

Report Date: 15 Apr 2014

**Summary Report for Individual Task
551-88K-4740
Identify Basic Components of Radar Sets
Status: Approved**

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

DESTRUCTION NOTICE: None

Condition: Assigned as a Mate onboard a vessel in port or at sea, given a completed risk assessment, an Operational Plan/Operations Order (OPLAN/OPORDER), radar or radar simulator that meets the standards of 33 CFR 164.38 and other applicable national and international performance standards, 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. Some iterations of this task should be performed in MOPP 4.

Standard: Identify the basic components and functions of the 3 cm or 10 cm digital radar sets IAW all applicable references.

Special Condition: None

Safety Level: Low

MOPP: Sometimes

Task Statements

Cue: Given an OPORD/OPLAN to identify the basic components of radar sets.

DANGER
None

WARNING
None

CAUTION
None

Remarks: None

Notes: None

Performance Steps

1. Identify the Modulator Transmitter Receiver (MTR) and Modulator.

Note:

2. Identify Cavity Magnetron.

Note:

3. Identify Linear Noise Amplifier (LNA).

Note:

4. Identify the PCB Controller.

Note:

5. Identify the TR Switch.

Note:

6. Identify the CRT or LCD Display Screen.

7. Identify the Slotted Wave Guide Antenna.

Note:

(Asterisks indicates a leader performance step.)

Evaluation Guidance: Score the Soldier GO if all performance steps are passed (P). Score the Soldier NO-GO if any performance step is failed (F). If the Soldier fails any step, show what was done wrong and how to do it correctly.

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. Identified the MTR and Modulator.			
2. Identified the Transmitter and Cavity Magnetron.			
3. Identified the Receiver and LNA.			
4. Identified the PCB Controller.			
5. Identified the TR Switch.			
6. Identified the CRT or LCD Display Screen.			
7. Identified the Slotted Wave Guide Antenna.			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	33 CFR	Navigation and Navigational	No	No
	COMDTINST M16672.2C	Navigation Rules - International-Inland	No	No
	DUTTON	DUTTON'S NAVIGATION AND PILOTING 14th EDITION	No	Yes
	FM 4-01.502	ARMY WATERCRAFT SAFETY	No	No
	FM 55-50	Army Water Transport Operations (Reprinted w/Basic Incl C1)	No	No
	PUB. NO. 9	The American Practical Navigator - Bowditch	No	Yes
	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-1504	Perform Vessel Pre-Sail Requirements	551 - Transportation (Individual)	Approved
551-88K-1705	Operate a Vessel's Electric Gyro System	551 - Transportation (Individual)	Approved
551-88K-1709	Operate Navigational Instruments Onboard a Class-A Vessel	551 - Transportation (Individual)	Approved

Supporting Individual Tasks :

Task Number	Title	Proponent	Status
551-88K-2710	Conduct Operation of Navigational Equipment Onboard a Class B Vessel	551 - Transportation (Individual)	Approved
551-88K-3709	Enforce Navigational Rules Onboard a Vessel	551 - Transportation (Individual)	Approved

551-88K-4715	Monitor Operations of Navigational Equipment Onboard a Vessel	551 - Transportation (Individual)	Obsolete
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Supported Individual Tasks :

Task Number	Title	Proponent	Status
551-88K-4715	Monitor Operations of Navigational Equipment Onboard a Vessel	551 - Transportation (Individual)	Obsolete
551-88K-3515	Enforce Vessel Pre-Sail Requirements	551 - Transportation (Individual)	Approved
551-88K-3708	Monitor Navigational Duties Onboard a Vessel	551 - Transportation (Individual)	Approved
551-88K-3511	Monitor Watch Standing Procedures Onboard a Vessel	551 - Transportation (Individual)	Approved
551-88K-1705	Operate a Vessel's Electric Gyro System	551 - Transportation (Individual)	Approved
551-880-8068	DEFINE BASIC RADAR PRINCIPLES AND DEFINITIONS.	551 - Transportation (Individual)	Analysis
551-88K-4513	Enforce Vessel Pre-Sail Requirements	551 - Transportation (Individual)	Obsolete
551-88K-2710	Conduct Operation of Navigational Equipment Onboard a Class B Vessel	551 - Transportation (Individual)	Approved
551-88K-1707	Determine Nautical Direction Using the Vessel's Magnetic Compass	551 - Transportation (Individual)	Approved
551-88K-1517	Perform Watch Standing Procedures Onboard a Vessel	551 - Transportation (Individual)	Approved
551-88K-1513	Observe Aids To Navigation (ATON) Onboard a Vessel	551 - Transportation (Individual)	Approved
551-88K-1512	Observe Vessel Navigational Rules for Inland/International Waters	551 - Transportation (Individual)	Approved
551-88K-1511	Prepare a Vessel for Ocean Towing Operations	551 - Transportation (Individual)	Approved
551-88K-4715	Monitor Operations of Navigational Equipment Onboard a Vessel	551 - Transportation (Individual)	Approved
551-88K-1707	Operate a Vessel Magnetic Compass	551 - Transportation (Individual)	Proposed
551-88K-1709	Operate Navigational Instruments Onboard a Class-A Vessel	551 - Transportation (Individual)	Approved
551-88K-1504	Perform Vessel Pre-Sail Requirements	551 - Transportation (Individual)	Approved
551-88K-4702	Interpret Visual Communication Onboard a Vessel	551 - Transportation (Individual)	Obsolete

Supported Collective Tasks :

Task Number	Title	Proponent	Status
55-2-0502	Deploy by Logistics Support Vessel	55 - Transportation (Collective)	Approved
55-5-0016	Direct Vessel Operations	55 - Transportation (Collective)	Approved
55-2-0040	Transport Bulk Water	55 - Transportation (Collective)	Approved
55-2-0020	Support Shore-to-Shore Cargo Operations.	55 - Transportation (Collective)	Approved
55-2-0039	Conduct Towing Operations.	55 - Transportation (Collective)	Approved
55-2-1503	Prepare Vessel for Sea	55 - Transportation (Collective)	Approved
55-2-0036	Prepare Vessel for Towing Operations.	55 - Transportation (Collective)	Approved
55-2-1508	Conduct Vessel Operations	55 - Transportation (Collective)	Approved
55-2-0501	Conduct a Convoy by Vessel	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