AIRCRAFT FLARES

STUDENT HANDOUT

5-567-2
6-567-2
22-567-2
69-567-2

FEBRUARY 1967

UNITED STATES ARMY AVIATION SCHOOL

FORT RUCKER, ALABAMA

DEPARTMENT OF TACTICS
UNITED STATES ARMY AVIATION SCHOOL
FORT RUCKER, ALABAMA 36360

DATE: Feb 1967

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PERFORMANCE OBJECTIVES

AIRCRAFT FLARES

1. Knowledge - Period one of two periods.

Without the aid of notes taken during class and without errors, the students will be able to list in writing:

a. The four characteristics of the MK-6 flare.

b. The minimum and maximum fuze settings for the MK-6 flare.

c. The best advantage factor for the MK-6 flare.

d. The safety precaution that must be observed when using the MK-6 flare internally.

e. The four characteristics of the MK-24 flare.

f. The minimum and maximum feet of fall that can be obtained with the minimum and maximum fuze delay settings for the MK-24.

(Period two of two periods)

g. The best advantage factor for the MK-24.

2. Skills:

a. Without the aid of notes or reference material and without errors,the student will be able to compute the:

(1) Drop altitude and/or fuze delay setting(s) for the MK-6 and MK-24 flares when given a mission requirement by the instructor. (Students may use table provided)

(2) Wind drift correction for the release point for the MK-6 and MK-24 flares when given the winds by the instructor.

(3) Number of flares required to provide continuous illumination over any given area of terrain and for any given length of time for a mission with either the MK-6 or the MK-24.

b. By using the Table provided for the MK-24 flare and from memory for the MK-6 flare, the students, without error, will be able to:

(1) Determine the longest fuze settings that can be used from any given altitude if flare burnout is desired at the instant the flare contacts the ground.

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STUDENT OUTLINE

AIRCRAFT FLARES

1. MK-6 flare.

   a. Characteristics.

   b. Fuze.

   c. Functioning.

d. Rigging

e. Best advantage factor.

f. Computing fuze delay and drop altitude.

g. Computing wind drift.

h. Navigation to release point.

i. Continuous illumination.

j. Multiple release points.

2. MK-24 flare.

a. Characteristics

b. Fuze.

c. Functioning.

d. Rigging and arming procedures. (T.V. tape)

e. Computing fuze settings and drop altitude.

f. Computing wind drift.

g. Continuous illumination.

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PERFORMANCE CHECKS

AIRCRAFT FLARES

1. MK-6 flare.
   a. Weight_____.
   b. Area illuminated_____.
   c. Burning time_____.
   d. Illuminating descent_____.
2. The minimum and maximum fuze settings for the MK-6 flare are_____ to _____.
3. What is the best advantage factor for the MK-6 and the MK-24 flares?

4. What safety precaution should be observed when using MK-6 flares internally?

5. MK-24 flare.
   a. Weight_____.
   b. Area illuminated_____.
   c. Burning time_____.
   d. Illuminating descent_____.

6. The MK-24 flare can fall (prior to ignition) a minimum of_____ and a maximum of_____.

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ADVANCE SHEET

AIRCRAFT FLARES

PURPOSE: This two hours of instruction is designed to provide the student with a general knowledge of types, characteristics, and capabilities of aircraft flares used by Army aircraft. The student will learn the techniques and procedures for employment of aircraft flares to include vectoring and positioning of aircraft over drop points. Drop techniques, safety precautions, functioning and tactical employment of aircraft flares will also be covered.

GENERAL: During the next two hours, the MK-6 and MK-24 flares will be discussed. Be prepared to actively participate in this conference by answering questions and contributing to the solution of problems worked during class.

STUDY ASSIGNMENT: None.

SPECIAL INSTRUCTIONS: Bring to class the Advance Sheet, Student Outline, and Performance Check.

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FUZE DELAY CHART

AIRCRAFT FLARES

Distance of Fall for Fuze Settings Prior to Flare Ignition (in ft).

