is recommended that you use abbreviations when copying clearances. Here are some examples:

+10	After 10 minutes (when dealing with time delays)
AF	As Filed
C	Cleared
/	Climb
->	Direct
EFC	Expect Further Clearance
EX	Expect
FL	Flight Level
FPR	Flight Plan Route
HDG	Heading
L, R	Left Turn, Right Turn
M	Maintain

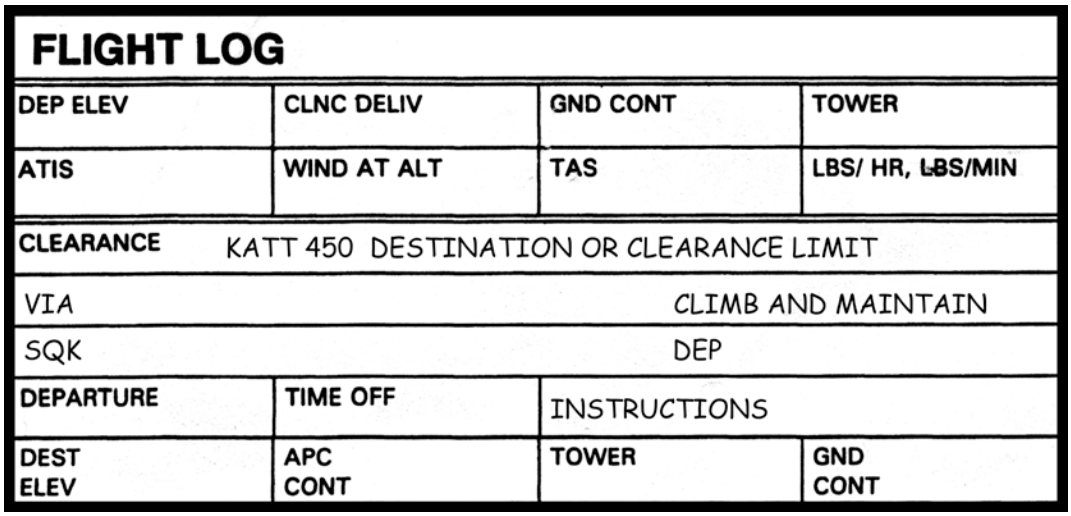
MN Minutes

RWY Runway

SQ Squawk

X Cross at or above

This list is not all-inclusive, but contains terms that you will hear repeatedly on IFR clearances. You may want to use your own abbreviations. It is vital that the clearance is copied and understood. Because you planned the hop, you can anticipate what clearance the controller will give you. It should be very similar to that requested route on the DD-175 or the canned route. Since the order and format is standard, you can set up your kneeboard for copying your clearance before you walk (Figure 2-3).



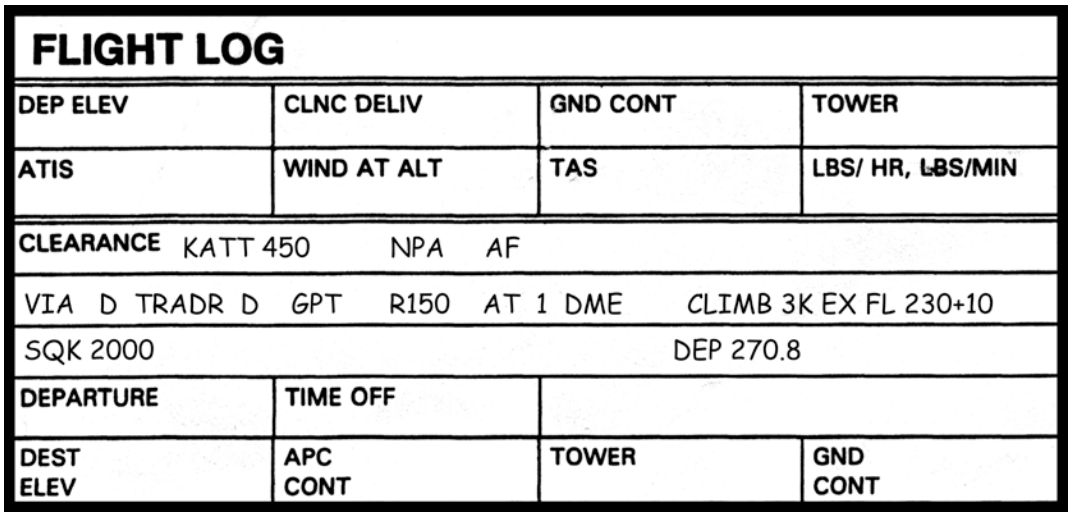
FLIGHT LOG			
DEP ELEV	CLNC DELIV	GND CONT	TOWER
ATIS	WIND AT ALT	TAS	LBS/ HR, LBS/MIN
CLEARANCE	KATT 450 DESTINATION OR CLEARANCE LIMIT		
VIA		CLIMB AND MAINTAIN	
SQK		DEP	
DEPARTURE	TIME OFF	INSTRUCTIONS	
DEST ELEV	APC CONT	TOWER	GND CONT

Figure 2-3 Flight Log #1

The following is sample clearance:

Example:

CLEARANCE: "KATT 650 is cleared to NAS Pensacola via direct TRADR, direct Golf Papa Tango (GPT), then as filed. At 1 DME past the TACAN, turn right heading one five zero. Climb and maintain three thousand, expect Flight Level two three zero ten minutes after departure. Departure frequency two seven zero point eight, Squawk two zero zero zero."



FLIGHT LOG			
DEP ELEV	CLNC DELIV	GND CONT	TOWER
ATIS	WIND AT ALT	TAS	LBS/ HR, LBS/MIN
CLEARANCE KATT 450 NPA AF			
VIA D TRADR D GPT R150 AT 1 DME CLIMB 3K EX FL 230+10			
SQK 2000 DEP 270.8			
DEPARTURE	TIME OFF		
DEST ELEV	APC CONT	TOWER	GND CONT

Figure 2-4 Flight Log #2

A good technique for reading back a clearance is to read back exactly what was given, in the order it was given. Summarizing a clearance may inadvertently change the meaning of the clearance. Aircrew should review the clearance to ensure the aircraft can comply with the clearance. If unable to comply, notify the controlling agency and request an amended clearance.

It is not unusual for clearance to change some points of the filed flight plan. The following example illustrates an ATC directed change in flight plan route.

> "KATT 614 is cleared to Sarasota except change route to read: direct INBRD, HEVVN, then as filed. Climb and maintain three thousand, expect Flight Level two three zero ten minutes after departure. Departure frequency two seven zero point eight, Squawk four three one two."

NOTE

> "Then as filed" means from that point, your clearance is exactly as you filed in your flight plan.

At many airfields, it is not necessary to receive your flight clearance prior to taxiing, only prior to takeoff. If Clearance Delivery does not immediately have your clearance available and you desire to taxi while it is being processed, request that clearance delivery relay your clearance through the ground control frequency. Expect ground control to read your clearance, or direct you to contact clearance delivery while taxiing.

205. BASE

The Squadron Duty Officer (SDO) is responsible for knowing the whereabouts of all squadron aircraft. A radio is maintained at the SDO's desk. This is an extremely valuable tool in

coordinating the flight schedule, aircraft maintenance, and advising aircrew of developing weather or aircraft equipment problems. All VT-10 and VT-4 aircrews must call "BASE" prior to leaving the ramp. The call is made prior to calling ground control for taxi clearance. This call is not a request, but merely a means of tracking aircraft. Your call should be acknowledged prior to taxiing.

Example:

SNFO:	"Base, KATT 615, taxi outbound, side number niner seven two."
BASE:	"KATT 615, roger."

Once you have contacted base, switch immediately back to Ground.

206. GROUND CONTROL

Ground control is responsible for movement of aircraft, vehicles, or personnel on taxiways and off-duty runways.

NOTE

At all controlled airfields other than NPA, ground must be contacted prior to any aircraft movement. Taxing the aircraft on the T-6 ramp without clearance from ground is a local procedure only.

The call for taxi clearance differs slightly depending on operating from homefield, or a transient field.

Example (NPA):

SNFO:	"Sherman Ground, BUCK 317, taxi, with CHARLIE."

Example (Transient Field):

SNFO:	"Nashville Ground, BUCK 317, South ramp, taxi, with CHARLIE."

At Sherman Field, ground knows where to look for a "KATT" or "BUCK" aircraft. At busy airports, however, there are many parking ramps and Fixed Base Operators (FBOs), so give the ground controller your position.

Students should be familiar with the airfield diagram as part of their preflight study. At NPA, the taxi route may become very familiar, but at other busy airfields, taxi instructions may become complex. It is essential to have your airfield diagram page open as you copy taxi clearance.

NOTE

If there is any doubt about a taxi route, do not hesitate to confirm with ground control taxi instructions.

Example:

SNFO:	"Sherman Ground, KATT 617, taxi, with LIMA."
GROUND:	"KATT 617, taxi to runway one niner via Foxtrot, Delta, Bravo, altimeter three zero zero seven."
SNFO:	"KATT 617, taxi to runway one niner via Foxtrot, Delta, Bravo, three zero zero seven."

207. TAXIING

Authorization to taxi to a runway is authorization to cross all inactive runways that intersect the taxi route to the hold-short area. Ensure all crewmembers visually check for traffic before crossing any off-duty runway or taxiway intersection.

208. TOWER

Tower controls all active runways, the taxiways between the parallel runways when the parallel runways are active and VFR traffic within the tower control zone. The call to tower is initiated automatically in the hold-short area when ready for takeoff. It should be noted that after calling tower for takeoff clearance, controllers will direct when to switch to the next frequency for the duration of the flight. At NPA, the following call is standard communication to inform tower you are ready for takeoff:

Example:

SNFO:	"Sherman Tower, BUCK 311, takeoff, VFR."

Notice that at NPA, the type of flight is mentioned after "takeoff". This aids tower in sequencing during dual runway operations. As you progress in your career, you may hear and/or use other terminology to signal you are ready for takeoff, such as "ready for takeoff", or "ready for departure"

There are four possible instructions that tower may give to an aircraft that has requested takeoff. These instructions shall be read back to the Tower:

1. Hold Short - Not cleared onto the runway. Hold your position prior to the hold-short line.

Example:

TOWER:	"BUCK 311, Hold Short Seven Right."
SNFO:	"BUCK 311, Hold Short Right."

2. Line up and Wait - Cleared to taxi across the hold-short line and into takeoff position, but not cleared for takeoff.

Example:

TOWER:	"BUCK 311, Line up and Wait Runway Seven Right."
SNFO:	"BUCK 311, Line up and Wait Seven Right."

3. Taxi Across - When using dual runways, cleared to taxi across the inboard runway in order to utilize the outboard runway.

Example:

TOWER:	"BUCK 311, taxi across Seven Right, hold-short Seven Left."
SNFO:	"BUCK 311, taxi across Seven Right, hold-short Seven Left."

4. Cleared for takeoff - Cleared to taxi onto the runway and depart.

Example:

TOWER:	"BUCK 311, wind zero niner zero at eight, Runway Seven Right, cleared for takeoff."
SNFO:	"BUCK 311, cleared takeoff Seven Right."

When cleared for takeoff, aircraft are expected to depart without delay. If a delay is anticipated, tower should be notified immediately in order to make pattern adjustments or adjust landing clearances.

NOTE

At NPA ¸single- piloted aircraft are typically switched to departure control before starting the takeoff roll. This is in accordance with OPNAVINST 3710 radio procedures for single-piloted aircraft.

Example:

TOWER:	"BUCK 314, winds two four zero at one two, Runway Two Five Left, cleared for takeoff, switch to departure."
SNFO:	"BUCK 314 cleared for takeoff Runway Two Five Left, switching."

Most other tower controlled airfields will switch you after you are airborne.

Example:

TOWER:	"BUCK 314, winds zero five zero at five, Runway Three Two, cleared for takeoff."
SNFO:	"BUCK 314, cleared for takeoff, Runway Three Two." (once airborne)
TOWER:	"BUCK 314, contact departure."
SNFO	"BUCK 314, switching."

In all cases, listen carefully and follow tower's instructions.

209. DEPARTURE CONTROL

Departure Control is responsible for ensuring safe separation between departing and arriving aircraft. Check in with departure control should be done when directed by tower, and safely airborne.

Example:

TOWER:	"KATT 612 change to departure."
SNFO:	"KATT 612 switching."
SNFO:	"Pensacola Departure, KATT 612, passing eight hundred for three thousand."

After you make the airborne call to Departure Control, he/she should respond:

Example:

CONTROLLER:	"KATT 612, Pensacola Departure, radar contact."

The term "radar contact" means the controller has identified your aircraft on radar. Successive controllers will not repeat "radar contact." At times, the controller may confirm the aircraft identity by asking the aircrew to ident.

