

# CHAPTER 74



## SONAR TECHNICIAN (SUBMARINE) (STS)

NAVPERS 18068-74E

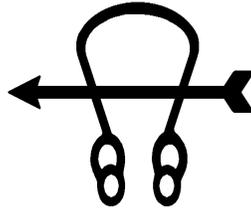
**CH-56**

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NAVY ENLISTED OCCUPATIONAL STANDARDS  
FOR  
SONAR TECHNICIAN (SUBMARINE) (STS)



SCOPE OF RATING

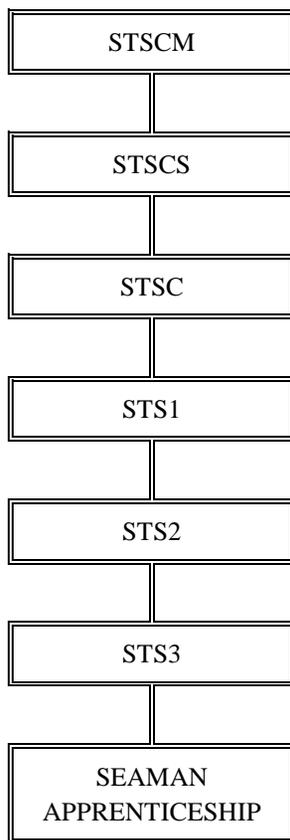
Sonar Technicians, Submarine (STS) operate (control, evaluate, and interpret data) submarine sonar, oceanographic equipment, and submarine auxiliary sonar; coordinate submarine sonar and underwater fire control interface; perform organizational and intermediate maintenance.

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These Occupational Standards are to be incorporated in Volume I, Part B, of the Manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards (NAVPERS 18068F) as Chapter 74.

## GENERAL INFORMATION

### CAREER PATTERN



Normal path of advancement to Chief Warrant Officer and Limited Duty Officer categories can be found in OPNAVINST 1420.1.

For rating entry requirements, refer to MILPERSMAN article 1306-618.

### SAFETY

The observance of Operational Risk Management (ORM) and proper safety precautions in all areas is an integral part of each billet and the responsibility of every Sailor; therefore, it is a universal requirement for all ratings.

**Job Title**

**Basic Sonar Operator**

**Job Code**

**001755**

**Job Family**

Military Specific

**NOC**

TBD

**Short Title (30 Characters)**

BASIC SONAR OPERATOR

**Short Title (10 Characters)**

BSONAR OP

**Pay Plan**

Enlisted

**Career Field**

STS

**Other Relationships and Rules**

0000 or 0505

**Job Description**

Sonar Operators detect, track, and classify surface and sub-surface contacts; conduct minor maintenance on and operate mainframe sonar systems, depth sounding equipment, and other auxiliary equipment; and perform towed array handling, and expendable bathythermograph evolutions.

**DoD Relationship**

Group Title

Sonar, General

DoD Code

113000

**O\*NET Relationship**

Occupation Title

Radar and Sonar Technicians

SOC Code

55-3017.00

Job Family

Military Specific

**Skills**

- Critical Thinking*
- Operation and Control*
- Complex Problem Solving*
- Mathematics*
- Active Learning*
- Operation Monitoring*
- Equipment Maintenance*
- Judgment and Decision Making*
- Systems Evaluation*
- Equipment Selection*

**Abilities**

- Deductive Reasoning*
- Information Ordering*
- Flexibility of Closure*
- Inductive Reasoning*
- Problem Sensitivity*
- Mathematical Reasoning*
- Spatial Orientation*
- Speed of Closure*
- Category Flexibility*
- Memorization*

**ACOUSTIC INTELLIGENCE**

**Paygrade**

**Task Type**

**Task Statements**

- |    |      |  |
|----|------|--|
| E4 | CORE | Analyze Acoustic Intelligence (ACINT) references and documentation |
| E5 | CORE | Analyze contact data to determine tactical intelligence            |
| E4 | CORE | Calculate acoustic source relationships                            |
| E4 | CORE | Calculate prime mover characteristics and component relationships  |
| E5 | CORE | Validate contact classification                                    |

