

LESSON PLAN

JANUARY 2004

COURSE TITLE: Rescue Swimmer Refresher
Course, Q-050-0604

TERMINAL OBJECTIVE:
Partially supported by this lesson topic:

CLASSIFICATION: Unclassified

3.0 Upon completion of this unit of instruction, the student will select and use the appropriate rescue devices, describe the use of survivor marker/locator devices per NWP 3-50.1, use applicable publications to obtain required information relative to rescue swimmer procedures, and operate and remove Navy and Air Force Aircrew survival equipment, harnesses and associated hardware, without injury to personnel or damage to equipment.

LESSON PLAN NUMBER: 3.2

LESSON TOPIC: Survivor Marker/Locator
Devices

ALLOTTED LESSON TIME: 1.0 Classroom

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor

INSTRUCTIONAL REFERENCES:

1. NWP 3-50.1 Naval Search and Rescue Manual
2. NAVAIR 00-80T-101, NATOPS Survival Manual
3. NAVAIR 11-15-7, Pyrotechnic, Screening, Marking, and Countermeasure Devices

Enabling Objective:

Completely supported by this lesson topic:

- 3.4 Describe the purpose and hazards of the following survivor marker locator devices per NWP 3-50.1:
 - a. MK-25 Marine Location Marker
 - b. MK-58 Marine Location Marker
 - d. Electric Marine Marker Light
 - e. MK-13/MK-124 MOD 0 Day/Night Distress Flare
 - f. MK-79 Pencil Flare
 - g. Signal Mirror
 - h. Sea Dye Marker
 - i. AN/PRC-125 Radio

INSTRUCTIONAL AIDS:

1. MK-25 Marine Location Marker
2. MK-58 Marine Location Marker
3. Electric Marine Marker Light

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

4. MK-13/MK-124 MOD 0 Day/Night Distress Flare
5. MK-79 Pencil Flare
6. Signal Mirror
7. Sea Dye Marker
- 8 AN/PRC-125 Radio

CRITERION TEST: None.

HOMEWORK: None.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION

A.	Establish Contact	Display name and lesson topic.
1.	Introduce self, give rank, current job.	
2.	State background, schools, duty stations, etc.	
3.	State question and answer policy.	
B.	State Lesson Objectives	Turn to cover page of Lesson Plan and paraphrase objectives.
C.	Establish Readiness	
1.	Motivating Statements	Establish importance and relevance of lesson material using personal experience or anecdote.
2.	Lesson Overview	Briefly outline material to be covered.
a.	Lesson Topic: Survivor Marker/Locator Devices	
b.	Major Teaching Points:	
(1)	MK-25 Marine Location Marker	
(2)	MK-58 Marine Location Marker	

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (3) MK-13/MK 124 MOD 0 Flares
- (4) MK-79 Signal Kit Personal Distress
(Pencil Flare)
- (5) Electric Marine Marker Lights
- (6) Signal Mirror
- (7) Sea Dye Marker
- (8) AN/PRC-125 Radio

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION

A. MK-25 Marine Location Marker

Display Marker.

1. Launched by aircraft or ships to provide day or night reference points to the position of survivors.

WARNING

Never throw flare out when in hover because of valve plug possibly striking aircraft or personnel.

WARNING

Should fuel be observed or suspected to be present in the water, pyrotechnic devices SHALL NOT BE USED due to ignition hazards.

2. Produces smoke and a limited amount of light, fumes are caustic.
3. Burn time is 10 to 20 minutes.

EMPHASIZE that ALL flares burn "white hot" and can cause serious burns if allowed to come into contact with skin.

B. MK-58 Marine Location Marker

Display Marker.

1. Launched from surface craft or aircraft.
2. This marker is intended for night/day use. Makes a long-burning, smoke and reference point marking on the ocean surface.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 3. It produces a yellow flame and white smoke.
- 4. It burns for 45 minutes.

C. MK-13/MK 124 MOD 0 Flares

- 1. This signal is used for day or night distress signalling as appropriate by personnel on land or at sea.
- 2. Emits orange smoke for day use and red flames for night use.
- 3. Burn time for each is approximately 20 seconds.

Display Flare.

- 4. MK-124 is the replacement for the MK-13 and is intended use is the same as MK-13, but is designed for single hand operation.

Display Flare.

D. MK-79 Signal Kit Personal Distress (Pencil Flare)

Display Flare.

- 1. Intended to be used by downed air crewmembers or personnel in life rafts as a distress signalling device.
- 2. Produces a single red star display at a minimum altitude of 250 feet.
- 3. Burns for a minimum of 4.5 seconds.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

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|----|---|-----------------|
| E. | Electric Marine Marker Lights | Show Lights. |
| | 1. Same as lights that are attached to life rings aboard ship. | |
| | 2. Launched by aircraft or ships as a visual reference of survivor position. | |
| | 3. Poses no hazard to the swimmer. | |
| | 4. Battery powered and produces a flashing light. | |
| | 5. Can be used at rescue sites where fuel is in the water. | |
| F. | Signal Mirror | Show Mirror. |
| | 1. Carried by pilots and crewmembers for day distress signaling. | |
| | 2. Poses no hazard to swimmers. | |
| G. | Sea Dye Marker | Display Marker. |
| | 1. Carried by pilots and crewmembers to provide day reference points for survivor location. | |
| | 2. No direct hazard, but undiluted dye crystals can stain and cause eye/skin irritation. | |
| | 3. Produces highly visible fluorescent green dye. | |

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

H AN/PRC-125 Rescue Swimmer Radio

Show students the AN/PRC-125.

1. Provides reliable two-way communication between SAR platform and the Rescue Swimmer in the water.
2. Designed as an optional method of communication device used as a back-up to standard Rescue Swimmer hand signals.
3. May be used as an emergency signalling locator device should the Rescue Swimmer become separated from the SAR platform.
4. Consist of the following components:
 - (a) Receiver/Transmitter
 - (b) Control Unit and Cable
 - (c) Speaker/Microphone
5. Receiver/Transmitter stows in LPU-28 storage pouch, cable exits top right corner of pouch. Control Unit attaches to enlarged velcro on right shoulder of LPU-28.
6. Operation is similar to the PRC-90. Function Switch has the following positions.
 - (a) Off
 - (b) 243.0 (MHZ) Voice

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (c) 243.0 (MHZ) Beacon Only
- (d) 282.8 (MHZ) Voice
- 7. Designed for hands free operation. Press to Talk (PTT) button can be operated with either hand or chin.
- 8. Effective Ranges:
 - (a) Swimmer to Swimmer - One nautical mile
 - (b) Swimmer to Aircraft:
 - 1. Up to six nautical miles with 100 ft Aircraft altitude.
 - 2. Thirty nautical miles with 5,000 ft Aircraft altitude.
- 9. Has optional earphone for use in high ambient noise areas.
- 10. Radio is completely waterproof, but does not float.
- 11. Receiver will function completely submerged as long as approximately one inch of the antenna is above the water surface.
- 12. Do not disassemble any part of the radio. This will break the watertight integrity of the radio and render it inoperative.

Explain line of sight theory.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION

None.

EVALUATION

None.

ASSIGNMENT

None.