Check in with departure shall be done whether on an IFR or VFR clearance when operating from Class B or C airspace.

For NPA VFR missions, report clear of Class C airspace.

Example:

SNFO:	"Pensacola Departure, KATT 612, clear of class Charlie."
DEPARTURE:	"KATT 612, squawk VFR, frequency change approved."
SNFO:	"KATT 612, wilco."

On IFR departures, departure will either give you radar vectors, or clear you to your first point. ATC often gives aircraft a vector in a climb or descent. Maintain an awareness of your position at all times but don't worry about heading off course. The controller is fully aware of where you need to be going and will eventually clear you to your first point.

As the aircraft travels beyond departure control's airspace, you will be switched to an ARTCC, commonly known as "center".

Example:

DEPARTURE:	"KATT 612, contact Jacksonville Center on one three four point three."
SNFO:	"KATT 612, switching one three four point three."

210. AIR ROUTE TRAFFIC CONTROL CENTER (ARTCC)

ARTCCs are established primarily to provide air traffic service to aircraft operating on IFR flight plans within controlled airspace. ARTCC communication networks are comprised of remote ground receiver and transmitter sites located throughout the United States.

ARTCCs are classified into regions, and each region has several sectors. Each sector has a different radio frequency. Notice the jagged line near the center right side of Figure 2-5. Atlanta Center controls the airspace north of the line and Jacksonville Center controls the airspace south of the line. As a flight progresses from one sector to another, the aircrew will be switched to the new sector frequency.

Example:

CENTER:	"KATT 614, contact Memphis Center on two eight four point seven."
SNFO:	"KATT 614, switching two eight four decimal seven."
SNFO:	(after switching): "Memphis Center, KATT 614, niner thousand."
CENTER:	"KATT 614, Memphis Center, roger, Meridian altimeter three zero zero two."

If the next controller cannot be contacted, switch back to the previous controller and state "negative contract" or "no joy". The transferring controller will then give you further instructions.

Example:

SNFO:	"Memphis Center, KATT 614, no joy (or negative contact) on two eight four point seven."
CENTER:	"KATT 614, attempt contact with Memphis Center on two eight seven point four."
SNFO:	"Memphis Center, KATT 614, switching two eight seven point four."

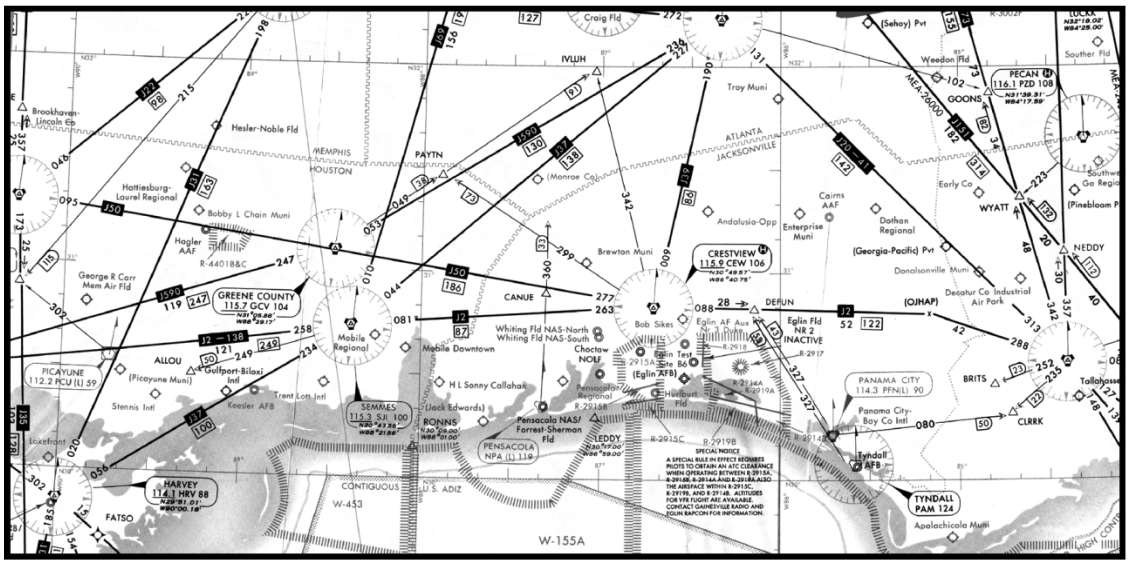


Figure 2-5 ARTCC Boundaries

The situation may arise when you need to communicate directly with Center without any previous radio contact with a Center controller. This happens when switching from a VFR flight to an IFR flight, and is discussed in Chapter 4.

An alphabetical listing of sectors and their associated frequencies is located in the aerodrome/facility directory section of the IFR Supplement. By approximating your position relative to one of the remote sites, you can find the appropriate discrete sector frequency (Figure 2-6).

JACKSONVILLE CENTER, FL **KZJX (R) (E) ARR/DEP US - 124.475 127.45 S ATLANTIC CON** - (N of 31°30'N **135.05 317.4 381.4)** (S of 31°30'N **135.25) GULF ROUTES CON - 124.475 251.1 ALBANY** - d125.75 134.45 d226.8 359.0 381.55 **ALMA** - d132.3 **133.3 135.975 282.3** d290.4 **346.3 CHARLESTON - 124.075** d127.95 **132.475 133.625 135.05 370.95** d379.1 **399.1 COLUMBIA** - d124.7 **127.875** d269.55 d298.9 **319.2** 335.5 **CRESTVIEW** - d120.2 **124.475** d134.15 **323.05** d338.3 d346.4 371.9 **DAYTONA BEACH** - d134.0 d357.1 **DOTHAN - (U)** d134.3 288.3 d353.5 **EGLIN** - d132.1 d360.6 **FLORENCE** - d133.45 134.35 d306.3 321.4 **GAINESVILLE** - d134.4 **135.65 291.7** d385.6 **GLYNCO** - d126.75 d277.4 **JACKSONVILLE - d134.85 d327.1 LAKE CITY** - d125.375 d254.325 **LOWELL - 125.175** 133.325 135.75 317.6 **360.7** 362.35 **MILLEN** - d132.5 d363.2 **MYRTLE BEACH** - d128.7 **135.05 319.85** d343.6 **381.4 ORLANDO (Eustis)** - d360.6 **PANAMA CITY** - 119.1 **346.35** 379.3 **PERRY FOLEY** - d127.8 d352.0 **ST. AUGUSTINE - 119.775 126.35 127.475 d132.825 236.7** d288.1 **307.25 346.25 SAVANNAH** - d120.85 **126.125 d132.425 285.65** d322.5 **d380.05 TALLAHASSEE - 125.05 128.075** d135.325 **307.2 343.8 364.8 VALDOSTA** - d125.95 d133.7 281.4 348.3 **363.0** d379.2 d399.6
H-4H, I, J-5D, E-6F, G, L-16G, H-18E, F, G, H-19A, B, C-20E, F, G, H-27A, B, A-1C

Figure 2-6 Jacksonville Center

There is an even easier method to determine which sector frequency you should try when you are not under positive control. Figure 2-7 is part of a Low Enroute Chart. Small boxes located throughout the chart show the name of the Center, the sector, and both UHF and VHF frequencies. Fixing your position on the chart and picking the nearest box takes all of the guesswork out of finding the proper sector. For example, if flying VFR west of the NATCHEZ TACAN and the weather deteriorates to where an IFR clearance becomes necessary, you may try contacting Houston Center on 135.7 or 381.5.

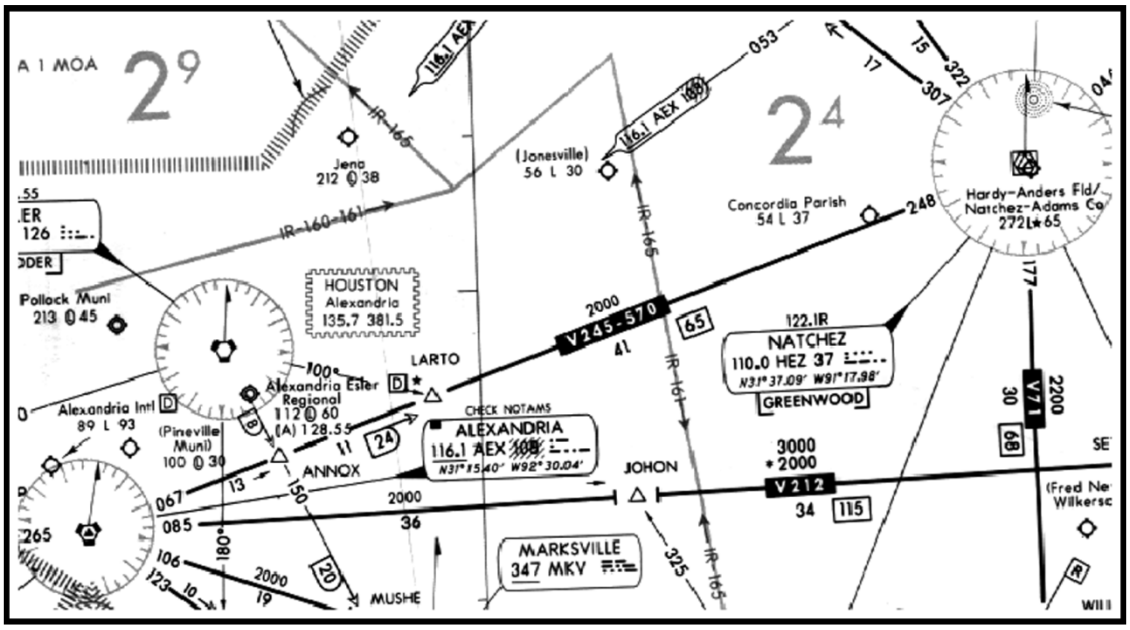


Figure 2-7 Low Enroute Chart

211. DESCENT

Expect ATC to descend you as you get closer to your destination. ATC may give you a “pilot’s discretion” descent. Before starting a pilot discretion descent, you must initiate the following call:

Example:

SNFO:	“Center, KATT 650, leaving one seven thousand for six thousand.”
CENTER:	“KATT 650, Jacksonville Center, roger.”

Planning ahead before a descent is crucial to success in the terminal area. Get arrival airfield ATIS, and then give airfield and approach briefings as soon as possible. After the initial ATC descent, radio communications become very busy.

212. LAND AND HOLD SHORT OPERATIONS (LAHSO)

Pilot Responsibilities When Conducting Land and Hold Short Operations (LAHSO)

LAHSO is an acronym for "Land and Hold Short Operations." Land and hold short operations are an air traffic control procedure intended to increase airport capacity without compromising safety.

The decision to accept a LAHSO clearance is completely up to the pilot.

A pilot who accepts a LAHSO clearance should land and exit the runway at the first convenient taxiway (unless directed otherwise) before reaching the hold short point. If a rejected landing becomes necessary after accepting a LAHSO clearance, the pilot should maintain safe separation from other aircraft or vehicles, and should promptly notify the controller.

ATC:	"KATT 614 CLEARED TO LAND RUNWAY SIX RIGHT, HOLD SHORT OF TAXIWAY BRAVO FOR CROSSING TRAFFIC."
AIRCRAFT:	"KATT 614, WILCO, CLEARED TO LAND RUNWAY SIX RIGHT TO HOLD SHORT OF TAXIWAY BRAVO."
ATC:	"KATT 610 CROSS RUNWAY SIX RIGHT AT TAXIWAY BRAVO, LANDING AIRCRAFT WILL HOLD SHORT."
AIRCRAFT:	"KATT 610, WILCO, CROSS RUNWAY SIX RIGHT AT BRAVO, LANDING TRAFFIC TO HOLD."

CHAPTER THREE
TERMINAL COMMUNICATIONS

300. INTRODUCTION

Terminal area communications are typically more active than enroute communications. Planning ahead is key to accomplishing all mission tasks in the proper prioritization, i.e. aviating, navigating, and communicating. This Chapter discusses considerations for different arrival scenarios. Complete "scripts" of terminal voice communications are in the appendices.

301. APPROACH REQUESTS

As you approach your destination airfield, or the airfield to which you want to make a practice approach, you will be switched to the appropriate controlling agency. This will most likely be approach control, but may be ARTCC if the field to which you will be flying the approach does not have a dedicated approach control. When checking in with approach control or center, the following information should be given:

WHO-WHERE-WHAT

"Call sign, altitude, ATIS information identifier, type approach requested, intentions."

Example:

SNFO	"Pensacola Approach, KATT 604, niner thousand, information Delta, request PAR Two Five Right, full stop."

Example – Multiple Approaches

SNFO	"Pensacola Approach, KATT 604, niner thousand, information Delta, request."
APPROACH	"KATT 604, say request."
SNFO	"KATT 604, request direct SIDNY for the GPS Seven Left approach, followed by radar vectors ILS Seven Left, full stop."

