

Report Date: 14 Apr 2014

**Summary Report for Individual Task
551-88K-4733
Operate Radar Collision Avoidance Systems
Status: Approved**

DISTRIBUTION RESTRICTION: Approved for public release; distribution is unlimited.

DESTRUCTION NOTICE: None

Condition: Assigned as a Mate, given a complete risk assessment, an Operational Plan/Operations Order (OPLAN/OPORDER), a vessel in port or at sea, all applicable publications, forms, records, tools, materials, personnel, and equipment in all weather conditions, day or night and all MOPP levels in an operational environment scenario, and an operational radar or radar simulator in standby mode, that meets the standards of 33 CFR 164.38 and other applicable national and international performance standards. Some iterations of this task should be performed in MOPP 4.

Standard: On order, operate radar collision avoidance systems, IAW references.

Special Condition: None

Safety Level: Low

MOPP: Sometimes

Task Statements

Cue: None

DANGER

None

WARNING

None

CAUTION

None

Remarks: None

Notes: None

Performance Steps

1. Adjust radar display set.
 - a. Switch Radar Display from "Standby" to "Transmit".
 - b. Set Display to Relative Motion with True Trails.
 - c. Set Display to North Up.
 - d. Set Range Ring Display and Change Range Settings.
 - e. Demonstrate Radar Controls.
2. Set the correct heading on each of the radar sets if necessary.
3. Construct the Speed Scale.
 - a. Construct the Speed Scale on the 12 and 24 mile range scale.
 - b. Construct the Speed Scale in half mile increments from 0 through 2 miles, then one mile increments out to 8 miles.
4. Plot on Radar Display Screen.
 - a. Mark the Contact on the Radar screen in Grease Pencil.
 - b. Draw the relative motion line.
 - c. Construct Collision Avoidance Triangle.
 - d. Select Mx (execute) and draw a new relative motion line.
5. Construct new relative motion vector and find new course/new speed for required CPA (closest point of approach).
6. Change course/speed to avoid collision.
7. Draw return to course line on the radar screen.
8. Return to base course.
9. Clean the radar screen at the end of the evolution.

(Asterisks indicates a leader performance step.)

Evaluation Guidance: Score the soldier a GO if all performance measures are correctly completed/pass (P). Score the Soldier a NO-GO if any of the performance measures are missed or incorrectly performed/fail (F).

Evaluation Preparation: Test this task in conjunction with the Vessel Operations assessment. Ensure Soldier understands why this task is important to the overall safe navigation of the vessel.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Adjusted radar display set.			
2. Set the correct heading on each of the radar sets if necessary.			
3. Constructed the Speed Scale.			
4. Plotted on Radar Display Screen.			
5. Constructed new relative motion vector and find new course/new speed for required CPA (closest point of approach).			
6. Changed course/speed to avoid collision.			
7. Drew return to course line on the radar screen.			
8. Returned to base course.			
9. Cleaned the radar screen at the end of the evolution.			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	978-0160888885	CFR TITLE 33 NAVIGATION AND NAVIGABLE WATERS: (Part 104 and 105)	No	No
	AR 56-9	Watercraft	Yes	No
	CFR TITLE 33 PART 159	CFR Title 33 Part 159	No	Yes
	DMA CHART NO 1	DMA CHART NO 1	Yes	No
	DUTTON	DUTTON'S NAVIGATION AND PILOTING 14th EDITION	Yes	No
	FM 4-01.502	ARMY WATERCRAFT SAFETY	No	No
	HOBBS	Marine Navigation Piloting & Celestial & Electronic Navigation, Fourth Edition	No	Yes
	PUB. NO. 9	The American Practical Navigator - Bowditch	Yes	No
	TC 4-15.51	MARINE CREWMAN'S HANDBOOK	No	No

Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT. AR 200-1 delineates TRADOC responsibilities to integrate environmental requirements across DOTMLPF and ensures all training procedures, training manuals, and training doctrine includes sound environmental practices and considerations. The Army's environmental vision is to be a national leader in environmental and natural resource stewardship for present and future generations as an integral part of all Army missions. Environmental protection is never completed. Continuously be alert to ways to protect our environment and reduce waste.

Leaders must ensure that their unit has an active and strong environmental program. They must understand the laws and know what actions to take. Leaders bring focus, direction, and commitment to environmental protection. Commanding officers should ensure the following environmental programs are in place and are being maintained:

- Hazardous materials program.
- Hazardous waste program.
- Hazardous communications program.
- Pollution prevention and hazardous waste minimization recycling program.
- Spill prevention and response plan program.

