Reference Notes:

1. Aeronautical Information Manual (AIM) references reflect Change 3, dated 31 Dec 2020. For the most current AIM, go to https://www.faa.gov/air_traffic/publications/atpubs/aim_html/index.html.

2. Federal Aviation Regulations (FAR) references are from the e-CFR website, retrieved on 2 Mar 2021. For the most current e-CFR, go to https://www.ecfr.gov/cgi-bin/text-idx?SID=76c34b543b7b72d910cd4ee7a1f1d525&mc=true&tpl=/ecfrbrowse/Title14/14tab_02.tpl

3. Pilots Handbook of Aeronautical Knowledge (PHAK) FAA-H-8083-25B, 2016 edition. For the most current PHAK, go to https://youtu.be/uni-PJVW45g.

4. FAA Aeronautical Chart User's Guide, effective 25 Feb 2021. For the most current Chart User's Guide, go to https://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/aero_guide/.

Part 1 Questions and Answers:

1. If 78% of midairs occur at non-towered airports, but non towered airports make up 97 percent of all airports ... suggest that towered airports are more hazardous!

> If 78% of the midair collisions occur at non-towered airports, that means that 22% of midairs occur at towered airports. Since towered airports represent less than 3% of the airports in the US, the relative risk is higher at towered airports. However, in terms of raw numbers, more midairs occur at non-towered airports.

2. Are there aircraft flying without ADS-B?

> The short answer is "Yes". *FAR 91.225* details the requirements for ADS-B that went into effect on 1 Jan 2020. The short version is that ADS-B is required everywhere a transponder with Mode C is required. Of course, there are exceptions for aircraft certificated without an electrical system, and aircraft with inoperative ADS-B transmitters.
>
> Specifically, FAR 91.225 says:
>
> - ADS-B is required in Class A airspace
> - ADS-B above 18,000 feet must be compliant with TSO 166b, with ADS-B and TIS-B on 1090 MHz, and meet the technical requirements of FAR 91.227
> - ADS-B is required below 18,000 MSL in the following airspace:
> - Inside Class B and C airspace

    - Inside the Mode C veil around Class B airspace
    - Above the lateral limits of Class B and C airspace up to 10,000 MSL
    - Class E airspace above 10,000 MSL, except below 2,500 ft AGL
    - Class E airspace at and above 3000 MSL over the Gulf of Mexico from the coast to 12 nm offshore
- For aircraft not originally certified with an electrical system (includes balloons and gliders), operations are authorized:
    - Inside the Mode-C veil
    - Above 10,000 MSL in Class E airspace
    - These operations must be outside of Class B and C airspace
- Requests for deviation from FAR 91.225 are made to the ATC facility
    - If ADS-B is inoperative, a request can be made to the involved ATC facility(ies) to fly the aircraft to a location where it can be repaired. These requests can be made anytime.
    - If the aircraft is not equipped with ADS-B, the request must be made an hour prior to the requested flight.

3. What is the alternative to "Traffic in area, please advise" radio call?

AIM paragraph 4-1-9 g 1, Self-Announce Position and/or Intentions, states, "Pilots stating, "*Traffic in the area, please advise"* is not a recognized Self-Announce Position and/or Intentions phrase and should not be used under any condition".

We all know that the AIM is **advisory** and **not regulatory**, so we can choose to adhere to the AIM's advice or not (but if you don't and something **bad** happens - you must have a good reason why you chose **not** to follow the AIM!). (**See the section at the end of this document for a discussion of regulatory vs. non-regulatory publications**).

There are a number of reasons why the phrase "traffic in the area please advise" is **not** a good idea, such as; frequency congestion, blocked calls from pilots attempting to report their position IAW the AIM, no calls from non-radio or electrical system aircraft in the area giving someone a false sense of security, etc. So what is the alternative?

Position reporting exists primarily so that we know where other traffic exists so that we can avoid a mid-air collision. If everyone who has a radio makes the proper calls as outlined in Table 4-1-1 of the AIM and all pilots comply with the basic tenet of "**see** and **avoid**" and maintain a good "visual" picture of traffic based on what they hear and see, then this is a good alternative to the "Traffic..." call.