Notice that for multiple approaches, it is usually better to break your call into two parts. This gives the controller time to identify you first, and then accurately understand and process your request.

302. LANDING INTENTIONS

Approach requests should include intentions following the approach. If you simply request an approach, you can expect ATC to come back with "say intentions following the approach." Help keep the transmissions down by including all appropriate information with your request, don't make ATC pull the information out of you.

Approaches terminate in one of three ways: full stop, another approach, or flight planned route (for drop in approaches). If requesting multiple approaches, or a terminal delay at an airport other than your destination, approach control will need to know so they can issue climbout instructions.

Example (for drop in approach):

SNFO	"Cairns Approach, KATT 617, nine thousand, information ZULU, request direct IVGIF for the VOR Alpha, then flight plan route."
APPROACH	"KATT 617, I have your climbout Instructions, advise ready to copy."
SNFO	"KATT 617, ready to copy."
APPROACH	"KATT 617, on the completion of your approach, fly runway heading, climb and maintain two thousand, contact departure on one two three point seven."
SNFO	"KATT 617, fly runway heading to two thousand, contact departure on one two three point seven."

303. TYPES OF INSTRUMENT APPROACHES

There are two basic ways to navigate instrument approaches – own navigation, or radar vectors to final. The method that you will use in flying these approaches depends on the approach type.

In SNFO Training, own navigation is often requested for VOR and GPS approaches.

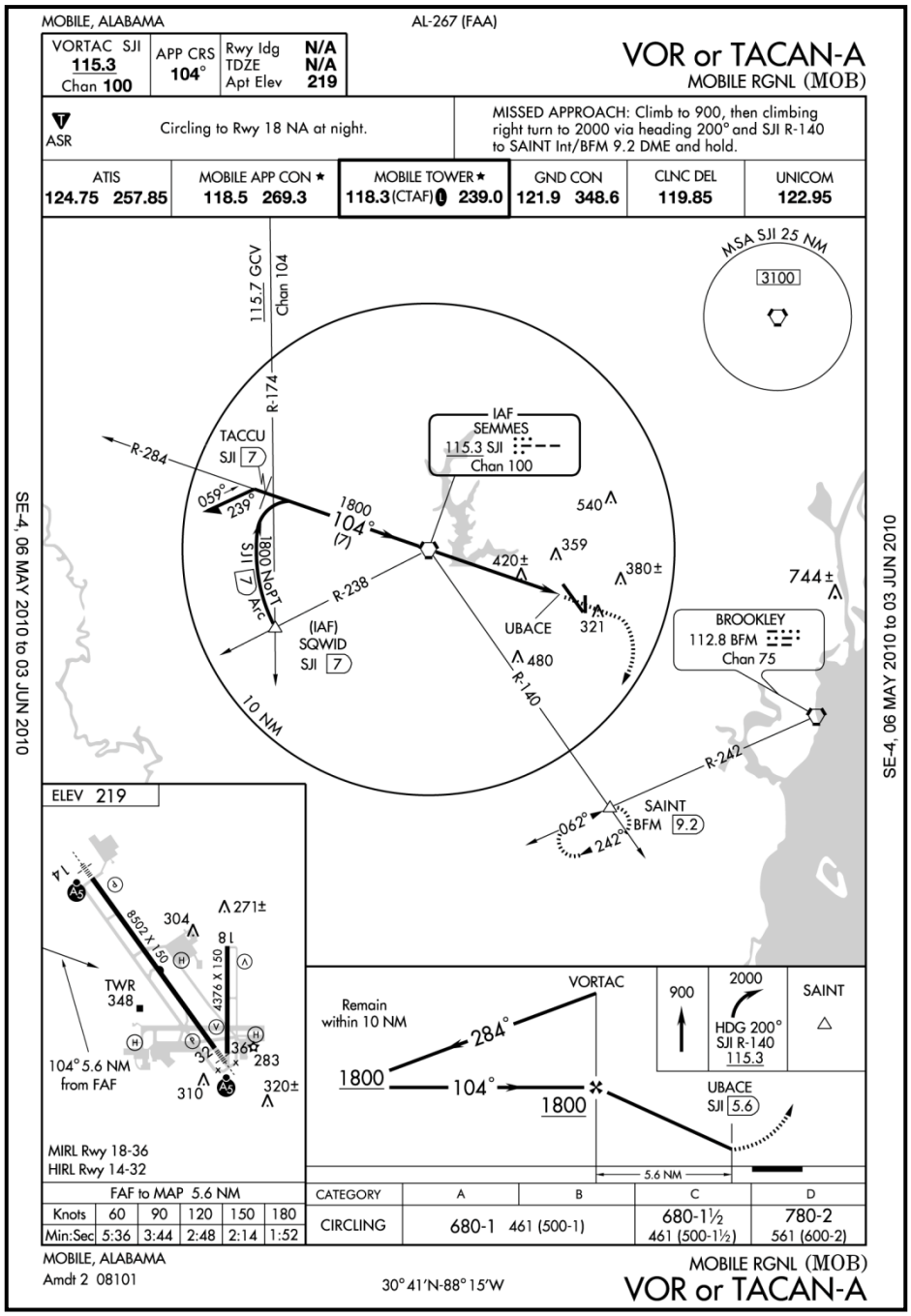


Figure 3-1 VOR A KMOB

1. VOR Approaches

VOR approaches often have more than one initial approach fix (IAF) and can be flown as either a procedure turn or procedure track. Note the following IAFs for the VOR A at Mobile Regional (Figure 3-1).

The VOR A approach at KMOB has two IAFs. The approach can be flown from SEMMES as a Procedure Turn, or flown from SQWID as an arcing, procedure track. It's important to tell approach control exactly what you want.

Example (Procedure Turn)

SNFO	"Mobile approach, KATT 610, eight thousand, information BRAVO, Request direct SEMMES for the VOR A procedure turn, then flight plan route."

Example (Procedure Track)

SNFO	"Mobile approach, KATT 610, eight thousand, information ECHO, request direct SQWID for the VOR A, then flight plan route."

Notice the subtle difference in the approach request. By requesting direct SQWID, approach can infer that you are requesting to do the arcing procedure turn approach. Clearance for the procedure turn, however, should always be specifically requested.

2. **GPS Approach**

Similarly, many GPS approaches have more than one IAF. The GPS approach to Runway 32 at KMOB is an example.

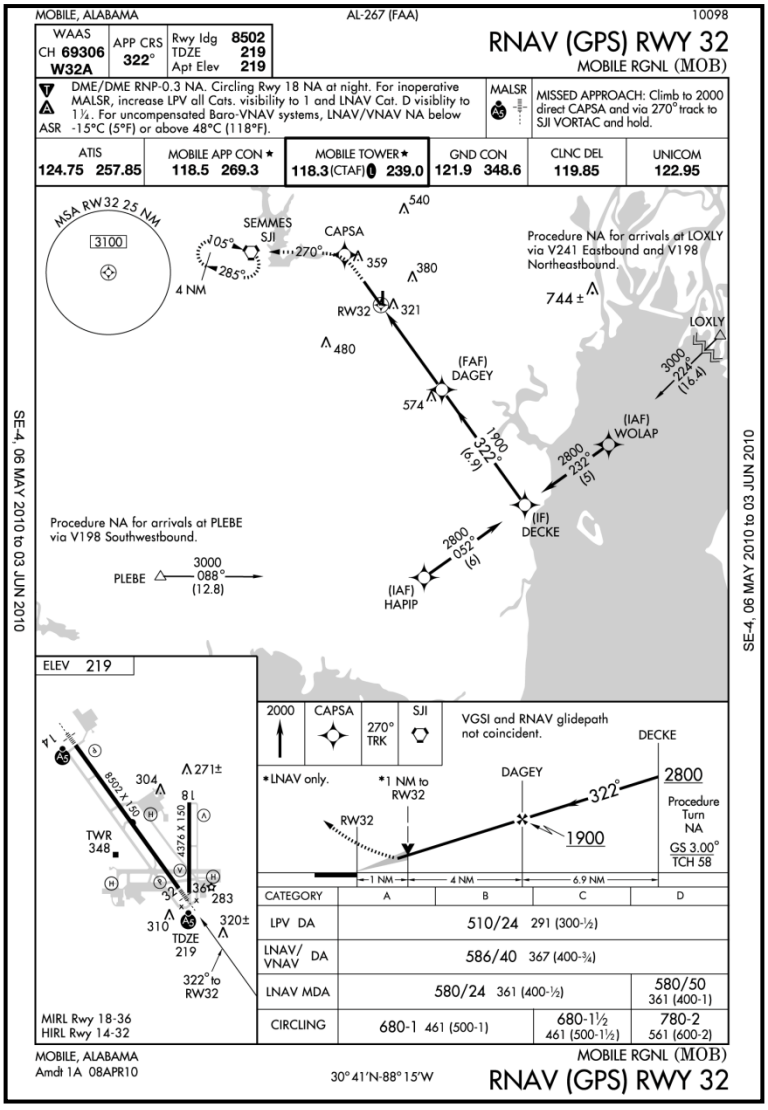


Figure 3-2 GPS 32 KMOB

As with the VOR approach, be specific with your request.

Example:

SNFO: "Mobile Approach, BUCK 303, niner thousand, information X-RAY, request own navigation direct HAPIP for the GPS Runway Three Two approach, then flight plan route."

Notice that in this call we requested own navigation. This lets the approach controller know we want to navigate ourselves on the entire approach without the assistance of radar vectors.

3. **ILS**

Although ILS and/or localizer approaches may sometimes be flown as procedure turn or procedure track approaches, these approaches are often flown using radar vectors.

Example:

SNFO	"Tallahassee Approach, KATT 605, Information JULIET, request."
APPROACH	"KATT 605, say request."
SNFO	"KATT 605, request direct WAPIM for the procedure turn VOR Runway One Eight approach, followed by radar vectors for the ILS Two Seven approach, full stop."

4. **Radar Approaches**

Radar approaches, also know as Ground Control Approaches, include Precision Approach Radar (PAR) and Airport Surveillance Radar (ASR). GCA approaches are requested in the same manner as other approaches.

Example:

SNFO:	"Pensacola Approach, KATT 632, niner thousand, information MIKE, request PAR Runway Two Five Right, full stop."

GCA approaches differ in a couple of ways from NAVAID or GPS approaches:

- Initial approach fixes (IAFs) are not applicable to GCAs.

- Since these approaches rely exclusively on radar, it is redundant to ask for radar vectors.

- Since guidance for the approach comes from a radar controller, and not NAVAID or GPS guidance, you won't hear the phrase "cleared for the approach."

- On a GCA approach, your final controller, not tower, will issue landing clearance.

- Special consideration to lost communication procedures must be given for GCA approaches.

Your aircraft will be vectored into the GCA pattern sequenced with other aircraft. As you near the final approach course on a GCA approach (approximately 8 miles from touchdown), you will

be handed off to your final controller on a discrete frequency. The controller will contact you by saying:

GCA CONTROLLER:	"KATT 619, this is your final controller, how do you read?"
SNFO	"KATT 619, loud and clear"

Repeat all required information (headings, altimeters, etc.) until told "Do not acknowledge further transmissions." On final you may omit your aircraft call sign in order to keep your responses brief. This is only because you are on a GCA discrete frequency, in which you are the only aircraft the controller is speaking to.

The final controller receives the clearance to land from tower. The final controller will then pass this clearance to you on your descent (normally 2-3 miles from touchdown). Even though he has previously instructed you to not acknowledge further transmissions, this is an exception and you will repeat the landing clearance.

Because GCA approaches are solely contingent on radio communication, consideration must be given to obtaining lost communication procedures. The Flight Information Handbook (FIH) has details on all types of lost communication procedures. For radar approaches, it says "proceed with a published instrument approach procedure or previously coordinated instructions." With that in mind, it's important to always back up your GCA approach, with a GPS or NAVAID approach, and to coordinate lost communication procedures, and actual missed approach procedures with ATC.

When on the downwind and base legs of a GCA, and in IMC, the controller should initiate communications at least once every minute to ensure radio communication is retained. During the final approach portion of the GCA, the controller must make calls at least every 5 seconds for a PAR or 15 seconds for an ASR, regardless of the weather.

304. RECEIVING YOUR APPROACH CLEARANCE

Approach or center will issue your clearance for the approach. This call is typically one of the hardest calls for students to understand. However, it becomes easy if we break it down.

CONTROLLER:	"KATT 614, five miles from BRENT, turn right heading one four zero, maintain one thousand seven hundred until established on the localizer, cleared ILS Runway One Seven approach."
SNFO:	"KATT 614, right one four zero, one thousand seven hundred until established cleared ILS One Seven."