**ADMINISTRATION**

**Paygrade**

**Task Type**

**Task Statements**

- |    |      |  |
|----|------|--|
| E4 | CORE | Prepare Acoustic Intelligence (ACINT) recording packages |
| E4 | CORE | Record towed array handling data                         |

**MAINTENANCE**

**Paygrade**

**Task Type**

**Task Statements**

- |    |      |   |
|----|------|---|
| E4 | CORE | Align sonar equipment   |
| E4 | CORE | Conduct preventive maintenance on sonar equipment                             |
| E4 | CORE | Conduct sound isolation surveys   |
| E5 | CORE | Correct sound isolation deficiencies  |
| E4 | CORE | Isolate electrical and hydraulic sonar equipment                              |
| E4 | CORE | Perform corrective maintenance on sonar equipment (AN/BQQ-10, AN/BSY-1, etc.) |
| E4 | CORE | Troubleshoot auxiliary sonar equipment  |

## OCEANOGRAPHY

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze data from tactical decision aids for active performance prediction
E4	CORE	Analyze data from tactical decision aids for passive performance prediction
E4	CORE	Analyze effects of environment on sonar operations
E5	CORE	Analyze real-time oceanographic data

## SONAR EMPLOYMENT

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Analyze conditions for towed array employment
E4	CORE	Analyze tactical security conditions
E4	CORE	Classify sonar contacts (spherical, towed, etc.)
E4	CORE	Provide contact management recommendations

## SONAR EQUIPMENT OPERATIONS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze active return characteristics for solution of contact
E4	CORE	Analyze contact transient emissions
E4	CORE	Calculate contact ranges using available ranging techniques
E4	CORE	Calculate range rates
E5	CORE	Collect Acoustic Intelligence (ACINT) data
E4	CORE	Conduct towed array handling evolutions
E4	CORE	Configure sonar equipment for active operations
E4	CORE	Configure workstation for system employment
E4	CORE	Correlate contacts using multiple sensors (spherical array, towed array, and other hull sensors)
E4	CORE	Detect navigation hazards using sonar equipment (active and passive)
E4	CORE	Maintain contact data using sonar tracker
E5	CORE	Verify sonar system employment operations

## SONAR FUNDAMENTALS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze relative motion for contact management
E4	CORE	Analyze self-noise data to determine ship's signature
E4	CORE	Calculate base frequencies
E4	CORE	Calculate propeller Revolutions Per Minute (RPMs) by aural or system employment
E4	CORE	Correct own ship noise offenders
E4	CORE	Detect contacts using passive sensors
E4	CORE	Detect contacts utilizing own ship's active sonar
E4	CORE	Implement sound silencing procedures (housekeeping surveys, Level of Sound (LOS) cuts, etc.)
E4	CORE	Implement watch team reporting procedures for all sonar events (reporting initial gains of contacts, reporting classification information, etc.)
E4	CORE	Maintain acoustic data logs

### TACTICAL PLOTS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze contact evaluation plots
E4	CORE	Analyze fusion plots
E4	CORE	Analyze geographic plots
E4	CORE	Analyze time-frequency plots
E4	CORE	Analyze time-range plots

### WEAPONS HANDLING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	NON-CORE	Combat submarine weapons casualties
E4	NON-CORE	Conduct weapons emergency procedures
E4	NON-CORE	Conduct weapons shipping operations
E4	NON-CORE	Conduct weapons handling operations
E4	NON-CORE	Transfer ammunition and countermeasures

**Job Title**

**Advanced Sonar Operator**

**Job Code**

**001760**

**Job Family**

Production

**NOC**

TBD

**Short Title (30 Characters)**

ADV SONAR OPERATOR

**Short Title (10 Characters)**

ASONAR OPR

**Pay Plan**

Enlisted

**Career Field**

STS

**Other Relationships and Rules**

0419, 0425, 0495, 0461, 0518, 0519, 0520, 2735, 2780

**Job Description**

Sonar Technicians maintain, troubleshoot, and repair sonar systems and support equipment; operate mainframe sonar systems and auxiliary equipment to detect, track, and classify acoustic contacts; and perform towed array handling, tactical oceanography employment, and expendable bathythermograph evolutions.