Additionally, if you are fortunate enough to be equipped for Traffic Information Service (TIS) and within about 55nm of the approximately 108 ATC radar facilities that are TIS-capable or have ADS-B (In) or TCAS, you have additional opportunities to increase your traffic awareness.

4. Why is it important for an aircraft departing a non-towered airport on an IFR clearance contact ATC as soon as practical from a non-towered airport?

When you depart IFR from a non-towered airport, the **airspace along your departure route is blocked from use by other IFR traffic until you contact ATC**. Because the airspace is blocked, you do not want to unnecessarily delay contacting ATC. AIM, paragraph 5-2-3, Note 1 states, "Other IFR traffic for the airport where the clearance is issued is suspended until the aircraft has contacted ATC or until 30 minutes after the clearance void time or 30 minutes after the clearance release time if no clearance void time is issued".

AIM paragraph 5-2-3 a, states: "On initial contact, pilots should advise that the flight is IFR and state the departure and destination airports." The ATC controller's primary responsibility is separation of IFR traffic, so the controller is going to find your aircraft on his/her radar display then ask the pilot his/her altitude if the pilot doesn't state that altitude (this is required so that the controller can confirm the aircraft's altitude and verify it against the radar's altitude readout). While the controller is finding you they need to make sure that separation exists and until they know right where you are, they also need to make sure that airspace where you should be is clear of traffic. So, on departure, you need to call as soon as possible so that the controller can find you and separate you from other traffic. That way he/she can open up airspace near you for other IFR aircraft and make efficient use of the airspace.

5. Many smaller class E/G do not have their taxiways charted on FAA airport maps. Is there another source?

There are many sources of detailed airport information: government sources (federal, state, and/or local), local airport management (websites), and third party vendors of flight information.

1. Digital Chart Supplement – Search airport information for any public use US airport. Chart Supplements are what we used to call the Airport/Facility Directory.
2. FAA Runway Safety Airport Diagrams – This searches terminal procedures airport diagrams, so it only covers airports with IFR procedures.
3. Terminal Procedures Publications (Approach Charts) – This searches for all terminal procedures and airport diagrams.
4. Jeppesen - This is a commercial terminal and enroute procedures provider which contains airport diagrams (10-9 pages) as well as SIDS, STARs, Instrument Approach Procedures, etc.
5. FlightPlan.com - This is also a commercial service (**free**) which contains a database of airport diagrams as well as other terminal and enroute procedures.
6. Many State aviation departments produce a book of all of the airports in that state, most of which have aerial photos of the airport.

7. Many larger and some smaller airports have well-maintained websites with a lot of information, including airport diagrams.
8. If you can't find an airport diagram that meets your needs using one of these sources, call the airport management and request assistance.

6a. AC90-66B indicates to use call sign when self-announcing. N345 is not the same as N12345. Shortening a call sign is something that ATC can initiate, but is not your full call sign.

6b. What was the reference for abbreviating the last 3 alphanumeric callsign? Flight Safety Foundation?

That is correct, AC 90-66B paragraph 10.3.1 indicates that we use our **full** call sign.

AIM paragraph 4-2-3 a 1 (b) states, "Your *full* aircraft identification as filed in the flight plan or as discussed in paragraph 4-2-4, Aircraft Call Signs. AIM paragraph 4-2-4 a 2 states, "... ATC specialists may initiate abbreviated call signs of other aircraft by using the *prefix and the last three digits/letters* of the aircraft identification after communication is established. The pilot may use the abbreviated call signs in subsequent contacts with the ATC specialist".

The AOPA Safety Adviser "Operations at Non-Towered Airports" #3 page 5, item 2 states,

- It's more important for pilots to know what kind of airplane you're flying than to know your complete call sign. Knowing the model of airplane will help other pilots plan their pattern flight relative to you. The abbreviated version of your call sign takes up less of valuable air time. It's also easier for other pilots to remember a short call sign if they need to request an update on your position.
- To prevent confusion, use your full call sign whenever you hear another aircraft with a similar call sign.

Since the AOPA Safety Advisor contradicts AIM, recommend you go with AIM guidance and use your complete call sign. Thank you for the feedback.

7. Say preferred term for take-off. Is it "taking off" or "departing" ?

AIM page 4-1-5, gives examples of verbiage, in this case, "Strawn traffic, Queen Air Seven One Five Five Bravo **departing** runway two six." Page 4-1-6 gives another example with the same verbiage.