The elements of this call are as follows:

Position	"five miles from BRENT"
Heading	"turn right heading 140"
Altitude	"maintain one thousand seven hundred"
Clearance	"cleared ILS Runway One Seven"

The acronym "PHAC" may be helpful in remembering these items. The only items required to be read back are the Heading, Altitude, and Clearance. The position is for your information only.

If shooting an approach via "own navigation", the approach clearance call is slightly different. Since we are navigating ourselves, we don't need a radar vector to intercept final.

Example:

APPROACH	"BUCK 305, cleared direct SQWID, maintain two thousand until established on a segment of the approach, cleared VOR Alpha."
SNFO	"BUCK 305, direct SQWID, two thousand until established, cleared VOR Alpha."

Sometimes, approach may clear you to the IAF, but not clear you for the approach. This typically happens when flying procedure turn approaches.

Example:

APPROACH	"KATT 619, proceed direct PRICH, track outbound. I'll call your procedure turn inbound."
SNFO	"KATT 619, direct PRICH, you'll call procedure turn inbound."

As with all radio communications, listen carefully! Notice in this case, approach only cleared us to the IAF, and then outbound on the procedure turn. Since they did not clear us for the approach, we can neither descend via the approach, nor intercept the inbound course until we receive further clearance.

APPROACH	"KATT 619, start your inbound turn now, cleared for VOR Runway One Eight approach."

3-8 TERMINAL COMMUNICATIONS

SNFO	"KATT 619, cleared VOR One Eight."

305. CONTACTING TOWER – THE FOUR "WS"

Nearing the final approach fix, approach control will switch you to tower. The call to tower follows the same Who-Where-What flow discussed in Chapter One with the addition of one more item – Wheels (gear).

Example:

APPROACH:	"KATT 614, contact tower."
SNFO:	"KATT 614, switching."

(After switching to tower frequency)

SNFO:	"Pensacola Tower, KATT 614, final approach fix, for the option gear down."

The elements of this call are as follows:

Who	"KATT 614"
Where	"final approach fix"
What	"the option"
Wheels	"gear down"

The check in with tower should be done as soon as approach control switches you. It's important to give your position to tower accurately. Your position can be reported as it relates to the final approach fix, or distance from the runway.

Examples:

"…..two miles from BRENT (FAF)."

"…..three mile final…"

If on a circling approach, position should be reported from the airfield in direction and distance, since circling approaches bring you in from different sectors that may or may not be aligned with the final approach course for the runway in use.

306. LANDING CLEARANCE

1. Full Stop

At controlled airfields, tower will issue landing clearance. Based on your request with approach control, tower should know the appropriate clearance. If the airfield is your destination, and you only requested one approach with approach control, expect tower to clear you to land.

Example:

SNFO	"Sherman Tower, KATT 614, three mile final, gear down."
TOWER	"KATT 614, wind two seven zero at eight, Runway Two Five Left, cleared to land."
SNFO	"KATT 614, cleared to land Two Five Left."

2. The option

Tower may also clear you for the option. Clearance for the option is very conducive to the training environment because it allows an instructor to evaluate a student's performance under changing situations. When tower clears an aircraft for the option, they are authorizing it for a touch and go, low approach, missed approach, stop and go, or full stop landing at the discretion of the pilot. Because of the inherent flexibility of the option, students should plan on always requesting the option, unless making a full stop.

3. Low Approach

Sometimes because of runway obstructions or traffic, tower can not clear you to make contact with the runway. Instead, they may clear you for a low approach. Unless specified by tower, start your climbout at decision height (DH) or the missed approach point (MAP). In certain cases, however, tower may issue you a restricted low approach. For a restricted low approach, don't plan on descending below five hundred feet above field elevation unless tower instructs you otherwise.

SNFO	"Pensacola Tower, KATT 614, final approach fix, gear down."
TOWER	"KATT 614, wind one eight zero at ten, Runway One Seven, cleared for restricted low approach at or above six hundred feet."
SNFO	"KATT 614, cleared for restricted low approach at or above six hundred feet."

If the clearance tower gives you is not what you want, speak up! Remember that being cleared to land is restrictive in that it gives clearance for only landing.

Example:

SNFO	"Pensacola Tower, KATT 614, final approach fix, gear down."
TOWER	"KATT 614, winds are one eight zero at ten, Runway One Seven, cleared to land."
SNFO	"KATT 614, request option."
TOWER	"KATT 614, Runway One Seven, cleared for the option."
SNFO	"KATT 614, cleared option One Seven."

307. EXITING THE RUNWAY

Active runways belong to Tower, and you must remain on Tower frequency until tower switches you to ground. If you have landed on the outboard runway of two parallels, tower shall positively control your taxi off the runway and provide instructions pertaining to the inboard runway.

Example (having just landed on 25 Right):

TOWER:	"BUCK 310, turn left when able, hold short Two Five Left."
SNFO:	"BUCK 310, hold short Two Five Left."

Or

TOWER:	"BUCK 310, turn left when able, cross Two Five Left, contact ground when off."
SNFO:	"BUCK 310, left when able, cross Two Five Left, wilco."

308. GROUND

Communications to ground control for taxi clearance remain the same as before. If at homefield, the phrase "taxi to my line" is understood to mean taxi to your ramp. Remember to request the "transient line" if at a military base other than NPA or the appropriate FBO if at a civilian field.

Example:

SNFO:	"Sherman Ground, KATT 613, clear of the duty, taxi to my line."
GROUND:	"KATT 613, taxi to your line via Alpha, Alpha Four."

Repetition at homefield increase orientation and makes taxing easier over time. However, when at transient fields, extra time is needed to study the airfield diagram. Always study this prior to your arrival. Anticipate the expected taxi route to the transient line or FBO. As part of mission preparation, cross out any taxi ways that have been NOTAM'd closed.

Usually the bigger the airport, the more complex the taxi instructions are. Depending on the size of the airport, it may also be advisable to tell ground your location.

Example:

SNFO:	"Memphis Ground, BUCK 318, taxi from Papa to Signature." (Signature is the FBO that has the Military fuel contract)
GROUND:	"BUCK 318, cross Runway 36 Center at Papa, Turn right on Charlie, hold short at Delta."

309. BASE

As you exit taxiway Alpha onto Alpha Four and enter the T-6 line area, switch to base frequency and call the SDO and report the aircraft status (not student status) as up or down.

Example:

SNFO:	"BASE, BUCK 310, in and up."
BASE:	"BUCK 310, roger."

After the call to Base, switch back to ground control frequency in case of an emergency on shutdown.

CHAPTER FOUR
SPECIAL SITUATIONS

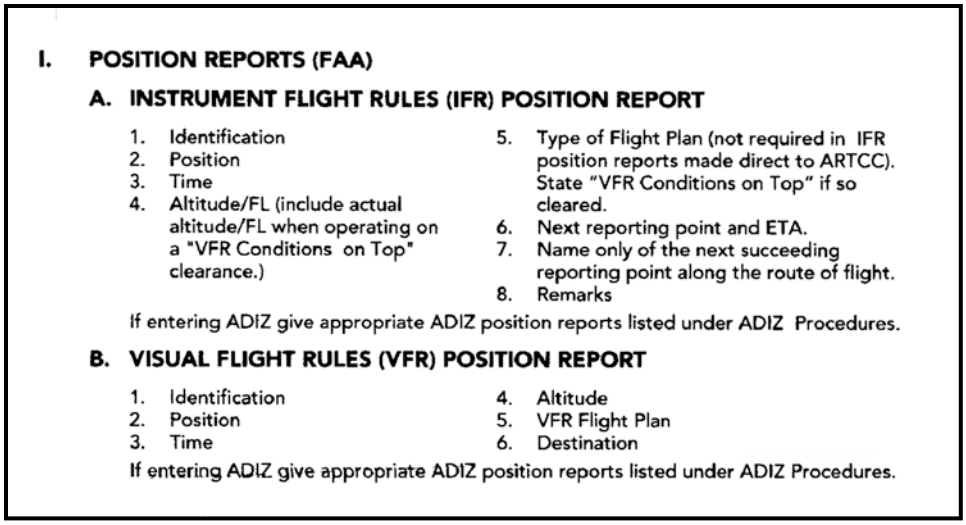
400. INTRODUCTION

This unit covers communications that do not normally occur on all flights. Situations that will be analyzed include flight in a non-radar environment, changing flight plans enroute, low-level reporting procedures, METRO/PIREP calls, Lost Comm (NORDO) procedures, and emergency communications.

401. NON-RADAR ENVIRONMENT

Airspace within the continental United States (CONUS) is almost exclusively under radar control. However, all aviators must be familiar with how to operate in a non-radar environment. Your first exposure to the non radar environment may be on an oceanic crossing.

The safety and effectiveness of traffic control depends to a large extent on accurate position reporting. The format for position reports can be found on the back cover of the IFR Enroute Supplement and in Section B of the Flight Information Handbook. (Figure 4-1.)



I. POSITION REPORTS (FAA)

A. INSTRUMENT FLIGHT RULES (IFR) POSITION REPORT

1. Identification
2. Position
3. Time
4. Altitude/FL (include actual altitude/FL when operating on a "VFR Conditions on Top" clearance.)
5. Type of Flight Plan (not required in IFR position reports made direct to ARTCC). State "VFR Conditions on Top" if so cleared.
6. Next reporting point and ETA.
7. Name only of the next succeeding reporting point along the route of flight.
8. Remarks

If entering ADIZ give appropriate ADIZ position reports listed under ADIZ Procedures.

B. VISUAL FLIGHT RULES (VFR) POSITION REPORT

1. Identification
2. Position
3. Time
4. Altitude
5. VFR Flight Plan
6. Destination

If entering ADIZ give appropriate ADIZ position reports listed under ADIZ Procedures.

Figure 4-1 Position Reports

The basic format can be summarized by: **PTAPTP**

P - Position (present position at mandatory reporting point)

T - Time (actual time of arrival at reporting point)

A - Altitude (your present altitude)

P - Position (next mandatory reporting point)

T - Time (ETA at next reporting point)

P - Position (succeeding mandatory reporting point)

402. FLIGHT SERVICE STATIONS

Flight Service Stations (FSSs) are the air traffic service facilities within the national airspace system. They are responsible for preflight briefings, enroute communications, VFR search and rescue service, assisting lost aircraft, and aircraft in emergency situations, relaying Air Traffic Control clearances, originating NOTAMs, broadcasting aviation weather, receiving and processing flight plans, and monitoring NAVAIDS. In addition, at selected locations, FSSs provide enroute Flight Advisory Service (Flight Watch), take weather observations, issue airport advisories, and advise Customs and Immigration of transborder flight.

403. REQUESTING FREQUENCY CHANGES

Aircraft with a single radio may need to request a frequency change from the current controller in order to listen to or make a call on a different frequency. Getting ATIS for an enroute approach field or your final destination is one example. Always request the switch from the controller.

Example:

SNFO:	"Atlanta Center, KATT 621, request off frequency for two minutes, we'll report back up."
CENTER:	"KATT 621, frequency change approved, report back up."
SNFO:	"KATT 621, wilco."

NOTE

If more than one radio is available in the aircraft, the student should not request "off frequency", but manage the radios so the controlling frequency and the desired frequency are both monitored.

Always monitor guard. This is the emergency frequency (UHF 243.0). If you did have to switch off the primary frequency, this enables the controller to call you if the situation warrants prior to returning to his frequency. When complete with whatever administrative task prompted the switch, report that you have returned to the control frequency.

Example:

SNFO:	"Atlanta Center, KATT 621 is back up."
CENTER:	"KATT 621, Atlanta Center, roger."

404. HOLDING

Whenever an aircraft is directed to a fix other than a destination airport and delay is expected, it is the responsibility of the ATC controller to issue complete holding instructions (unless the holding pattern is charted), an EFC time, and best estimate of any additional enroute/terminal delay. If there is published holding depicted, the controlling agency will generally direct you to hold as published.

405. REQUESTING ALTITUDE CHANGES

Changes in altitude may be needed for turbulence, icing, or other weather related factors.

Example:

SNFO:	"Atlanta Center, KATT 650, request Flight Level two one zero."
CENTER:	"KATT 650, climb and maintain Flight Level two one zero."
SNFO:	"KATT 650, leaving Flight Level one niner zero for Flight Level two one zero."