Safety: In a training environment, leaders must perform a risk assessment in accordance with FM 5-19, Risk Management. Leaders will complete a DA Form 7566 COMPOSITE RISK MANAGEMENT WORKSHEET during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination. All operations will be performed to protect and preserve Army personnel and property against

accidental loss. Procedures will provide for public safety incidental to Army operations and activities and safe and healthful workplaces, procedures, and equipment. Observe all safety and/or environment precautions regarding electricity, cable, and lines. Provide ventilation for exhaust fumes during equipment operation and use hearing protection when required IAW AR 385-10, the Clean Air Act (CAA) and the CAA amendments, and the OSHA Hazard Communication standard.

Accidents are an unacceptable impediment to Army missions, readiness, morale, and resources. Decision makers at every level will employ risk management approaches to effectively preclude unacceptable risk to the safety of personnel and property affiliated with this task.

- (a) Take personal responsibility.
- (b) Practice safe operations.
- (c) Recognize unsafe acts and conditions.
- (d) Take action to prevent accidents.
- (e) Report unsafe acts and conditions.
- (f) Work as a team.

Prerequisite Individual Tasks :

Task Number	Title	Proponent	Status
551-88K-1705	Operate a Vessel's Electric Gyro System	551 - Transportation (Individual)	Approved
551-880-8086	PERFORM VESSEL PRESAIL INSPECTION	551 - Transportation (Individual)	Approved

Supporting Individual Tasks :

Task Number	Title	Proponent	Status
551-88K-1510	Prepare a Vessel for Harbor Tug Operations	551 - Transportation (Individual)	Approved
551-880-8029	DETERMINE VESSEL'S POSITION BY PLOTTING A FIX	551 - Transportation (Individual)	Approved
551-880-9051	NAVIGATE VESSEL USING NAUTICAL CHARTS	551 - Transportation (Individual)	Approved
551-880-9068	NAVIGATE VESSEL ALONG OCEAN ROUTES	551 - Transportation (Individual)	Approved
551-88K-1509	Prepare a Vessel for Inland Towing Operations	551 - Transportation (Individual)	Approved
551-88K-1511	Prepare a Vessel for Ocean Towing Operations	551 - Transportation (Individual)	Approved
551-880-8008	OPERATE A CLASS A1 VESSEL	551 - Transportation (Individual)	Approved
551-88K-1512	Observe Vessel Navigational Rules for Inland/International Waters	551 - Transportation (Individual)	Approved
551-880-9056	NAVIGATE VESSEL IN PILOTAGE WATERS	551 - Transportation (Individual)	Approved
551-88K-1513	Observe Aids To Navigation (ATON) Onboard a Vessel	551 - Transportation (Individual)	Approved
551-880-9048	NAVIGATE VESSEL IN SAFE WATERS WITHOUT A FIX	551 - Transportation (Individual)	Approved
551-880-9055	NAVIGATE VESSELS ALONG COASTAL ROUTES	551 - Transportation (Individual)	Approved
551-880-9094	OPERATE RADAR IN RELATIVE MOTION MODE	551 - Transportation (Individual)	Approved
551-880-9054	NAVIGATE VESSEL USING AIDS TO NAVIGATION	551 - Transportation (Individual)	Approved
551-88K-1508	Prepare Vessel for Beaching and Retracting Operations, Class A Vessel	551 - Transportation (Individual)	Approved

Supported Individual Tasks :

Task Number	Title	Proponent	Status
551-88K-3511	Monitor Watch Standing Procedures Onboard a Vessel	551 - Transportation (Individual)	Approved
551-88K-1504	Perform Vessel Pre-Sail Requirements	551 - Transportation (Individual)	Approved

551-88K-4715	Monitor Operations of Navigational Equipment Onboard a Vessel	551 - Transportation (Individual)	Obsolete
551-88K-1517	Perform Watch Standing Procedures Onboard a Vessel	551 - Transportation (Individual)	Approved
551-88K-3708	Monitor Navigational Duties Onboard a Vessel	551 - Transportation (Individual)	Approved

Supported Collective Tasks :

Task Number	Title	Proponent	Status
55-2-1508	Conduct Vessel Operations	55 - Transportation (Collective)	Approved
55-2-0036	Prepare Vessel for Towing Operations.	55 - Transportation (Collective)	Approved
55-2-1503	Prepare Vessel for Sea	55 - Transportation (Collective)	Approved

ICTL Data :

ICTL Title	Personnel Type	MOS Data
MOS 88K Watercraft Operator SL 4	Enlisted	MOS: 88K, Skill Level: SL4, Duty Pos: TFJ