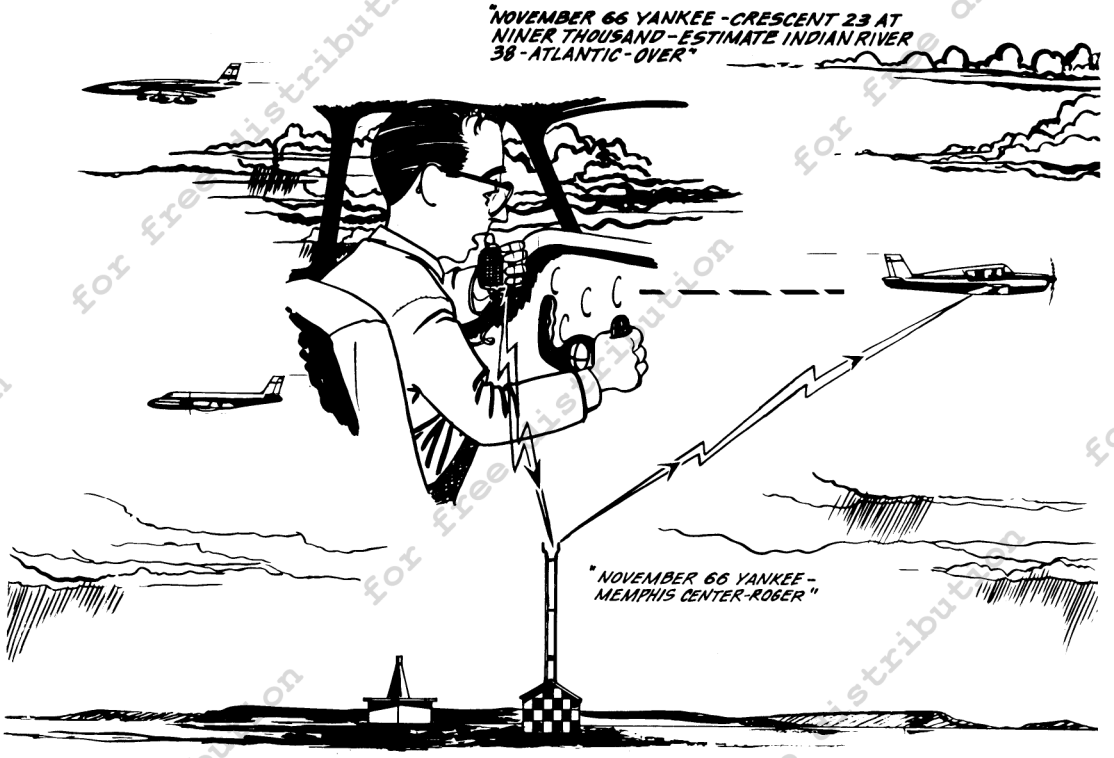
Department of Transportation
FEDERAL AVIATION ADMINISTRATION

IFR PILOT EXAM-O-GRAM* NO. 11

Communications Procedures for Pilots on IFR Flight Plans



Many applicants taking the Instrument Pilot Written Examination have difficulty with test items concerning IFR radiotelephone procedures, techniques, and phraseologies. The services of Air Traffic Control (ATC), as well as the ability of a pilot to make maximum use of these services, are dependent on effective communications. Several pages in the Airman's Information Manual specify pilot actions and responsibilities in this area, and these pages should be studied carefully.

The following questions and answers cover many problems involving IFR radiotelephone communications and may help to increase pilot understanding in this important area.

***Exam-O-Grams are non-directive in nature and are issued solely as an information service to individuals interested in Airman Written Examinations.**

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1. How do IFR pilots know what frequencies to use and monitor?

   Departing pilots are instructed when, and on what frequencies, to contact CLEARANCE DELIVERY, TOWER, DEPARTURE CONTROL, and CENTER. ATC assumes that pilots will make frequency changes as directed, will "check in" or report on the newly assigned frequency, and will monitor the frequency at all times.

2. Why are numerous frequency changes required while enroute?

   Air Route Traffic Control Centers (ARTCCs handle most enroute flights) have jurisdiction over large geographic areas within which 100 or more IFR flights may be operating simultaneously. Direct pilot/controller communications with these flights cannot be maintained on any one frequency, nor can the flights be handled by one controller. Consequently, the ARTCC is divided into SECTORS; each sector is handled by one controller, or team of controllers, and has its own sector discrete frequency. As an IFR flight progresses from one sector to another, the pilot is requested to change to the appropriate sector discrete frequency.