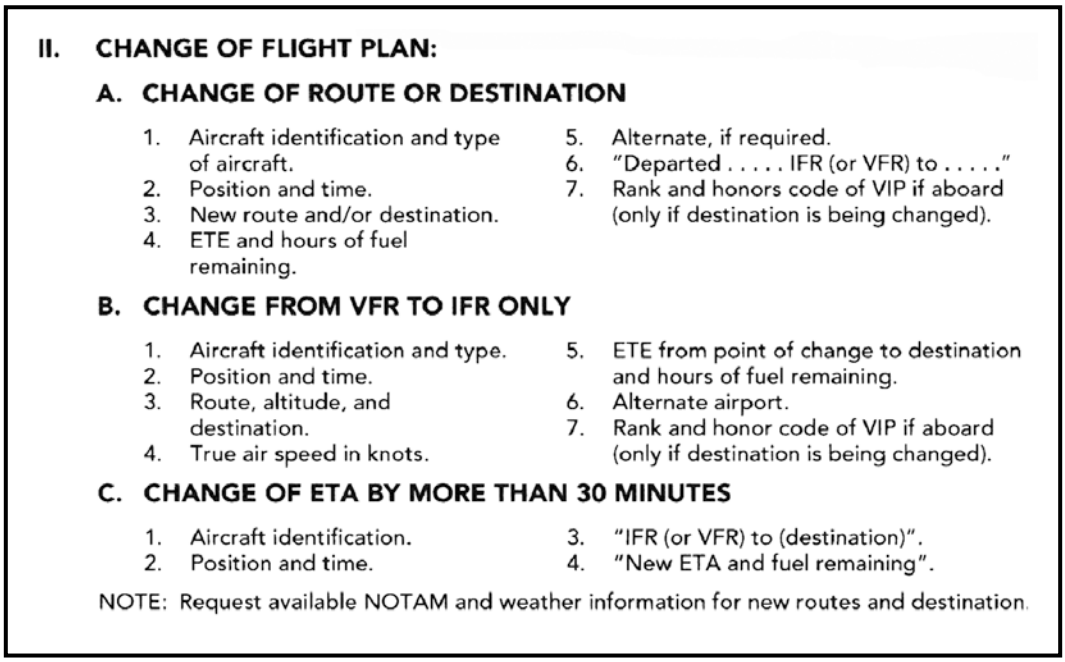
406. REQUESTING FLIGHT ROUTE AND/OR DESTINATION CHANGES

Changes in flight plans may be needed for weather avoidance, or to save fuel by requesting a more direct route. Minor deviations to flight routes can usually be approved expeditiously by ATC.

Example:

SNFO:	"Houston Center, BUCK 316, request present position direct Semmes, then as filed."
CENTER:	"BUCK 316, cleared direct Semmes, rest of route unchanged."
SNFO:	"BUCK 316, direct Semmes, rest of route unchanged."

If you need to make major changes to you flight route, or change destination, ATC requires you to read your changes in a standard format. This format can be found on back cover of the DoD FLIP IFR Supplement (Figure 4-2). Depending on controller workload, ATC may not have time to accommodate your request, and they will direct you to contact FSS to implement the changes.



II. CHANGE OF FLIGHT PLAN:

A. CHANGE OF ROUTE OR DESTINATION

1. Aircraft identification and type of aircraft.
2. Position and time.
3. New route and/or destination.
4. ETE and hours of fuel remaining.
5. Alternate, if required.
6. "Departed . . . . . IFR (or VFR) to . . . . ."
7. Rank and honors code of VIP if aboard (only if destination is being changed).

B. CHANGE FROM VFR TO IFR ONLY

1. Aircraft identification and type.
2. Position and time.
3. Route, altitude, and destination.
4. True air speed in knots.
5. ETE from point of change to destination and hours of fuel remaining.
6. Alternate airport.
7. Rank and honor code of VIP if aboard (only if destination is being changed).

C. CHANGE OF ETA BY MORE THAN 30 MINUTES

1. Aircraft identification.
2. Position and time.
3. "IFR (or VFR) to (destination)".
4. "New ETA and fuel remaining".

NOTE: Request available NOTAM and weather information for new routes and destination.

Figure 4-2 Change of Flight Plan

407. COMPOSITE CLEARANCE / LOW-LEVEL REPORTING

Low-level visual navigation routes are typically filed as a composite IFR/VFR/IFR clearance. On this clearance, you fly an IFR departure, VFR low-level route and then return IFR.

Prior to entering the low-level environment, it is necessary to activate the VFR portion of your flight plan. **DO NOT** use the term "close out" when referring to your IFR flight plan as this will drop the remainder of your flight plan out of ARTCC's computer. Canceling IFR is not a request; you are telling ATC that you can proceed under VFR rules.

Example:

SNFO:	"Pensacola Departure, KATT 613, cancel IFR."
DEPARTURE:	"KATT 613, IFR is terminated, squawk VFR, frequency change approved."
SNFO:	"KATT 613, switching."

Entry on low level published routes (i.e. VR1020) requires communication with FSS. T-6 low level flights are typically on non-published routes, and there is no call made to FSS to enter these **non-published** routes. However, in intermediate training, you will need to announce route entry in the following format:

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"Agency, call sign, type aircraft, route number, entry point, time, exit point, time, altitude, airspeed."

Example:

SNFO:	"Anniston Radio, Anniston Radio, KATT 650."
RADIO:	"KATT 650, Anniston Radio, go ahead."
SNFO:	"KATT 650, single T-1, entering Victor Romeo one zero two one point ALPHA at time five one, exiting point ECHO at time two zero, five zero zero feet, two four zero knots."
RADIO:	"KATT 650, roger, no traffic along the route, altimeter two niner niner six."
SNFO:	"KATT 650, roger."

After exiting the low-level, initiate a call to FSS reporting you are off the low-level route.

Example:

SNFO:	"Anniston Radio, KATT 650."
RADIO:	"KATT 650, Anniston Radio, go ahead."
SNFO:	"KATT 650, exiting Victor Romeo one zero two one, point ECHO at this time."

If FSS does not respond either entering or exiting the low-level, transmit the same information "in the blind." Other aircraft will still find the information useful.

408. VFR TO IFR PICKUP

After completing the low-level route, a request to Center for IFR clearance to your destination is required. This transmission is termed a "pop-up" call, because you are attempting to pop up on a controller's radar. Format for the pop-up call is:

1. Format: "Agency, call sign, position, altitude, request"

Example:

SNFO:	"Atlanta Center, KATT 650, two seven miles northeast of Monroeville three thousand five hundred, request IFR clearance to Navy Pensacola as filed."
CENTER:	"KATT 650, Atlanta Center, roger, squawk zero four zero six."

2. Dial in the new squawk.

CENTER:	"KATT 650, radar contact, cleared present position to Navy Pensacola as filed, climb and maintain Flight Level two zero zero."
SNFO:	"KATT 650, cleared as filed, leaving three thousand five hundred for flight level two zero zero."

NOTE

In the example above, the request for an IFR pickup was quickly granted by ATC. This is because the aircrew had previously filed for a composite IFR/VFR/IFR clearance. If the crew does not file for an IFR flight plan following the VFR leg, ATC will have a harder time granting an IFR clearance. If they can accommodate your request, be ready to give them all pertinent data, as listed on the back cover of the IFR Supplement, "Change from VFR to IFR" section. If ATC is too busy, expect them to direct you to contact FSS.

409. PILOT TO METRO SERVICE

The USAF Air Weather and the Naval Oceanographic Command operate a Pilot to Metro Service (PMSV) at selected facilities to provide aircrew direct contact with weather forecasters or observers. PMSV (METRO) facilities manned by forecasters are listed as "Full Service" while PMSV facilities manned by weather observers are listed as "Limited Service."

Keeping abreast of current and forecast weather is your responsibility. PMSV will be used to the maximum to update forecasts and obtain the latest weather observations.

You may wish to contact Metro enroute to get an update on the weather at your destination. Look at the diagram in the Flight Information Handbook to find the closet PMSV and the appropriate frequency. (See Figure 4-3.)

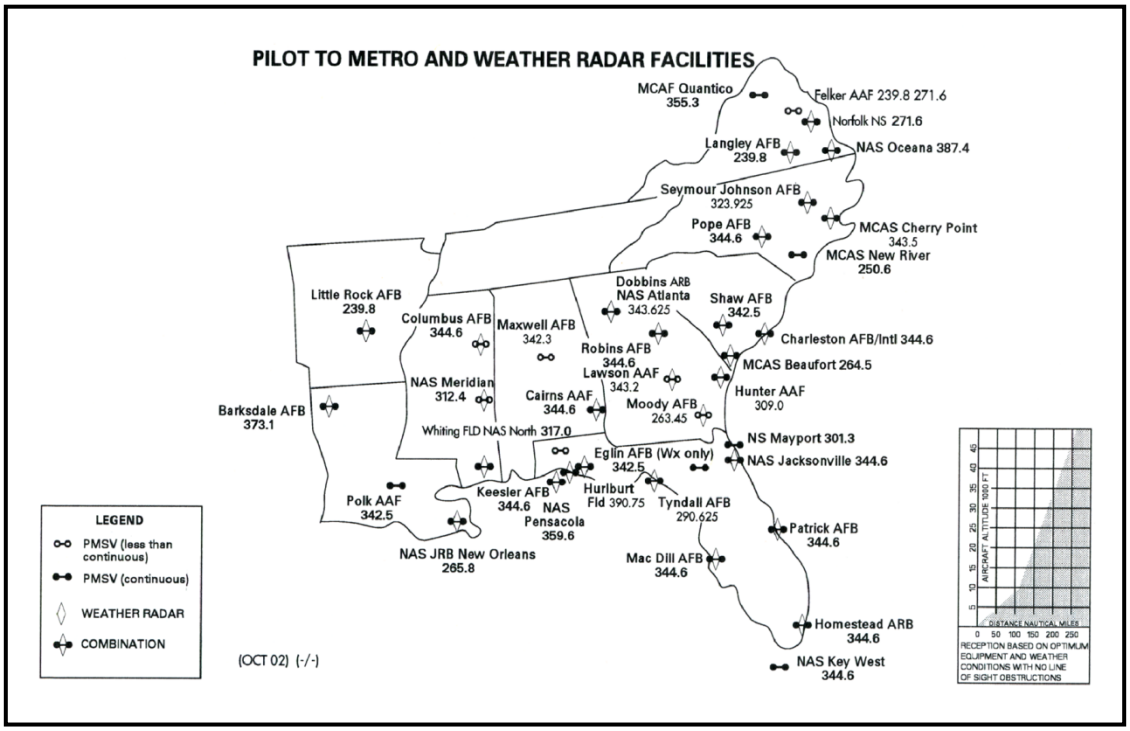

Figure 4-3 Pilot to Metro Stations

The callsign for PMSV is “METRO” (e.g., “Eglin METRO”). When requesting terminal weather, advise the forecaster/observer of your destination and a time of arrival.

Example:

SNFO:	“Eglin METRO, BUCK 333.”
PMSV:	“BUCK 333, Eglin METRO, go ahead.”
SNFO:	“BUCK 333, request current weather at Victor Quebec Quebec (VQQ) and a one hour forecast.”
PMSV:	“BUCK 333, roger, standby.”
PMSV:	“BUCK 333, Eglin METRO.”
SNFO:	“BUCK 333, go ahead.”

PMSV:	"Cecil weather is presently VFR, five thousand scattered, one zero thousand broken, visibility 5 miles in haze, surface winds zero one zero at twelve, altimeter two niner niner eight. Forecast should remain the same."
SNFO:	"BUCK 333, copies all, thanks, switching."

410. PILOT WEATHER REPORTS (PIREP)

FAA air traffic facilities are required to solicit PIREPs whenever ceilings are at or below 5000 feet, visibility is at or below five miles (surface or aloft), thunderstorms and related phenomena, icing of light degree or greater, turbulence of moderate degree or greater, wind shear or volcanic ash clouds are reported or forecast. Aircrews are urged to cooperate and volunteer reports of cloud tops, upper cloud layers, thunderstorms, ice, turbulence, strong winds and other significant flight condition information. The PIREP should be transmitted to METRO, if possible, or to the FAA ground facility with which communication is established (e.g., FSS or ARTCC). The format and procedures are contained in Section C of the Flight Information Handbook.

Example:

PMSV:	"KATT 633, Eglin Metro, request PIREP."
SNFO:	"Eglin Metro, KATT 633, two zero miles east of Crestview, time one seven Zulu, at one zero thousand, T-6, cloud tops one five thousand, temperature plus two zero, wind two eight zero at one zero, light turbulence in clouds."
PMSV:	"KATT 633, roger."

Section C of the Flight Information Handbook contains airframe icing and turbulence reporting criteria tables. These tables give specific descriptions of intensities of icing and turbulence. The most important information for any PIREP would be your type of aircraft and position/altitude. There is a tremendous difference between a T-6 reporting moderate turbulence and a 747 reporting moderate turbulence.