**DoD Relationship O\*NET Relationship**

**Group Title**

Sonar, General

**DoD Code**

113000

**Occupation Title**

Power Plant Operators

**SOC Code**

51-8013.00

**Job Family**

Production

**Skills**

*Critical Thinking*

*Operation and Control*

*Mathematics*

*Complex Problem Solving*

*Active Learning*

*Operation Monitoring*

*Reading Comprehension*

*Coordination*

*Equipment Selection*

*Judgment and Decision Making*

**Abilities**

*Deductive Reasoning*

*Information Ordering*

*Inductive Reasoning*

*Problem Sensitivity*

*Flexibility of Closure*

*Mathematical Reasoning*

*Spatial Orientation*

*Category Flexibility*

*Memorization*

*Perceptual Speed*

**ACOUSTIC INTELLIGENCE**

**Paygrade**

**Task Type**

**Task Statements**

E4

CORE

Analyze Acoustic Intelligence (ACINT) references and documentation

E5

CORE

Analyze contact data to determine tactical intelligence

E4

CORE

Calculate acoustic source relationships

E4

CORE

Calculate prime mover characteristics and component relationships

E5

CORE

Validate contact classification

**ADMINISTRATION**

**Paygrade**

**Task Type**

**Task Statements**

E4

CORE

Prepare Acoustic Intelligence (ACINT) recording packages

E5

NON-CORE

Prepare sonar dome for ballasting evolutions

E4

CORE

Record towed array handling data

E5

CORE

Verify Acoustic Signature Maintenance Log (ASML) entries

**MAINTENANCE**

**Paygrade**

**Task Type**

**Task Statements**

E4

CORE

Align sonar equipment

E4

CORE

Conduct preventive maintenance on sonar equipment

E4

CORE

Conduct sound isolation surveys

E6

CORE

Coordinate equipment modifications

E5

CORE

Correct sound isolation deficiencies

E4

CORE

Perform corrective maintenance on sonar equipment (AN/BQQ-10, AN/BSY-1, etc.)

E5	CORE	Prepare sonar dome for entry
E4	CORE	Troubleshoot auxiliary sonar equipment

### **OCEANOGRAPHY**

<b><u>Paygrade</u></b>	<b><u>Task Type</u></b>	<b><u>Task Statements</u></b>
E4	CORE	Analyze data from tactical decision aids for active performance prediction
E4	CORE	Analyze data from tactical decision aids for passive performance prediction
E4	CORE	Analyze effects of environment on sonar operations
E5	CORE	Analyze real-time oceanographic data
E5	CORE	Develop sonar search plans

### **SONAR EMPLOYMENT**

<b><u>Paygrade</u></b>	<b><u>Task Type</u></b>	<b><u>Task Statements</u></b>
E5	CORE	Analyze conditions for towed array employment
E4	CORE	Analyze tactical security conditions
E4	CORE	Classify sonar contacts (spherical, towed, etc.)
E4	CORE	Provide contact management recommendations
E5	CORE	Reconstruct post watch events for data collection and analysis

### **SONAR EQUIPMENT OPERATIONS**

<b><u>Paygrade</u></b>	<b><u>Task Type</u></b>	<b><u>Task Statements</u></b>
E4	CORE	Analyze active return characteristics for solution of contact
E4	CORE	Analyze contact transient emissions
E4	CORE	Calculate contact ranges using available ranging techniques
E4	CORE	Calculate range rates
E5	CORE	Collect Acoustic Intelligence (ACINT) data
E4	CORE	Conduct towed array handling evolutions
E4	CORE	Configure sonar equipment for active operations
E4	CORE	Configure workstation for system employment
E4	CORE	Detect navigation hazards using sonar equipment (active and passive)
E4	CORE	Maintain contact data using sonar tracker
E5	CORE	Supervise towed array handling operations
E5	CORE	Verify sonar system employment operations
E5	CORE	Verify sonar system status

### **SONAR FUNDAMENTALS**

<b><u>Paygrade</u></b>	<b><u>Task Type</u></b>	<b><u>Task Statements</u></b>
E4	CORE	Analyze relative motion for contact management
E4	CORE	Analyze self-noise data to determine ship's signature
E4	CORE	Calculate base frequencies
E4	CORE	Calculate propeller Revolutions Per Minute (RPMs) by aural or system employment
E4	CORE	Correct own ship noise offenders
E4	CORE	Detect contacts using passive sensors
E4	CORE	Detect contacts utilizing own ship's active sonar
E4	CORE	Implement sound silencing procedures (housekeeping surveys, Level of Sound (LOS) cuts, etc.)