3. How much radiotelephone (communications) equipment is required for IFR flight?

   Regulations require that IFR pilots maintain a communications watch on the "appropriate" frequency, and make radiotelephone reports at specified times and places. The capability to transmit to a Flight Service Station on 122.1 (for relay of message to the control facility), and to receive on the voice channel of the VOR being used for navigation, meets the requirements of the regulation. However, this system imposes a severe handicap because of time lag and is impracticable in high density traffic areas.

   Transmitter/receivers with 90 channel capability (118.0 to 126.9) are suitable for most IFR operations, however, pilots will have occasional difficulty maintaining direct pilot/controller communications. This is because some sector discrete frequencies are higher than 126.9. Radios with 180 channel capability (118.0 to 135.9) give more complete coverage, and radios with 360 channel capability (118.00 to 135.95) will provide all frequencies needed.

4. Pilots of aircraft not having 360 channel capability may be assigned frequencies on which they are "unable." What should the pilot do in this case?

   Pilots having only a 90 channel radio cannot accept a frequency assignment above 126.9, and pilots with a 180 channel radio cannot accept a frequency assignment with hundredth megacycle spacing, such as 127.55. Make a written record of frequency assignments--and do not accept a frequency for which your radio is not equipped.

5. How about pilots who, having the radio capability, are unable to establish communications on a newly assigned frequency?

This occasionally happens and is a good reason for recording frequency assignments. If "unable" on an assigned frequency, re-contact the transferring controller or facility. If you are unable to re-contact the transferring facility, then try the appropriate FSS, and failing this--try for any ATC facility on 121.5. Remember that if you contact an FSS for relay of message, it is well to state that you are IFR.

6. What is the proper procedure for establishing initial contact on a newly assigned frequency?

To establish initial contact when no position report is required, pilots should (on the initial call-up) say:

(name) CENTER/APPROACH CONTROL - (aircraft identification) AT (altitude/flight level) or AT (altitude/flight level) CLIMBING/DESCENDING TO MAINTAIN (altitude/flight level) - OVER.

When flying in a non-radar environment (not in radar contact), and the communications contact is to be followed by a position report, use the procedure as outlined in the Airman's Information Manual.

7. How do IFR pilots receive SIGMETS, AIRMETS, and other weather information while enroute?

IFR pilots who are monitoring an FAA enroute navigation aid for ATC clearances will hear all special and scheduled weather broadcasts. These broadcasts do not interfere with the pilot's monitoring ATC, because the broadcasts may be interrupted to relay an air traffic clearance.

Pilots in direct communication with the ARTCC should monitor the navigation aid voice feature at sufficient volume level to be aware of special and scheduled broadcasts, and possible interruption of the station identification. Pilots should not voluntarily interrupt their listening watch on the assigned discrete frequency. Centers may direct a pilot to contact an FSS for weather information, or may authorize a pilot's request to do so.

8. Why is standard phraseology important in ATC radiotelephone contacts?

Standard phraseology helps pilots organize their transmissions, reduces the possibility of misunderstanding, and saves time on the frequency. Remember that the controller may be working with a dozen or more aircraft on the same sector discrete frequency, and other pilots may be waiting to use this "party line."

9. How should a pilot in flight, desiring to file an IFR flight plan, contact ATC?

A pilot in such a circumstance should contact the nearest FSS for relay of communications to ATC, or for assignment to the appropriate Center Sector Discrete Frequency.

Pilots in the vicinity (for example--20 miles) of a destination airport which is served by an Approach Control may expedite receipt of an ATC clearance by calling Approach Control on an appropriate frequency.

IFR flight plans filed in flight impose an extra load on ATC and often result in delaying the pilot. For this reason, IFR flight plans should be filed at least 30 minutes in advance of expected request time whenever possible. If it becomes necessary to file in flight, state that the flight is VFR (if in controlled airspace), give reliable position information, and maintain VFR conditions until clearance is received.

10. What may you do to develop good radiotelephone techniques?

1 - Study the pilot instructions and phraseology examples in the Airman's Information Manual.
2 - Practice correct phraseology for position reports, speak distinctly, and identify yourself positively.
3 - Know how to make the best use of the radiotelephone equipment in your aircraft.
4 - Monitor ATC on the appropriate frequency at all times.
5 - Listen to what is being said on the frequency.
6 - Be as brief as practicable in your contacts. Know what to say and how to say it.
7 - Always be alert to receive and copy instructions.
8 - Learn to copy clearances quickly and accurately.
9 - Don't accept a clearance unless you understand it and can comply with it.
10 - If your aircraft has limited frequency capability, advise ATC of this fact. Don't accept instructions to make contact on a frequency you don't have.

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