411. NORDO PROCEDURE

It is important to provide regulations and procedures applicable to all possible situations associated with a two-way radio communications failure. When confronted with a situation not covered in the regulation, aircrews are expected to exercise good judgment in whatever actions are taken. The emergency procedures section of the Flight Information Handbook provides a handy in-flight reference for two-way radio failure.

412. MALFUNCTIONS

FAA regulations require a malfunction report be given when operating in controlled airspace under IFR. The aircrew shall report immediately to ATC any in-flight malfunction of navigational or communication capability. Only report those malfunctions that affect ability to continue IFR operations. Each report shall include the following:

1. Aircraft identification

2. Equipment affected

3. The degree your capability to operate IFR is impaired

4. The nature and extent of assistance desired from Air Traffic Control

The exact nature and degree of assistance available from the ATC system will vary considerably. It is essential the aircrew inform the controller of any assistance needed. Some examples of what ATC can do for you include giving vectors to the nearest divert field, and coordinating for arresting gear and emergency vehicles at the arrival airfield. If no assistance is required, normal handling may be expected.

413. MINIMUM FUEL AND EMERGENCY FUEL

Minimum fuel is an advisory term indicating that in the judgment of the aircrew, their fuel state is such that no undue delays can be accepted enroute to destination. This is not an emergency situation, but informs the controller that any undue delays may result in an emergency fuel situation. Pilots declaring minimum fuel should not expect special handling from FAA controllers.

Emergency fuel shall be reported as fuel remaining in minutes. Emergency fuel warrants special handling. Declaring emergency fuel tells the controller you can accept no delays.

414. DECLARING EMERGENCIES

When you find yourself in a desperate situation, it may be time to declare an emergency. It is very important to get the controller's attention properly:

SNFO:	"Houston Center, BUCK 323 is declaring an emergency..."

Change your squawk to 7700 if there is not an immediate response from ATC. This emergency squawk causes alarms to go off and alerts every controller that you have a problem. Obviously, ATC won't know what the problem is and won't be able to assist until you inform them. You can expect the controller to ask questions since there are ATC procedures the controller must follow in the event of an emergency. Remember, **take care of your airplane first**! If the controller can provide any assistance, advise the controller. If the controller is bothering you at a time you are

busy with other things, tell the controller to stand by. Once things are under control, you can expect the controller to query you on the nature of the emergency. Do not state the title of the emergency, for example “I have a chip light.” The controller may not understand what that means. Give the controller a ‘big picture’ idea of what’s going on, i.e. “impending engine failure” or “electrical problems.” The controller may also ask for the “number of souls on board” and “time to splash.” Do not be alarmed by these questions, they are standard practice.

415. EMERGENCY VOICE REPORTS

Use **MAYDAY** or PAN PAN calls in a situation where you need to get someone’s attention (operating VFR without flight following) or for serious emergencies that you have no time to fix (perhaps occurring at a low altitude). When repeated three times, **MAYDAY** indicates imminent and grave danger and that immediate assistance is required. **PAN PAN** reports may be used in a situation that may turn serious, i.e. a malfunction that requires a Precautionary Emergency Landing (PEL). If that malfunction turns into an engine failure, your call would change from the PAN PAN call to a MAYDAY call. MAYDAY/PAN PAN reports may be broadcast on the frequency you are currently using or on guard, 243.0 UHF or 121.5 VHF. After repeating PAN PAN or MAYDAY three times, the following “ISPI” format should be used for the remaining information:

- **I** identification
- **S** situation
- **P** position
- **I** intentions

Example:

SNFO: “MAYDAY, MAYDAY, MAYDAY, BUCK 312 has an engine failure, 5 miles south of Oyster Bay, six thousand five hundred, will be executing a forced landing Jack Edwards.”

Or

“MAYDAY, MAYDAY, MAYDAY, BUCK 312 has an engine failure, one zero miles west of Oyster Bay, one thousand five hundred, Ejecting, two souls onboard.”

“PAN PAN, PAN PAN, PAN PAN, BUCK 312 with impending engine failure (could be prop sleeve touchdown, chip light etc.) three miles north of Barin at seven thousand five hundred, executing a Precautionary Emergency Landing to Barin.

APPENDIX A
GLOSSARY

A100. INTRODUCTION

English is the international aviation language. Through the years, aviators and controllers have developed what is, at times, their own language. Several terms have been modified to fit the aviation environment. The following sections contain lists of common aviation terms you will use throughout your career. These sections are separated into civilian and military terminology. Civilian terms should be used with civilian controlling agencies. Military terms should be used to increase communication brevity in a tactical environment.

A101. CIVILIAN TERMS

(The majority of these terms are listed in the Pilot/Controller Glossary found in the Airmen's Information Manual and in Chapter 2 of FLIP General Planning)

1. ACKNOWLEDGE - Let me know you have received and understood my message.

Example:

CONTROLLER:	"BUCK 317, turn right, heading one eight zero vector for traffic, acknowledge."
SNFO:	"BUCK 317, right, heading one eight zero."

2. ADVISE INTENTIONS - Tell me what you plan to do.

Example:

APPROACH:	"BUCK 312, advise intentions after touch and go."
SNFO:	"BUCK 312, request PAR, full stop."

3. AFFIRMATIVE - Yes.

4. ALTITUDE RESTRICTIONS - An altitude or altitudes stated in the order flown which are to be maintained until reaching a specific point or time. Altitude restrictions may be issued by ATC due to traffic, terrain or other simple considerations.

5. BLOCKED - Phraseology used to indicate that a radio transmission has been distorted or interrupted due to multiple simultaneous radio transmissions. The controller may sometimes use the terms "stepped on" or "blocked."

6. BREAK - Controller makes a string of transmissions pertaining to different aircraft, separated by "break." Because the controller is busy, no response from any aircraft is expected nor desired. (Not listed in the pilot/controller glossary, but commonly used.)

Example:

CONTROLLER:	"BUCK 312, expect higher in one five miles, break, KATT 611 say your request."

7. BUTTON/CHANNEL - Standard frequencies for your operating area will be entered into your radio as one of 20 preset, selectable "buttons" or "channels." For example, Sherman Tower frequency 340.2 is preset channel 4. (Not listed in the pilot/controller glossary, but commonly used.)

Example:

APPROACH:	"KATT 633, contact Tower button 4."
SNFO:	"KATT 633, switching button 4."

8. CAVU - Pronounced "cavoo". An acronym for "Ceiling and Visibility Unlimited." This denotes good weather. (Not listed in the pilot/controller glossary, but commonly used.)

9. CLEARANCE LIMIT - The fix, point, or location to which an aircraft is cleared when issued an ATC clearance.

Example:

CLEARANCE:	"KATT 621 is cleared to Navy Pensacola via direct NSE as filed..."

10. CLEARANCE ON REQUEST - Used by Clearance Delivery to inform the pilot that clearance is not currently ready to be issued. (Not listed in the pilot/controller glossary, but commonly used.)

11. CLEARED AS FILED or CLEARED VIA FLIGHT PLAN ROUTE - Means the aircraft is cleared to proceed in accordance with the route of flight listed in the flight plan. This clearance does not include the altitude, Departure Procedure (DP) or DP Transition.

Example:

CLEARANCE:	"KATT 624 is cleared to Maxwell AFB via direct INBRD, then as filed, climb and maintain..."

Any change to what you have filed will be presented as "except change route to read…."

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CLEARANCE:	"KATT 624 is cleared to NPA as filed, except change route to read: direct Crestview two seven zero radial at two zero, then as filed, climb and maintain...."

12. CLEARED (as filed, approach, for the option, to land) - ATC authorization for an aircraft to perform a specific procedure. Always report what you are cleared for. Do not simply repeat "cleared."

Example:

TOWER:	"KATT 611 Runway Seven Right, cleared to land."
SNFO:	"KATT 611 cleared to land Seven Right."

13. CLIMB UNRESTRICTED - Rate of climb to an assigned altitude is not restricted and/or published altitude restrictions on a SID are no longer applicable; however, the remaining items of the SID are binding. (Not listed in the pilot/controller glossary, but commonly used.)

14. CONTACT - Establish communication with (followed by the name of the facility and, if appropriate, the frequency to be used).

Example:

CONTROLLER:	"KATT 631, contact Pensacola Approach on two seven zero point eight (or local button six)."

15. CORRECTION - An error has been made in the transmission and the corrected version follows.

Example:

SNFO:	"KATT 631, leaving eight thousand, for three thousand correction four thousand."

16. CROSS (FIX) AT/ABOVE OR BELOW - Must be at the requested altitude restriction at the specified fix. Used by ATC when a maximum or minimum crossing altitude at a specific fix is required. It does not prohibit the aircraft from crossing the fix at a lower altitude if "At or Below" was given or at a higher altitude if "At or Above" was given.

17. DISCRETE FREQUENCY - A separate radio frequency used in direct pilot-controller communications used primarily during precision approaches. This assists in eliminating frequency congestion on the frequency.

18. DISREGARD - Cancel my last message. Similar to the "correction" call except in this case more than one piece of information was transmitted incorrectly. You will hear instructors use this when students make incorrect or improper radio calls.

19. ETA - Estimated Time of Arrival.

20. ETE - Estimated Time Enroute.

21. EXECUTE - Perform a task.

Example:

CONTROLLER: "BUCK 331, execute missed approach."

22. EXPECT - Used under certain conditions to inform a pilot that an altitude and/or additional clearance will be provided later.

Example:

CONTROLLER: "BUCK 337, expect seven thousand in ten miles."

23. EXPECT FURTHER CLEARANCE (TIME)/EFC - The time or place at which it is expected that additional clearance will be issued to an aircraft. This pertains to route as well as altitude.

Example:

CONTROLLER: "KATT 622, hold as published expect further clearance time four zero, time now one eight."

24. EXPEDITE - Used by ATC when prompt compliance is required to avoid the development of an imminent situation.

Example:

CONTROLLER: "KATT 622, expedite your descent through Flight Level two two zero."

25. FLY HEADING (DEGREES) - Informs pilot of heading to fly.

Example:

CONTROLLER: "KATT 631, fly heading two niner zero."

26. GLIDEPATH - Used by ATC to inform an aircraft making a precision approach of its vertical position relative to published glideslope.

A-4 GLOSSARY

Example:

CONTROLLER:	"KATT 623, above glidepath, correcting slowly...."

27. GO AHEAD - Proceed with your message.

Example:

SNFO:	"Mobile Approach, KATT 631, eight thousand, information Romeo, request."
CONTROLLER:	"KATT 631, go ahead."

28. GO AROUND - Instructions for a pilot to abandon his approach to landing. Similar to WAVEOFF.

Example:

TOWER:	"KATT 617, go around, fouled deck."

29. GUARD - Universal emergency frequency (243.0 UHF, 121.5 VHF)

30. HAVE NUMBERS - Used by aircrew to inform ATC that they have received runway, wind, and altimeter setting for a particular airfield.

31. HOW DO YOU HEAR or HOW DO YOU READ - A question relating to the quality of the transmission or to determine how well the transmission is being received.

Example:

CENTER:	"BUCK 317, how do you read this transmitter?"
SNFO:	"BUCK 317, loud and clear," or "BUCK 317 weak and unreadable," or "BUCK 317, broken."

32. IDENT - A request for a pilot to activate the aircraft transponder identification feature. This will help the controller to confirm an aircraft identity. (No verbal response necessary.)

Example:

CONTROLLER:	"KATT 611, ident."

33. IFR - Instrument Flight Rules - Rules governing the procedures conducting instrument flight.

34. IMC - In Instrument Meteorological Conditions, meaning no discernible horizon and/or in clouds.

Example:

CONTROLLER:	"KATT 811, say visibility."
SNFO:	"KATT 811, IMC."

35. IMMEDIATE/IMMEDIATELY - Used by ATC when such action is required to avoid an imminent situation.

Example:

CONTROLLER:	"KATT 833, immediate right turn, heading one eight zero."
SNFO:	"KATT 833, right one eight zero."

36. INOPERATIVE - Used to describe a piece of equipment which has ceased to function properly (e.g., an inoperative TACAN). (Not listed in the pilot/controller glossary, but commonly used.)

37. INTERCEPT - To meet or cross. (Not listed in the pilot/controller glossary, but commonly used.)

Example:

CONTROLLER:	"BUCK 312, intercept the Crestview two three zero radial and proceed outbound."

38. LAST ASSIGNED - Last clearance assigned by ATC and acknowledged by the pilot.

39. LEAVING - To depart an altitude/flight level at which you were level. This term is not in the Pilot/Controller Glossary but is a common use term.

Example:

SNFO:	"APPROACH, KATT 628, leaving one zero thousand for six thousand."

40. MAINTAIN - Concerning altitude/flight level, the term means to remain at the altitude/flight level specified. The phrase "climb and" or "descend and" normally precedes "maintain" and the altitude assignment.