EJECTION FUZE SETTING (SECOND)	IGNITION FUZE SETTINGS (SECONDS)				
	10	15	20	25	30
10	1150	1225	1300	1375	1450
15	2050	2125	2200	2275	2350
20	3050	3125	3200	3275	3350
25	4050	4125	4200	4275	4350
30	5050	5125	5200	5275	5350

NOTE: Height values calculated by using mean delay time of fuze settings.

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SECTION I

PRACTICAL EXERCISE

AIRCRAFT FLARES

1. If you are assigned a mission of dropping MK-24 flares and assigned a drop altitude of 6500 feet, what fuze settings would you use if terrain elevation were 1400 feet? Use the simplified method.

10 - 15

1400
3000

2. If the wind is 18 knots from the south what distance and direction from the target will the MK-24 flare be released if your flight path is into the wind? Use the delay used with Problem #1.

10 9 M/sec 90 sec + 10

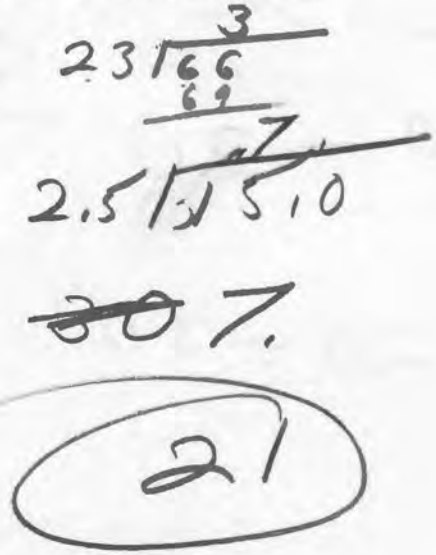
900 M up wind.

3. Using the MK-6 flare, what would be the maximum fuze delay setting to insure flare burnout as the flare reaches the ground? Terrain elevation 1300 feet. Drop altitude 8500 feet indicated.

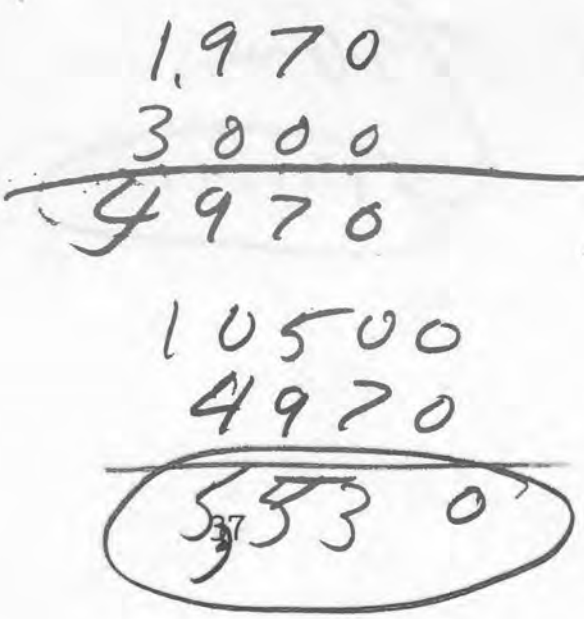
1,300
1500
2800

8500
2800
5,700

4. How many MK-6 flares would be required to provide continuous illumination along a riverline 6600 meters long, for a period of 15 minutes?



5. If the elevation of this riverline was 1970 feet and your assigned altitude was 10,500 feet, what fuze delay would you set on the MK-6 flares?



6. What would be the fuze settings for an MK-24 if you dropped it from 6600', over terrain with an elevation of 250'? Use both methods.

3,250

6600
3250
3350

a. Simplified Method:

10 — 20

b. Normal Method: 20 — 30

7. You are to drop MK-6 flares over a target from 4100', the wind is from the north at 10 kts. How far and in what direction from the target should the flare be released?

N/5 Hwe

N X5/90 we

450 MN.