

AIRMAN CERTIFICATION STANDARDS: REMOTE PILOT SMALL: You will know and be able to explain in writing or oral form the below tasks regarding RADIO COMMUNICATIONS.

Task	Task A. Radio Communications Procedures
References	AC 107-2; AIM
Objective	To determine that the applicant is knowledgeable in radio communication procedures.
Knowledge	The applicant demonstrates understanding of:
UA.V.A.K1	1. Airport operations with and without an operating control tower.
UA.V.A.K2	2. The description and use of a Common Traffic Advisory Frequency (CTAF) to monitor 2.manned aircraft communications.
UA.V.A.K3	3. Recommended traffic advisory procedures used by manned aircraft pilots, such as self-3.announcing of position and intentions.
UA.V.A.K4	4. Aeronautical advisory communications station (UNICOM) and associated 4.communication procedures used by manned aircraft pilots.
UA.V.A.K5	5. Automatic Terminal Information Service (ATIS).
UA.V.A.K6	6. Aircraft call signs and registration numbers.
UA.V.A.K7	7. The phonetic alphabet.
UA.V.A.K8	8. Phraseology: altitudes, directions, speed, and time.

COMMUNICATIONS AND FLIGHT INFORMATION

You need to avoid air traffic. To do that you need to observe the 5 mile No Fly Zone regulation or advising and receiving permission to fly within the No Fly Zone monitor aviation activity near you. Even though you maintain the FAA regulation of flying less than 400 feet AGL if you are within a no fly zone you want to stay out of the runway approach where aircraft will descend below 400 feet in their landing pattern.

It is good to learn the language of communication used by pilots. Consider purchasing and using a portable aviation radio to monitor air traffic. You can use your ear equally well to avoid air traffic.

COMMUNICATIONS AND FLIGHT INFORMATION

FLIGHT SERVICE STATION

BRIEFING: Contact for Briefings (1 800 WX BRIEF)

FLIGHT PLANS: Filing of V/IFR Flight Plans

CONTACT: Airborne contacts for weather and airport advisories

VHF/DF FINDING: Enroute assistance if you get lost (radio triangulation)

SEARCH AND RESCUE: Alerted by FSS when you have not reported (CLOSED YOUR FLIGHT PLAN) within 30 minutes of ETA.

Most now work using automation. Ten years ago there were 1,200 FSS facilities nationwide but due to privatization, Honeywell, that was reduced to 13 by 2009, and after February 2011 there will only be 7 FSS facilities that pilots can use for pilot briefings and contact.

AFSS: Use these shortcuts in place of voice recognition when calling 800-WX-BRIEF

- Press 1 to speak to a Briefer; enter state code (see below).
- Press 2 to issue, cancel, or amend Notams (authorized persons only).
- Press 3 to listen to TIBS (transcribed information briefing service); enter state code.
- Press 4 to record a Fast File Flight Plan.
- Press 5 to hear Special Announcements.

Additional telephone numbers:

- Clearance Delivery: 888-766-8267
- TIBS direct line: 877-4-TIBS-WX (877-484-2799); enter state code

Alabama	AL or 25	Nebraska.....	NE or 63
Alaska.....	AK or 25	Nevada	NV or 68
Arizona	AZ or 29	New Hampshire	NH or 64
Arkansas.....	AR or 27	New Jersey.....	NJ or 65
California.....	CA or 22	New Mexico	NM or 66
Colorado	CO or 26	New York.....	NY or 69
Connecticut.....	CT or 28	North Carolina.....	NC or 62
Delaware	DE or 33	North Dakota	ND or 63
District of Columbia.....	DC or 32	Ohio	OH or 64
Florida	FL or 35	Oklahoma	OK or 65
Georgia	GA or 42	Oregon	OR or 67
Hawaii	HI or 44	Pennsylvania	PA or 72
Idaho	ID or 43	Puerto Rico	PR or 77
Illinois.....	IL or 45	Rhode Island	RI or 74
Indiana	IN or 46	South Carolina.....	SC or 72
Iowa.....	IA or 42	South Dakota	SD or 73
Kansas	KS or 57	Tennessee	TN or 86
Kentucky.....	KY or 59	Texas.....	TX or 89
Louisiana	LA or 52	Utah	UT or 88
Maine	ME or 63	Vermont.....	VT or 88
Maryland	MD or 63	Virgin Islands	VI or 84
Massachusetts	MA or 62	Virginia	VA or 82
Michigan	MI or 64	Washington.....	WA or 92
Minnesota	MN or 66	West Virginia	WV or 98
Mississippi	MS or 67	Wisconsin	WI or 94
Missouri	MO or 66	Wyoming	WY or 99
Montana	MT or 68		



COMMUNICATIONS AND FLIGHT INFORMATION

VHF COMMUNICATIONS IS LIMITED TO “LINE OF SIGHT”

Altitude	NM Range of VHF
1000	39
1500	48
2000	55
3000	69
5000	87
10000	122
15000	152
20000	174