Example:

CONTROLLER: "KATT 631, descend and maintain one thousand eight hundred."

41. MISSED APPROACH - A maneuver conducted by the pilot when an approach cannot be completed to a landing.

42. NEGATIVE – "No" or "Permission not granted" or "That is not correct."

43. NEGATIVE CONTACT

a. Used to report traffic called by ATC that is not in sight. (You will hear many responses. "NO JOY"/"LOOKING"/"SEARCHING"/"I do not see him." "Negative contact" is the correct response from the Aeronautical Information Manual.)

b. Also used to inform ATC that you were unable to contact ATC on a particular frequency.

44. NEGATIVE ATIS/NEGATIVE NUMBERS - Used by pilots to inform ATC that they have not received airport information.

45. NORDO - A contraction meaning "no radio." It is used to describe aircraft that lost radio communication capability.

46. OPTION – Clearance for any of the following - touch and go, full stop, low approach, and stop and go.

Example:

CONTROLLER: "BUCK 314, cleared option Runway Seven Right."

47. OVERHEAD - A series or predetermined maneuvers prescribed for VFR arrival of military aircraft. It consists of an initial approach 3 to 5 miles in length and an elliptical pattern consisting of two 180 degree turns.

48. PASSING - Used on initial check-in with a controller when you are climbing or descending through an altitude /flight level. (Not in the pilot/controller glossary, but commonly used term.)

49. PAR - Precision Approach Radar approach providing glideslope and azimuth (course) information via a precision approach radar system located at the destination airfield.

50. PILOT'S DISCRETION - When used in conjunction with altitude assignments, means that ATC has offered the pilot the option of starting a climb or descent at any rate or time the pilot wishes. The pilot may temporarily level off at any intermediate altitude. However, once the pilot has vacated an altitude, the pilot may not return to that altitude.

51. READ BACK - Repeat the message back to me.

52. REPORT - Used to instruct pilots to advise ATC of specified information.

53. REQUEST - To ask for.

54. ROGER - I have received all of your last transmission. It should not be used to answer a question requiring a yes or no answer.

Example:

CLEARANCE:	"BUCK 311, your clearance is on request."
SNFO:	"BUCK 311, roger."

55. SAY AGAIN - Used to request a repeat of the last transmission.

56. SAY ALTITUDE - Used by ATC to ascertain an aircraft's specific altitude/flight level. When the aircraft is climbing or descending, the pilot should state the indicated altitude rounded to the nearest 100 feet.

Example:

CONTROLLER:	"BUCK 312, say altitude."
SNFO:	"BUCK 312, passing eight thousand two hundred."

57. SAY HEADING - Used by ATC to request an aircraft heading. The pilot should state the actual heading of the aircraft.

Example:

CONTROLLER:	"BUCK 331, say heading."
SNFO:	"BUCK 331, two niner zero."

58. SAR - Search and Rescue service.

59. SQUAWK - Activate specific modes/codes (4 digit number)/functions on the aircraft transponder.

Example Codes:

Emergency Squawk	7700

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VFR Squawk	1200
Hijacking	7500
NORDO	7600
Aerobatics	4700 (Local Alert Area 292 use only)
Low Level	4000

60. STAND BY - The controller or aircrew wants the other to wait for a few seconds usually to attend to other duties of higher priority. A verbal response of "roger" is **not** desired after being told to "stand by".

61. SWITCHING - A response to an ATC request to contact a new agency on a discrete frequency followed by reading back the frequency.

Example:

CENTER:	"KATT 633, contact JACKSONVILLE CENTER on three five one point niner"
SNFO:	"KATT 633, switching three five one point niner"

62. TRAFFIC IN SIGHT - Used by pilots to inform a controller that previously issued traffic is in sight. See NEGATIVE CONTACT for traffic that is not in sight.

63. UNABLE - Indicates inability to comply with a specific instruction, request, or clearance.

64. UNIFORM - Used to refer to UHF.

65. VICTOR – Used to refer to VHF.

66. VECTOR - Heading issued to an aircraft to provide navigational guidance by radar.

67. VERIFY - Request confirmation of information.

Example:

SNFO:	"APPROACH, KATT 623, verify assigned altitude."

68. VFR - Visual Flight Rules - Rules that govern the procedures for conducting the flight under visual conditions. This term is also used to indicate weather conditions that are equal to or greater than minimum VFR requirements.

69. VMC - Visual Meteorological Conditions - Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling equal to or better than specified minimum.

70. WHEN ABLE - When used in conjunction with ATC instructions, gives the pilot the latitude to delay compliance until a condition or event has been reconciled. Unlike “pilot discretion,” when instructions are prefaced “when able,” the pilot is expected to comply at the first opportunity. "When able" should not be used when expeditious compliance is required.

Example:

CONTROLLER:	“BUCK 331, fly heading zero niner zero. When able, proceed direct SEMMES.”

71. WILCO - I have received your message, understand it and **will comply**. “Wilco” a call in which you were told to do something.

Example:

CONTROLLER:	“BUCK 322, SHERMAN TOWER, report the numbers, Runway Seven Right.”
SNFO:	“BUCK 322, wilco.”

A102. MILITARY TERMS

The following terms are included in Navy tactical lexicons. Tactical lexicons are groups of words and phrases used in a tactical environment to keep required communications as concise as possible. Civilian controllers are not required to know the meaning of the terms included in military lexicons. Civilian controllers, however, usually understand the most frequently used tactical lexicon terms.

(Reference the tactical lexicon issued for your specific community. The terms listed here are simply the most commonly used terms.)

1. ANGELS - Height of aircraft in thousands of feet (e.g., ANGELS 6 = 6000 feet).

2. BANDIT - Target or enemy aircraft.

3. BINGO - Fuel state at which emergency profiles must be flown to get home.

4. FEET WET/DRY - Flying over water/land.

5. HOLDING HANDS - Aircraft flying in visual formation.

6. JOKER - The fuel state at which the aircraft should begin returning to base. This fuel state is above BINGO.

7. LOOKING - Previously issued traffic is not in sight, and trying to visually acquire it. A closely related word to looking is “searching”. However, searching should only be used by air to air radar equipped aircraft to imply they are searching via radar.

Example:

ATC:	“KATT 810, traffic twelve o'clock, one mile, one six thousand.”
SNFO:	“KATT 810, looking.”

Traffic calls will now be discontinued by the controller unless the traffic continues to be a hazard.

8. NO JOY - You were unable to contact ATC on a particular frequency.

Example

SNFO:	“DEPARTURE, BUCK 312, no joy on three two seven point zero.”

Also, aircrew does not have visual contact with the target/bandit; opposite of term “TALLY.”

9. POPEYE - Used to tell a controller that you are in clouds (IMC) and cannot see the traffic the controller is calling.

Example:

ATC:	“BUCK 312, traffic at your three o’clock, eight thousand.”
SNFO:	“BUCK 312, popeye.”

10. RECYCLE - Reset your transponder. Indicates that ATC is not properly receiving your IFF.

11. RTB - Acronym meaning “return to base”.

12. SWEET - Valid IFF response received.

13. TALLY or TALLY HO - I have gained visual contact with a possible enemy.

Example:

CONTROLLER:	“KATT 821, traffic, twelve o’clock, 2 miles, three thousand, Mig-29.”

SNFO: "KATT 821, tally."

14. VISUAL - I have gained visual contact with a friendly aircraft.

Example:

ATC: "KATT 821, traffic, twelve o'clock, 2 miles, three thousand, T-2."

SNFO: "KATT 821, visual."

15. WOXOF - Pronounced "wock-soff". An acronym signifying poor weather, meaning literally that the weather is zero ceiling obscured, zero visibility due to fog.

APPENDIX B
CONTACT COMMUNICATIONS

B100. VFR ARRIVAL

Returning to base for a VFR arrival can be done whether on a VFR or IFR flight plan. At NAS Pensacola we refer to the VFR arrival as "course rules." Recall that since you are VFR and squawking 1200, approach control is not closely monitoring your position. You are one of many VFR aircraft.

After copying ATIS, and approaching the VFR course rules entry point, switch to Pensacola Approach and make the following call using the basic Who-Where-What flow.

Example:

SNFO:	"Approach, BUCK 310, three thousand five hundred, information ECHO, request course rules."

You told the controller who you are (BUCK 310) and where you are (3500 ft). Your altitude should be enough information for ATC because they are expecting you to make the call near the course rules entry point ,Jack Edwards airport. Finally, you told the controller what your intentions are (course rules). This call again illustrates how homefield, or local area calls allow for more brevity.

The controller will reply with a squawk.

Example:

ATC:	"BUCK 310, squawk zero one three six."
SNFO:	"BUCK 310, squawk zero one three six."

Until you enter the discrete squawk and approach radar identifies the given transponder code, you must remain clear of class "C" airspace. This is not an issue overhead Jack Edwards, since it is nearly 20 NM from NPA. However, there may be times when you request course rules at a different entry point. Once the controller locates your aircraft on the radar screen and reports "radar contact", the controller should clear you for the course rules arrival for the runway in use at NPA (Figure B-1).

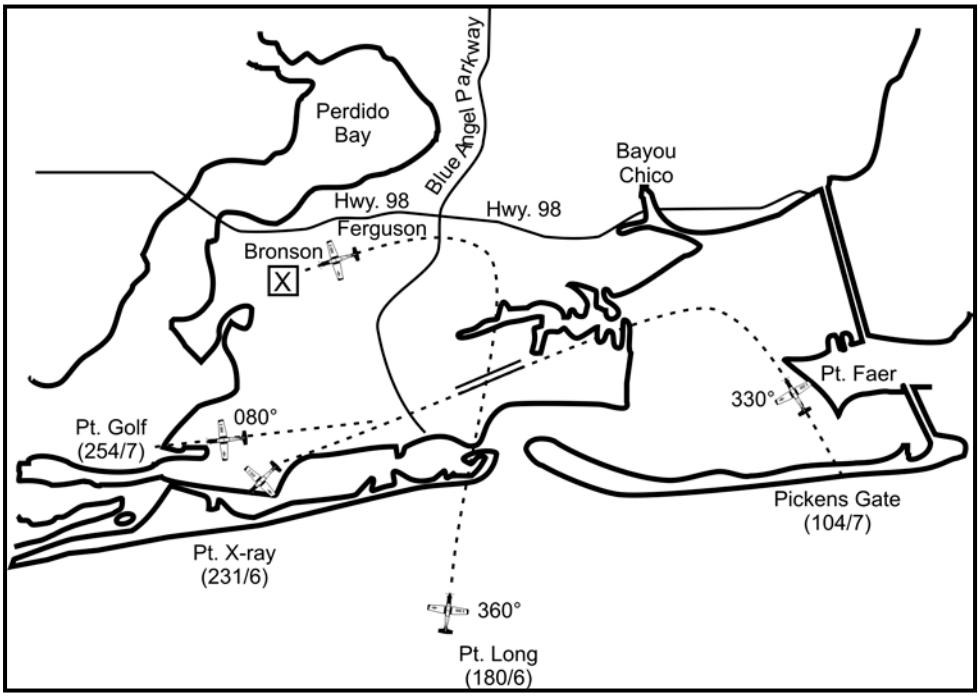

Figure B-1 Course Rules

ATC:	"BUCK 310, radar contact, descend and maintain two thousand. Report Point GOLF in sight."
SNFO:	"BUCK 310, leaving three thousand five hundred for two thousand, wilco."

As soon as the initial is in sight, report this to the controller:

SNFO:	"Approach, BUCK 310, PT GOLF in sight."
ATC:	"BUCK 310, contact TOWER."
SNFO:	"BUCK 310, switching."

Once on top of the entry point, make the following call to the Tower:

SNFO	"Sherman Tower, BUCK 310, Point GOLF for the break."
TOWER:	"BUCK 310, report the numbers Runway Seven Right."
SNFO:	"BUCK 310, WILCO."

B-2 CONTACT COMMUNICATIONS

Sometimes, another aircraft communicating with the Tower interferes with your opportunity to report your point. When this occurs, continue flying the course rules. When the frequency is clear, report your current position as accurately as possible.

Example:

SNFO:	"BUCK 311, inside Point GOLF"

Or

SNFO:	"BUCK 311, three mile initial"

Proceed inbound to the field. The next call is at the numbers (the approach end of the duty runway): Tower will identify any traffic in the landing pattern and will clear you to break. The controller may clear you to break immediately, at midfield (half way down the runway), at the upwind numbers (the opposite end of the duty runway), or on the tower controller's command, i.e. "proceed upwind, I'll call your break."

SNFO:	"BUCK 310, numbers, Seven Right"
TOWER:	"BUCK 310, right break approved."
SNFO:	"BUCK 310, right break."