8. In rural areas, is it a good idea to monitor 122.9 and 123.45? I hear many pilots use 123.45 even though it's not the proper frequency.

AIM Table 4-1-1 on page 4-1-3 indicates that airports without a tower, FSS or Unicom should use the MULTICOM frequency of 122.9 MHZ. If you fly near those airports you should hear aircraft on that frequency doing their AIM-prescribed Communication/Broadcast Procedures. AIM Table 4-1-3 on page 4-1-7 shows the Federal Communications Commission (FCC) has designated 122.75 MHZ for air-to-air communication for private fixed wing aircraft, so that frequency, rather than 123.45 MHZ, should be used to talk to other airplanes in flight.

The designated air-to-air frequency for designated oceanic airspace is 123.45 MHZ. Aircraft over the US should **not** be using that frequency. But, since so many pilots use 123.45 you may not hear air-to-air communications if you, do the right thing, and stay on 122.75!

A very important **permanent** FDC NOTAM 4/4386 is often overlooked. It requires all pilots to continuously monitor 121.5 MHZ, **if capable**. The term "guard" refers to the voice emergency frequencies: VHF 121.5 MHz and UHF 243.0 MHz. Airlines, the military, and NASA are required to continuously monitor guard. One of our presenters had 2 occasions where he was able to help a pilot, and also a Grand Canyon river rafting guide in an emergency because he was monitoring guard.

9. IFR traffic landing at a non-towered airport in VMC should break off the approach when appropriate and join the pattern.

AC 90-66B paragraph 9.6 states IFR traffic landing at non-towered airports, "...should bear in mind they do **not** have priority over other VFR traffic."

However, this does not automatically mean all IFR traffic in VMC should break off their approaches and enter the VFR pattern. If you are on an IFR procedure into a non-towered airport and you can fit yourself into the VFR flow, you can do that. However, if continuing your IFR procedure will disrupt the flow and cause another aircraft to maneuver to avoid you, then you should discontinue the IFR procedure and maneuver yourself to enter the VFR traffic pattern.

Also keep in mind that FAR 91.113 g Right of way rules: Except water operations states,

> Aircraft, while on final approach to land or while landing, have the right of way over other aircraft in flight or operating on the surface, except that they shall not take advantage of this rule to force an aircraft off the runway surface which has already landed and is attempting to make way for an aircraft on final approach. When two or more aircraft are approaching the airport for the purpose of landing, the aircraft at the lower altitude has the right of way, but it shall not take advantage of this rule to cut in front of another which is on final approach to land or to overtake that aircraft."

So, this regulation does **not** give an IFR arrival priority over a VFR aircraft. The IFR aircraft must give way to an aircraft on final approach or landing, if the VFR aircraft has the right of way according to FAR 91.113.

Further, FAR 91.126 b (1), also states, "Each pilot of an airplane must make all turns of that airplane to the left...". So, the IFR arrival must fly a left hand pattern (or right hand if charted), unless other guidance dictates otherwise. In this case, "other guidance" is the instrument procedure.

Bottom line, a pilot on an **IFR procedure in VMC** to a non-towered airport does not have traffic priority and must fit themselves into the traffic flow. If that means breaking off the procedure to enter the VFR traffic pattern, then that's what the pilot must do. If that means continuing the approach, that is fine also. Use your best judgment.

10. What is the latest guidance on VFR arrival, 45 degrees on the downwind or is a straight in appropriate?

AC 90-66B says the following in paragraph 11.3,

> **Traffic Pattern Entry.** Arriving aircraft should be at traffic pattern altitude and allow for sufficient time to view the entire traffic pattern before entering. Entries into traffic patterns while descending may create collision hazards and should be avoided. Entry to the downwind leg should be at a 45 degree angle abeam the midpoint of the runway to be used for landing. The pilot may use discretion to choose an alternate type of entry, especially when intending to cross over midfield, based upon the traffic and communication at the time of arrival.

11. Are we are required to monitor 121.5 when capable!

The short answer is **yes**. FDC Permanent NOTAM 4/4386 states, "All aircraft operating in United States National Airspace, if capable, shall maintain a listening watch on VHF guard 121.5 or UHF 243.0".