SPEAK ZULU

TIME CONVERSION TABLE	
To Convert From	To UTC (Zulu)
Eastern Standard Time	Add 5 hours
Central Standard Time	Add 6 hours
Mountain Standard Time	Add 7 hours
Pacific Standard Time	Add 8 hours
For DAYLIGHT TIME, SUBTRACT 1 HOUR FROM CONVERSION TIME	

COMMUNICATIONS AND FLIGHT INFORMATION

ALWAYS LISTEN BEFORE HITTING TRANSMIT SO YOU DO NOT "WALK-ON" OTHERS

MOST ALL COMMUNICATIONS HAS 3 PIECES OF INFORMATION

WHO (YOU ARE CALLING AND WHO YOU ARE)

WHERE AND HOW HIGH (IF ALOFT)

WHAT IS YOUR REQUEST OR INTENTION

EXAMPLES

Approaching Zephyrhills..

Zephyrhills Traffic, this is Cessna N736NC...

10 miles west

Inbound for landing, full stop, runway 04

If busy You WAIT for acknowledgement before giving all details.

Tampa approach, Cessna N736NC, over

Tampa...Go ahead 736NC

Cessna N736NC,

Departed Zephyrhills VFR climbing thru 1500

Request vectors thru "Bravo" to Clearwater Airport

Tip on Communicating with a Busy Tower

Say “Request” to Tower

When contacting the tower, state your N number, as you would on any inbound flight, and then add one word: “**Request.**”

Now you have the tower’s attention, and you have let the controller

know that something’s on your mind. Having heard that one key word, *the controller can decide whether to solicit your request immediately or deal with other chores first.*

What should you expect to hear?

The response will be ‘**Stand by**’ or ‘**Say request.**’ Your prime objective is to fly the airplane, while the controller's task is to separate traffic. Help them to do their job by being professional on the radio.

COMMUNICATIONS AND FLIGHT INFORMATION

Uncontrolled Airport Communications

CTAF – Common Traffic Advisory Frequency IN AF/D “(Airport Name) Traffic....”

MULTICOM: Can perform same function if non-published CTAF frequency on 122.9

UNICOM: Privately owned air/ground comm. Will sometimes provide “Airport Advisories” and provide services (phone, taxi, fuel, etc.)

GCO – Ground communication outlet (AF/D) allows VHF-to-telephone link to ATC (FSS). See next slide

Facility at Airport	Frequency to Use
UNICOM (No Tower or FSS)	Communicate with UNICOM station on published CTAF; 122.7, 122.725, 122.8, 122.975, or 123.0.
No Tower in Operation, FSS Open	Communicate with FSS on CTAF.
No Tower, FSS, or UNICOM	Self-announce on MULTI-COM frequency 122.9.
Tower or FSS Not in Operation	Self-announce on CTAF.



COMMUNICATIONS AND FLIGHT INFORMATION

Controlled Airport Communications

Air Traffic Control (ATC) clearances and instructions: They rule the roost, BUT you are pilot in control and have the final say and total responsibility.

DEPARTURE PROCEDURES

ATIS – Get traffic, weather and expected departure/arrival procedures before contacting **DEPARTURE CONTROL**

DELIVERY CLEARANCE – If it exists at that airport – **USE IT** prior to contact of Ground Control (reduces workload for controllers).

GROUND CONTROL – Command every movement on the ground on all areas except active runways (other than crossing).

CONTROL TOWER – Command every movement entering, on and exiting the active runway, and aircraft movements immediately after liftoff.

DEPARTURE CONTROL – Command every movement after release from the control tower.

ARRIVAL PROCEDURES

ATIS → APPROACH CONTROL → CONTROL TOWER → GROUND CONTROL

APPROACH CONTROL – Commands every movement from entry to hand off to Control Tower. **EXPECT VECTORS ESPECIALLY IN “BRAVO”**

Following the airport name and ATIS phonetic letter identifier, the broadcast states the time of the current weather report,

magnetic wind direction and velocity,

visibility, obstructions to visibility, and ceiling/sky condition,

temperature and dewpoint (if available),

and altimeter setting.

Next, the instrument approach and runways in use are indicated.

The ATIS broadcast also contains any other pertinent remarks relating to operations on or near the airport, such as closed runways or temporary obstructions.

The phonetic letter identifier is restated at the end of the broadcast.

*Centennial Airport Information Uniform,
1145 Zulu weather,*

wind 330 at 11,

visibility 30, 8,000 broken,

*temperature 21 check density altitude,
dewpoint 10,*

altimeter 30.22.

*Visual approach in use landing and
departing Runways 35 Right and Left.
Departing Runway 10, landing Runway 28.*

*Notices to Airmen, Runway 28 REILs out
of service. Advise ground control direction
of flight. The following special procedures
are in effect; advise ground control when
ready for departure with departure intersection.
Arrivals use caution, simultaneous operations
in progress on parallel runways.*

*Advise on initial contact you have
Information Uniform.*

A common “GOTCHA” on the FAA exam regarding ATIS sky conditions and visibility is that “the ceiling/sky condition, visibility, and obstructions to vision may be omitted from the ATIS broadcast if the ceiling is above 5,000 feet and the visibility is more than 5 miles”.