When the aircraft approaches the abeam position, and the landing gear is down, report to tower. The call here follows the same flow discussed in Chapter 3, i.e. Who, Where, What, Wheels.

Format:	"Call sign, position, gear down (or three down and locked), landing intentions."
SNFO:	"BUCK 310, one eighty, three down and locked, full stop."

If unable to contact the tower due to other traffic calls, continue your approach but amend the call by using the aircraft's current position. Always remember to read back tower's clearance.

SNFO:	"BUCK 310, ninety, gear down, option."
TOWER:	"BUCK 310, Runway Seven Right, cleared option."
SNFO:	"BUCK 310, cleared option Seven Right."

B101. OLF COMMUNICATIONS (REFERENCE TRAWING 5 FWOP)

First determine the duty runway on the appropriate frequency.

SNFO: "Barin, landing."

RDO: "Barin landing Runway Zero Niner, acknowledge."

SNFO: "Barin landing Runway Zero Niner."

1. Arrival to the break:

   a. Just prior to arriving at the 3 mile initial:

   SNFO: "Barin RDO, BUCK 310, three mile initial Runway Zero Niner, dual, Contact 4003."

   RDO: "BUCK 310, roger, you are number one for the break, number three here when you get here, call your crosswind break."

   b. After clearing the pattern and initiating break procedure:

   SNFO: "Barin RDO, BUCK 310, crosswind break."

   RDO: "Roger break."

2. Pattern Comm:

   a. On downwind, complete the Before Landing Checklist **to instructor only**. After completing transition procedure for landing, report gear down to RDO.

   SNFO: "BUCK 310, one eighty, gear down and locked."

   b. In event of a waveoff, after the aircraft is climbing:

   SNFO: "BUCK 310, waveoff."

   RDO: "Roger waveoff."

   c. After commencing the crosswind turn for successive touch and gos:

   SNFO: "BUCK 310, crosswind, touch and go."

   d. When number 1 upwind, depart:

   SNFO: "BUCK 310, number 1 upwind, departing."

   RDO: "BUCK 310, roger."

B-4 CONTACT COMMUNICATIONS

3. For practice PEL entry:

   a. Approaching the high key:

INSTRUCTOR:	"Barin RDO, BUCK 310, three miles north, practice PEL , passing five thousand, dual, Contact four thousand one."
RDO:	"BUCK 310, roger, you are #1 for high key, #2 when you get here, report high key."
SNFO:	"BUCK 310, wilco."

   b. At high key:

SNFO:	"BUCK 310, high key, Runway Zero Niner."
RDO:	"BUCK 310, report low key with the gear."
SNFO:	"BUCK 310, wilco."

   c. At low key:

   SNFO: "BUCK 310, low key, gear down."

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APPENDIX C
INSTRUMENT COMMUNICATIONS

NOTE

All approach requests should be followed up with one of the following three items: another approach, full stop or flight planned route. If "full stop" or "flight planned route" is not the last item, you can expect ATC to ask "say intentions following the approach."

If conducting a SINGLE approach to a full stop, consideration should be given to including what approach is desired along with words to indicate a full stop. This will assist Approach control in minimizing communications, especially when they are busy. When requesting holding or multiple approaches use "request." Be specific with your request. For example, if the approach you desire has several IAFs or if you would like the full procedure turn, it is advisable you state the specific IAF or full procedure turn. If several options are available and you simply request the title of the approach, you can expect radar vectors to final. If you are planning for more than one approach, ensure tower gives you clearance for the option.

1. Returning to Navy Pensacola after the enroute portion of the flight and checking in with Pensacola Approach at 9000:

SNFO:	"Pensacola Approach, BUCK 310, niner thousand, information Delta, request direct SIDNY, for holding then GPS Seven Left, followed by PAR Seven Left, full stop."
APPROACH:	"BUCK 310, Pensacola Approach, proceed direct SIDNY, descend and maintain two thousand two hundred."

2. Established in holding.

SNFO:	"BUCK 310, established in holding at SIDNY."
APPROACH:	"BUCK 310, roger."

3. When ready for the approach:

SNFO:	"Pensacola Approach, BUCK 310, ready for the approach."

APPROACH:	"BUCK 310, maintain 2200 till SIDNY, cleared GPS Seven Left approach."
SNFO:	"BUCK 310, maintain two thousand two hundred, till SIDNY, cleared GPS Seven Left."

4. While on the approach:

APPROACH:	"BUCK 310, your climbout instructions are: runway heading to eight hundred, at 2 DME past the TACAN, turn right one eight zero, climb to one thousand five hundred."
SNFO:	"BUCK 310, runway heading to eight hundred, at 2 DME past the TACAN right one eight zero, climb to one thousand five hundred."

5. On the final approach course:

APPROACH:	"BUCK 310, contact Sherman Tower, button four."
SNFO:	"BUCK 310, switching."
SNFO:	"Sherman Tower, BUCK 310, final approach fix, gear down."
TOWER:	"BUCK 310, wind zero seven zero at eight, Runway Seven Left, cleared for the option."
SNFO:	"BUCK 310, cleared option, Seven Left."

6. At MAP:

SNFO:	"Tower, BUCK 310, executing climbout."
TOWER:	"BUCK 310, roger, contact Pensacola Approach two seven zero point eight."
SNFO:	"BUCK 310, switching two seven zero point eight."

7. When executing climbout:

SNFO:	"Pensacola Approach, BUCK 310, passing eight hundred for one thousand five hundred."

C-2 INSTRUMENT COMMUNICATIONS

APPROACH:	"BUCK 310, Radar contact three miles southeast of Navy Sherman, maintain one thousand five hundred, heading one eight zero."
SNFO:	"BUCK 310, right one eight zero, one thousand five hundred."

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APPENDIX D
INSTRUMENT COMMUNICATIONS/PAR APPROACH

1. Initial check-in:

SNFO:	"Pensacola Approach, BUCK 313, niner thousand, information DELTA, request."
APPROACH:	"BUCK 313, go ahead."
SNFO:	"BUCK 313, request PAR, Two Five Right, followed by a no gyro PAR, full stop."
APPROACH:	"BUCK 313, roger. This will be vectors to a PAR Runway two five Right, descend and maintain one thousand two hundred, turn right heading one two zero."
SNFO:	"BUCK 313, leaving niner thousand for one thousand two hundred, right one two zero."

2. Switch to discrete frequency:

APPROACH:	"BUCK 313, switch to my frequency button one zero."
SNFO:	"BUCK 313, switching button one zero."
SNFO:	"Approach, BUCK 313, button one zero, one thousand five hundred."
APPROACH:	"BUCK 313, roger."

3. Turn left to base:

APPROACH:	"BUCK 313, turn left heading three four zero."
SNFO:	"BUCK 313, left three four zero."

4. Turn to final:

APPROACH:	"BUCK 313, turn left heading two five zero, stand by for final controller."
SNFO:	"BUCK 313, left two five zero."

FINAL CONT: "BUCK 313, Sherman final controller, wheels should be down, how do you hear?"

5. If the gear are down and locked:

SNFO: "BUCK 313, loud and clear, gear down."

6. If the gear are not down and locked, do not report them down and locked.

SNFO: "BUCK 313, loud and clear."

NOTE

Report gear down and locked to the final controller after the gear are down and locked:

NOTE

It is not necessary to repeat your call sign when under control of the final controller as your aircraft is on a discrete frequency and you are the only aircraft communicating on that frequency. When the controller gives you directive communication, it is acceptable to repeat the directive information without using your callsign (since you are the only aircraft on frequency).

FINAL CONT: "BUCK 313, climbout instructions are runway heading to eight hundred, at 2 DME past the TACAN, turn left one eight zero, climb to one five zero zero."

SNFO: "BUCK 313, runway heading to eight hundred, at 2 DME past the TACAN, turn left one eight zero, climb and maintain one thousand five hundred."

FINAL CONT: "Right of course, turn left two five zero."

SNFO: "left two five zero."

FINAL CONT: "Approaching glide path, do not acknowledge further transmissions, slightly right of course, turn left 248."

SNFO: (No response required)

FINAL CONT: "Slightly below glide path, begin descent."

SNFO: (No response required)

D-2 INSTRUMENT COMMUNICATIONS/PAR APPROACH

FINAL CONT:	"4 miles, up and on glide path, on course."
SNFO:	(No response required)
FINAL CONT:	"3 miles, on glide path, on course."
SNFO:	(No response required)
FINAL CONT:	"2 miles on glide path, on course."
SNFO:	(No response required)
FINAL CONT:	"BUCK 313, wind two four zero at eight, Runway Two Five Right, cleared for the option."
SNFO:	"BUCK 313, cleared option two five right."
FINAL CONT:	"1 mile, going slightly above glide path."
SNFO:	(No response required)
FINAL CONT:	"BUCK 313, at decision height. If field not in sight, execute missed approach, say intentions."
SNFO:	"BUCK 313, executing climbout."

7. Departure is required to initiate the call to you during a Single Frequency Approach. However, if Departure does not call you after a few seconds then proceed with the following call:

SNFO:	"Departure, BUCK 313, eight hundred feet."

a. Turn to downwind:

DEPARTURE:	"BUCK 313, turn left zero seven zero, climb maintain one thousand three hundred, for a PAR runway two five right, expect no gyro vectors on final."
SNFO:	"BUCK 313, left zero seven zero, maintaining one thousand three hundred roger."

b. Turn to left base:

DEPARTURE:	"BUCK 313, turn left three five zero, 8 miles from touchdown on the base leg, all turns on final should be half standard rate."
SNFO:	"BUCK 313, left three five zero, roger."

c. Turn to final:

DEPARTURE:	"BUCK 313, turn left two five zero, standby for final controller."
SNFO:	"BUCK 313, left two five zero."
FINAL CONT:	"BUCK 313, Sherman final controller, wheels should be down, how do you hear?"
SNFO:	"BUCK 313, loud and clear, gear down."
FINAL CONT:	"BUCK 313, roger. This will be a no gyro PAR to Runway Two Five Right, start and stop all turns on my call."
	"Left of course. Turn right."
SNFO:	"313 turning right."
FINAL CONT:	"Stop turn."
SNFO:	"Stopping turn."
FINAL CONT:	"BUCK 313, missed approach instructions remain the same, do you desire a repeat?"
SNFO:	"313, negative."
FINAL CONT:	"Right of course, turn left."
SNFO:	"Turning left"
FINAL CONT:	"Stop turn."
SNFO:	"Stop turn."
FINAL CONT:	"5 miles, approaching glidepath, begin descent, do not acknowledge further transmissions, slightly right of course, turn left."

SNFO:	(No response required)
FINAL CONT:	"Slightly below glidepath, stop turn."
SNFO:	(No response required)
FINAL CONT:	"4 miles, on glidepath."
SNFO:	(No response required)
FINAL CONT:	"Up and on glidepath."
SNFO:	(No response required)
FINAL CONT:	"3 miles, going slightly above glidepath."
SNFO:	(No response required)
FINAL CONT:	"Coming down, on glidepath."
SNFO:	(No response required)
FINAL CONT:	"2 miles, going slightly above glidepath, turn left."
SNFO:	(No response required)
FINAL CONT:	"Stop turn, on glidepath."
SNFO:	(No response required)
FINAL CONT:	"BUCK 313, wind two four zero at eight, Runway Two Five Right, cleared to land."
SNFO:	"BUCK 313, cleared to land runway two five right, gear down."
FINAL CONT:	"1 mile, going slightly above glidepath."
SNFO:	(No response required)
FINAL CONT:	"BUCK 313, at decision height. If field not in sight, execute missed approach, say intentions."
SNFO:	"BUCK 313, field in sight."

FINAL CONT:	"BUCK 313, proceed visually."
SNFO:	"BUCK 313, wilco."

d. On deck:

SNFO:	"Sherman Tower, BUCK 313, GCA roll-out."
TOWER:	"BUCK 313, turn left when able, hold short of two five left."

e. After rolling out and in between runways:

SNFO:	"BUCK 313, holding short of runway two five left."
TOWER:	"BUCK 313, taxi across runway two five left, contact Ground when clear."
SNFO:	"BUCK 313, taxi across runway two five left, wilco."

f. When clear of all active runways, after switching to Ground frequency:

SNFO:	"Sherman Ground, BUCK 313, clear of the duty, taxi to my line."
GROUND:	"BUCK 313, taxi to your line."
SNFO:	"BUCK 313, wilco."

g. When off taxiway Alpha on taxiway Alpha 4 taxiing into the ramp area, automatically switch to Base on button 19 (VT-10) or 20 (VT-4).

SNFO:	"Base, BUCK 313, in and up."
BASE:	"BUCK 313, base, roger."

h. Switch immediately back to Ground on button 3 for the rest of your taxiing and engine shutdown.