One way to accomplish this in a GA aircraft is **technique only** and only applies to aircraft with more than one Comm radio. Use #1 for ATC and #2 for "everything else". For example; use ground, tower, departure, etc. for ATC, and #2 for ATIS then 121.5, after listening to ATIS. That way the radio configuration is consistent. This is just one technique, once it's accepted by everyone in the cockpit, allows everyone to know what radio is used for what! There are other techniques you can use, just make sure everyone using the radios knows which radio is being used for ATC and which for "everything else".

12. Is saying "active runway" appropriate?

AC 90-66B paragraph 10.3.1 states, “When referring to a specific runway, pilots should use the runway number and **not** use the phrase “Active Runway”, because there is no official **active** runway at a non-towered airport”.

13. Please verify time zone used for tower hours of operation.

The Chart Supplement Legend, page 14 states, “Hours of operation of all facilities are expressed in Coordinated Universal Time (UTC) and shown as **Z time**”.

On page 21 of the Aeronautical Chart User’s Guide in the VFR chart frequency tabulation example, it states airport tower hours as “Hours of Operation (**local time**)”.

So this means that the **frequency tabulation on the VFR charts is in local time**. **Most everything else is in Z time**. Typically a “Z” or “L” will follow the time. If in doubt, consult the Aeronautical Chart User’s Guide, publication legend pages, or call the airport.

14. Although the guidance recommends announcement at NT airports prior to taxi and takeoff, would you also recommend when crossing runways when taxiing on the ground as well?

The AIM Table 4-4-1 outlines the guidance on recommended communication procedures and paragraph 4-1-9 c states, “Pilots of departing aircraft should monitor/communicate on the appropriate frequency from start-up, during **taxi**, and until 10 miles from the airport...”.

We can’t find any specific guidance in FAA material to self-announce when crossing runways and taxiing on the ground. However, AIM page 4-2-1 paragraph 4-2-1 b states, “The single most important thought in pilot-controller communications is understanding.” So, based on the above paragraph stating to communicate “during **taxi**”, and the need to promote situation awareness, self-announcing crossing a runway and/or taxi route is prudent.

15. What is the correct airport name to use in making your radio call, e.g. 5Y1 in Hessel, Michigan is Albert J Lindberg airport. Hessel seems to be more position specific, but I "Lindberg" is correct.

AC 90-66B paragraph 10.1.1 note 2 states, “Pilots use the correct **airport** name, as identified in appropriate aeronautical publications, when exchanging traffic information to reduce the risk of confusion. For example, “Using Midwest National Traffic” instead of the town name “Mosby Traffic” or “Clay County Traffic” at KGPH when the airport name is printed “Midwest National” on aeronautical publications”.

The Chart Supplement Legend says the following regarding the airport name as listed in the publication,

> Civil and joint Civil/Military airports which are open to the public are listed alphabetically by state and associated city. Where the city name is different from the airport name the city name will appear on the line above the airport name. Airports with the same associated city name will be listed alphabetically by airport name and will be separated by a dashed rule line. A solid rule line will separate all others. FAA approved helipads and seaplane landing areas associated with a land airport will be separated by a dotted line. Military airports and private–use (limited civil access) joint Military/Civil airports are listed alphabetically by state and official airport name.

Based on this guidance, the correct way to self-announce at 5Y1 is “Lindberg Traffic”.

16. If we hear someone on CTAF blabbing about personal stuff, is it appropriate to ask the person to stop unnecessary talking?

Here’s what AC 90-66B, paragraph 10.7 says:

> 10.7. Disagreements. Do not correct other pilots on frequency (unless it is safety critical), particularly if you are aware you are correcting a student pilot. If you disagree with what another pilot is doing, operate your aircraft safely, communicate as necessary, clarify their intentions and, if you feel you must discuss operations with another pilot, wait until you are on the ground to have that discussion. Keep in mind that while you are communicating, you may block transmissions from other aircraft that may be departing or landing in the opposite direction to your aircraft due to IFR operations, noise abatement, obstacle avoidance, or runway length requirements. An aircraft might be using a runway different from the one favoring the prevailing winds. In this case, one option is to simply point out the current winds to the other pilots and indicate which runway you plan on using because of the current meteorological conditions.