COMMUNICATIONS AND FLIGHT INFORMATION

EMERGENCY COMMUNICATIONS

DON'T HESITATE FOR THE CONCERN TO BECOME URGENT – LET PEOPLE

KNOW IF SOMETHING IS NOT RIGHT. CONTACT **121.5** AND ADVISE.

NEAR EMERGENCY (“PAN-PAN-PAN”)

EMERGENCY (“MAYDAY-MAYDAY-MAYDAY”) TRANSPONDER TO 7700

DISTRESS or URGENCY	“MAYDAY-MAYDAY-MAYDAY or “PAN-PAN-PAN”
NAME OF STATION ADDRESSED	“TAMPA RADIO”
IDENTIFICATION/TYPE OF AIRCRAFT	“5674R Cessna 172,”
NATURE OF DISTRESS OR URGENCY	“trapped above overcast”
WEATHER	“marginal VFR”
YOUR INTENTIONS AND REQUEST	“request radar vectors to nearest VFR airport”
PRESENT POSITION AND HEADING	“Lakeland VOR, heading 253 degrees”
ALTITUDE	“6,500”
FUEL REMAINING IN HRS & MINS	“Estimated 30 minutes fuel remaining”
NUMBER OF PERSONS ONBOARD	“three persons onboard”
ANY OTHER USEFUL INFORMATION	“squawking 7700”

COMMUNICATIONS AND FLIGHT INFORMATION

Helpful Hints

LISTEN to others: Get an aircraft scanner and listen to communications better understand phraseology for different situations. Your flight instructor will tell you most you need, but listen and learn from others.

USE HEADPHONES: Cuts ambient noise, keeps your voice and inflection appropriate (not screaming over the engine noise).

THINK AHEAD: Know what you are going to say before you do it.... Stops “Ums” “Ehrs” and “Ahaas” to a minimum. Helps your organization and makes you sound professional.

BE COURTEOUS: TWO-MULTI-WAY communications – Don’t hog, be brief. If you can accurately communicate in 10 words, don’t use 30. Your hogging airtime that other pilots are needing to communicate.

COMMUNICATIONS AND FLIGHT INFORMATION

MEMORIZE THE PHONETIC ALPHABET – YOU WILL USE IT A LOT

PRONUNCIATION KEYS

<u>Letter</u>	<u>Word</u>	<u>Pronunciation</u>	<u>Number</u>	<u>Pronunciation</u>
A	Alpha	AL FAH	0	ZE-RO
B	Bravo	BRAH VOH	1	WUN
C	Charlie	CHAR LEE or SHAR LEE	2	TOO
D	Delta	DELL TAH	3	TREE
E	Echo	ECK OH	4	FOW- er
F	Foxtrot	FOKS TROT	5	FIFE
G	Golf	GOLF	6	SIX
H	Hotel	HOH TELL	7	SEV - en
I	India	IN DEE AH	8	AIT
J	Juliet	JEW LEE ETT	9	NIN - er
K	Kilo	KEY LOH		
L	Lima	LEE MAH		
M	Mike	MIKE		
N	November	NO VEM BER		
O	Oscar	OSS CAH		
P	Papa	PAH PAH		
Q	Quebec	KEY BECK		
R	Romeo	ROW ME OH		
S	Sierra	SEE AIR RAH		
T	Tango	TANG GO		
U	Uniform	YOU NEE FORM		
V	Victor	VIK TAH		
W	Whiskey	WISS KEY		
X	X-ray	ECKS RAY		
Y	Yankee	YANG KEY		
Z	Zulu	ZOO LOO		

<u>Number</u>	<u>Transmitted as</u>	<u>Pronounced as</u>
10	ONE ZERO	WUN ZE-RO
75	SEVEN FIVE	SEV-en FIFE
100	ONE HUNDRED	WUN HUN-dred
583	FIVE EIGHT THREE	FIFE AIT TREE
2 500	TWO THOUSAND FIVE HUNDRED	TOO TOU-SAND FIFE HUN-dred
5 000	FIVE THOUSAND	FIFE TOU-SAND
11 000	ONE ONE THOUSAND	WUN WUN TOU-SAND
25 000	TWO FIVE THOUSAND	TOO FIFE TOU-SAND
38 143	TREE EIGHT ONE FOUR THREE	TREE AIT WUN FOW-er

COMMUNICATIONS AND FLIGHT INFORMATION

SOURCES OF INFORMATION

CHART SUPPLEMENT (PREVIOUSLY: AIRPORT/FACILITY DIRECTORY)

FEDERAL AVIATION REGULATIONS

AERONAUTICAL INFORMATION MANUAL

NOTAMS

ADVISORY CIRCULARS

JEPPESEN INFORMATION SERVICES – PAY FOR IMMEDIATE NOTIFICATION.

FLIGHT PUBLICATIONS

Aviation Radio Frequency Bands: See instructor notes on CD

WHAT IS THE EMERGENCY FREQUENCY (MEMORIZE IT)

121.5

DIVE-VER COMMUNICATIONS