

OFFICE OF CIVILIAN DEFENSE  
CIVIL AIR PATROLTRAINING DIRECTIVE )  
NO. 25 )NATIONAL HEADQUARTERS  
WASHINGTON, APRIL 11, 1942ADVANCED FLIGHT TRAINING MISSIONS1. General

This course of instruction is for the advanced training of Pilots and Observers. The missions comprising this course are of such a nature that they should be undertaken only by the more proficient and experienced flight personnel.

2. Text

An outline of Advanced Flight Training Missions is presented in the following pages. The Operations Officer will work out the details for each of these missions, making such changes as local terrain, flying restrictions, etc., may necessitate.

3. Distribution

Copies of this Directive will be distributed on the basis of four copies per Headquarters.

4. Requirement

Pilots undertaking Advanced Flight Training Missions are required to have officially logged a minimum of 200 hours flying time as pilots. No pilot will be assigned to any of these missions, who, in the opinion of the Unit Commander, is not qualified to perform successfully the particular mission in question. Observers taking this course are required to have completed the courses of instruction covered by Training Directive No. 17 - Primary Flight Training Missions and Training Directive No. 23 - Basic Flight Training Missions.

5. Observance of Regulations

All flying will be done in accordance with the requirements of (a) the Civil Air Regulations and (b) any special regulations, restrictions, or orders issued by the armed forces or other defense agencies of the Government. Permission will be obtained from the Civil Aeronautics Administration and from such military or other defense agencies as circumstances may necessitate for the performance of any missions that may require a waiver.

## 6. Operations Orders

The Operations Officer will issue an Operations Order for each of these training missions.

## 7. Reports

An Operations Report covering each mission will be submitted by the Pilot. In addition, Pilot-Observer Reports will be submitted on all Observation and Reconnaissance Missions.

## 8. Instruction Procedure

a. Special emphasis will be placed upon precision flying, thoroughness and accuracy of observation, and accuracy and clarity in the preparation of reports.

b. Maximum efficiency is obtained from crews whose members are accustomed to working together as a team. Hence, a special effort should be made to have the same Pilot and Observer assigned together on Flight Missions in order to develop team-work.

By direction of National Commander JOHNSON:

HARRY H. BLEE  
Colonel, Air Corps  
Training & Operations Officer

ADVANCED FLIGHT TRAINING MISSIONSSUMMARY

1. Pick-up Message Practice (FTM-23)
2. Elementary Formation Flying (FTM-24)
3. Map Reading and Sketching (FTM-25)
4. Dropping Supplies by Parachutes (FTM-26)
5. Formation Flying by Flights (FTM-27)
6. Radio Communications (FTM-28)
7. Rendezvous - Flights in Formation (FTM-29)
8. Night Flying (FTM-30)
9. Instrument Flying (FTM-31)

DESCRIPTION1. Pick-up Message Practice (FTM-23)

Before undertaking this type of mission it will be necessary to secure two poles, not less than 15 feet in length with a finishing nail driven in each pole near one end with  $\frac{1}{2}$  inch protruding. These poles are to be held by hand in a vertical position approximately 30 feet apart with a message bag tied to a light strong line (fish line) long enough to hang over the nail in each pole and on each end of which should be attached a small sack containing approximately  $\frac{1}{4}$  pound of sand. The special equipment in the plane should consist of 100 feet to 150 feet of heavy cord with a three-prong steel hook about 6 inches long, attached to one end. The Observer is to pick up the message by use of the hook trailing at least 50 feet below the airplane as the Pilot flies low over the center of the line suspended between the poles. This mission is excellent for the development of precision flying and is a very important military type of mission.

2. Elementary Formation Flying (FTM-24)

Training in formation flying should be conducted under the supervision of experienced pilots and should begin with two-plane elements flying considerable distance apart, then gradually tightening up,

then add a third plane to the element. Before attempting formation manoeuvres, such as changing from V to echelon, it is suggested that an Army Pilot be requested to explain technique and signals.

3. Map Reading and Sketching (FTM-25)

This mission consists of the dispatch of airplanes with Pilot-Observer crews over designated routes and requiring the Observers to make sketches while en route. These sketches are to show such prominent landmarks as towns, tanks, bridges, highways, railroads, streams, wooded areas, etc. A triangular course, approximately 15 miles on a leg, starting and terminating at the home airport, is suggested. Observers should make use of military signs and symbols in preparing sketches. Compare the sketches submitted by each Observer flying over the same route and criticize and grade them.

4. Dropping Supplies by Parachutes (FTM-26)

This mission differs from FTM-16 in that it consists of dropping bulky packages at more remote locations and under more difficult weather conditions.

5. Formation Flying by Flights (FTM-27)

Pilots who have satisfactorily completed Elementary Formation Flying (FTM-24) may be formed into flights so that nine planes (three V's of three planes each) may practice formation flying by elements. This work should be done under the supervision of a thoroughly experienced instructor.

6. Radio Communications (FTM-28)

The problems assigned under this heading will be more advanced than those assigned under FTM-21 and will simulate as closely as possible the communications problems encountered in the performance of observation missions for military organizations, such as reporting traffic conditions and movements. The Observer should keep a log of all messages sent and received.

7. Rendezvous - Flights in Formation (FTM-29)

Pilots who have satisfactorily completed FTM-27 may be assigned to rendezvous missions in which flights flying in formation at prescribed altitudes meet at pre-designated times over specified points.

8. Night Flying (FTM-30)

It is contemplated that missions assigned under this heading will be such as to give proper training to Pilots needing additional experience in night flying and will include short cross-country flights.

9. Instrument Flying (FTM-31)

Pilots not holding instrument ratings should be encouraged to take instrument flight training so far as practicable for them to do so.