E4	CORE	Implement watch team reporting procedures for all sonar events (reporting initial gains of contacts, reporting classification information, etc.)
E4	CORE	Maintain acoustic data logs

#### **TACTICAL PLOTS**

<b><u>Paygrade</u></b>	<b><u>Task Type</u></b>	<b><u>Task Statements</u></b>
E4	CORE	Analyze contact evaluation plots
E4	CORE	Analyze fusion plots
E4	CORE	Analyze geographic plots
E4	CORE	Analyze time-frequency plots
E4	CORE	Analyze time-range plots

#### **WEAPONS HANDLING**

<b><u>Paygrade</u></b>	<b><u>Task Type</u></b>	<b><u>Task Statements</u></b>
E4	NON-CORE	Combat submarine weapon casualties
E4	NON-CORE	Conduct weapons emergency procedures
E4	NON-CORE	Conduct weapons shipping operations
E4	NON-CORE	Conduct weapons handling operations
E6	NON-CORE	Supervise ammunition and countermeasure transfers
E4	NON-CORE	Transfer ammunition and countermeasure

**Job Title**

**Sonar Supervisor**

**Job Code**

**001765**

**Job Family**  
Management

**NOC**  
TBD

**Short Title (30 Characters)**  
SONAR SUPERVISOR

**Short Title (10 Characters)**  
SONAR SUPV

**Pay Plan**  
Enlisted

**Career Field**  
STS

**Other Relationships and Rules**  
E6 with NEC 0501 or 2781

**Job Description**

Sonar Supervisors manage the employment of undersea warfare equipment; evaluate, disseminate, and make tactical undersea warfare decisions; coordinate communications; oversee divisional and departmental operations, maintenance, training, tactical oceanography employment, and decision making; and conduct critical work functions to support producing intelligence, processing and attacking targets, repairing and maintaining equipment, and providing personnel support.

**DoD Relationship**

**Group Title**                      **DoD Code**  
Sonar, General                      113000

**O\*NET Relationship**

**Occupation Title**                      **SOC Code**                      **Job Family**  
General and Operations Managers                      11-1021.00                      Management

**Skills**

- Critical Thinking*
- Operation and Control*
- Complex Problem Solving*
- Mathematics*
- Reading Comprehension*
- Speaking*
- Operation Monitoring*
- Active Learning*
- Coordination*
- Operations Analysis*

**Abilities**

- Deductive Reasoning*
- Information Ordering*
- Problem Sensitivity*
- Inductive Reasoning*
- Flexibility of Closure*
- Oral Expression*
- Mathematical Reasoning*
- Time Sharing*
- Spatial Orientation*
- Speed of Closure*

**ACOUSTIC INTELLIGENCE**

<b><u>Paygrade</u></b>	<b><u>Task Type</u></b>	<b><u>Task Statements</u></b>
E4	CORE	Analyze Acoustic Intelligence (ACINT) references and documentation
E5	CORE	Analyze contact data to determine tactical intelligence
E4	CORE	Calculate acoustic source relationships
E4	CORE	Calculate prime mover characteristics and component relationships
E5	CORE	Validate contact classification

**ADMINISTRATION**

<b><u>Paygrade</u></b>	<b><u>Task Type</u></b>	<b><u>Task Statements</u></b>
E4	CORE	Prepare Acoustic Intelligence (ACINT) recording packages
E5	NON-CORE	Prepare sonar dome for ballasting evolutions
E4	CORE	Record towed array handling data
E5	CORE	Verify Acoustic Signature Maintenance Log (ASML) entries
E7	CORE	Verify sonar division administrative requirements

**MAINTENANCE**

<b><u>Paygrade</u></b>	<b><u>Task Type</u></b>	<b><u>Task Statements</u></b>
E7	CORE	Administer corrective maintenance procedures for sonar equipment
E7	CORE	Administer preventive maintenance procedures for sonar equipment
E4	CORE	Align sonar equipment
E4	CORE	Conduct preventive maintenance on sonar equipment
E4	CORE	Conduct sound isolation surveys