17. There is no "lineup and wait" at a NT airport!

The paragraph 5-2-5a “Line Up and Wait” states, “Line up and wait is an air traffic control procedure designed to position an aircraft onto the runway for an imminent departure.” So, this phrase (which replaced the old “taxi into position and hold” when the FAA aligned their procedures with ICAO a number of years ago) is an ATC function used by controllers to have an airplane on the runway and READY for takeoff, thereby increasing the departure rate at a busy airport. It is **not** a **pilot** function to be used at a non-towered airport.

It’s pretty easy to imagine all of the problems that can occur if pilots use this procedure without a tower to separate arriving and departing traffic. When someone lines up on a

runway and they do not see an aircraft on final approach, this is a collision just waiting to happen. The aircraft on final may inadvertently land on the aircraft on the runway or if they do see the aircraft on the runway and decides to go around but the departing aircraft takes off there's a potential mid-air collision between the two aircraft. See and avoid is still a basic tenet of flying and if you line up on a runway with your back to arriving traffic, you can't "see and avoid" that traffic anymore!

18. What do you think about "final call" radio calls when departing NT fields?

We are not really sure what the question means. If the question is referring to making a radio call on final approach, the PHAK figure 14-1 lists one of the recommended radio calls as "final". Most pilots make that call beginning the turn from base to final. Some also make an additional call on short final (~1 mile), especially if the first final call was a few miles out.

If the question is referring to something on departure, we are not sure. Please email us if this did not answer the question and we'll get the answer to your question.

19. If approaching a non-towered traffic pattern from the side away from the traffic pattern (i.e., from the west for a south runway with a left hand pattern), do you recommend overflying the field 1000'?

AC 90-66B, PHAK Chapter 14, AIM paragraph 4-3-3, and FAR 91.126 address traffic pattern entry. There are two different cases: crossing over the airport to maneuver to enter on a 45 degree angle to downwind, or direct entry to downwind without passing over the airport.

When crossing over the airport to enter on a 45 degree angle to downwind, the recommendation is to **cross over the airport 500 feet above traffic pattern altitude**. Guidance also says that unless otherwise published, traffic pattern altitude at non-towered airports is **1000 feet AGL for piston aircraft** and **1500 feet AGL for turbine aircraft**. So if you are at a non-towered airport that used by turbine aircraft, crossing over the airport 500 feet **above the turbine traffic pattern altitude** is prudent.

If you are doing a direct entry to downwind **without crossing over the airport**, and **without a 45 degree entry**, you should be at traffic pattern altitude.

There are many opinions circulating on traffic patterns and entry procedures. Remember the three things that mitigate risks at non-towered airports:

- Follow established procedures
- Use best practices
- Be predictable

This means be predictable by following established procedures and best practices as published in the FARs, AC 90-66B, AIM, and PHAK.

20. What is the better practice for airports with recent name changes that are not charted or where multiple names are used?

If you look at question #15 above, you'll find the recommended procedure - to use the airport name on the aeronautical publication. As airport names change it can take a while for the "old timers" to learn/accept/use the new name. But as pilots who are new to that airport fly arrive and depart, they may not know the previous name and become confused when they think that they're at the airport but hearing a different name. So, to avoid confusion, follow the chart terminology and to use the correct airport name.

21. A final word about regulatory vs. non-regulatory guidance from the FAA.

This is from the General Information Section of AIM. In Flight Information Publication Policy, paragraph d it says,

> This publication, while not regulatory, provides information which reflects examples of operating techniques and procedures which may be requirements in other federal publications or regulations. It is made available solely to assist pilots in executing their responsibilities required by other publications.

This addresses Advisory Circulars and is also in the General Information Section of AIM. It's in the Code of Federal Regulations and Advisory Circulars section.

> Advisory Circulars - The FAA issues Advisory Circulars (AC) to inform the aviation public in a systematic way of nonregulatory material. Unless incorporated into a regulation by reference, the contents of an advisory circular are not binding on the public. Advisory Circulars are issued in a numbered subject system corresponding to the subject areas of the Code of Federal Regulations (CFR) (Title 14, Chapter 1, FAA).

What both of these passages mean is that as a pilot, you need a really, really good reason to deviate from a non-regulatory source. When choosing to deviate from a non-regulatory source it's the responsibility of the pilot to know whether that source incorporates an FAR by reference, thus making it regulatory!!