E6	CORE	Coordinate equipment modifications
E5	CORE	Correct sound isolation deficiencies
E4	CORE	Isolate electrical and hydraulic sonar equipment
E4	CORE	Perform corrective maintenance on sonar equipment (AN/BQQ-10, AN/BSY-1, etc.)
E5	CORE	Prepare sonar dome for entry
E7	CORE	Schedule off hull external agency support for major sonar equipment
E4	CORE	Troubleshoot auxiliary sonar equipment
E7	CORE	Verify sonar division maintenance evolutions

### **OCEANOGRAPHY**

<b><u>Paygrade</u></b>	<b><u>Task Type</u></b>	<b><u>Task Statements</u></b>
E4	CORE	Analyze data from tactical decision aids for active performance prediction
E4	CORE	Analyze data from tactical decision aids for passive performance prediction
E4	CORE	Analyze effects of environment on sonar operations
E5	CORE	Analyze real-time oceanographic data
E5	CORE	Develop sonar search plans

### **SONAR EMPLOYMENT**

<b><u>Paygrade</u></b>	<b><u>Task Type</u></b>	<b><u>Task Statements</u></b>
E5	CORE	Analyze conditions for towed array employment
E4	CORE	Analyze tactical security conditions
E4	CORE	Classify sonar contacts (spherical, towed, etc.)
E5	CORE	Conduct acoustic briefings
E4	CORE	Provide contact management recommendations
E5	CORE	Reconstruct post watch events for data collection and analysis

### **SONAR EQUIPMENT OPERATIONS**

<b><u>Paygrade</u></b>	<b><u>Task Type</u></b>	<b><u>Task Statements</u></b>
E4	CORE	Analyze active return characteristics for solution of contact
E4	CORE	Analyze contact transient emissions
E4	CORE	Calculate contact ranges using available ranging techniques
E4	CORE	Calculate range rates
E5	CORE	Collect Acoustic Intelligence (ACINT) data
E4	CORE	Conduct towed array handling evolutions
E4	CORE	Configure sonar equipment for active operations
E4	CORE	Configure workstation for system employment
E4	CORE	Correlate contacts using multiple sensors (spherical array, towed array, and other hull sensors)
E4	CORE	Detect navigation hazards using sonar equipment (active and passive)
E4	CORE	Maintain contact data using sonar tracker
E5	CORE	Supervise towed array handling operations
E5	CORE	Verify sonar system employment operations
E5	CORE	Verify sonar system status

## SONAR FUNDAMENTALS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze relative motion for contact management
E4	CORE	Analyze self-noise data to determine ship's signature
E4	CORE	Calculate base frequencies
E4	CORE	Calculate propeller Revolutions Per Minute (RPMs) by aural or system employment
E4	CORE	Correct own ship noise offenders
E4	CORE	Detect contacts using passive sensors
E4	CORE	Detect contacts utilizing own ship's active sonar
E4	CORE	Implement sound silencing procedures (housekeeping surveys, Level of Sound (LOS) cuts, etc.)
E4	CORE	Implement watch team reporting procedures for all sonar events (reporting initial gains of contacts, reporting classification information, etc.)
E4	CORE	Maintain acoustic data logs

## TACTICAL PLOTS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze contact evaluation plots
E4	CORE	Analyze fusion plots
E4	CORE	Analyze geographic plots
E4	CORE	Analyze time-frequency plots
E4	CORE	Analyze time-range plots

## WEAPONS HANDLING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E6	NON-CORE	Administer weapon emergency procedures
E5	NON-CORE	Administer weapon handling procedures
E5	NON-CORE	Administer weapon shipping procedures
E4	NON-CORE	Combat submarine weapon casualties
E4	NON-CORE	Conduct weapon emergency procedures
E4	NON-CORE	Conduct weapon shipping operations
E4	NON-CORE	Conduct weapons handling operations
E7	NON-CORE	Inspect submarine weapon casualty procedures
E6	NON-CORE	Supervise ammunition and countermeasure transfers
E4	NON-CORE	Transfer ammunition and countermeasures