

# CHAPTER 74



## SONAR TECHNICIAN (SUBMARINE) (STS)

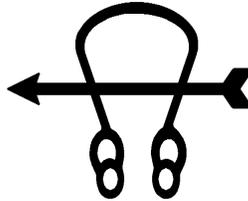
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NAVY ENLISTED OCCUPATIONAL STANDARD  
FOR  
SONAR TECHNICIAN (SUBMARINE) (STS)



SCOPE OF RATING

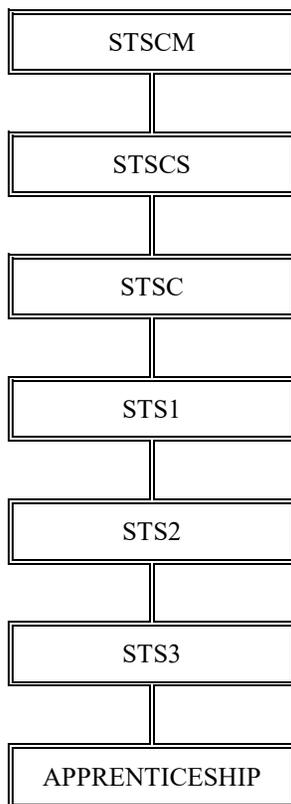
Sonar Technicians, Submarine (STS) operate submarine sonar mainframe and auxiliary equipment to include controlling, evaluating and intercepting sonar data from oceanographic equipment; coordinate submarine sonar and underwater fire control interface; employ environmental monitoring equipment; and perform 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**

Transportation and Material Moving

**NOC**

TBD

**Short Title (30 Characters)**

BASIC SONAR OPERATOR

**Short Title (14 Characters)**

BAS SONAR OPER

**Pay Plan**

Enlisted

**Career Field**

STS

**Other Relationships and Rules**

NECs TXXX series and other NECs as assigned

**Job Description**

Basic 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 evolutions.

**DoD Relationship**

**Group Title**

Sonar, General

**DoD Code**

113000

**O\*NET Relationship**

**Occupation Title**

Air Traffic Controllers

**SOC Code**

53-2021.00

**Job Family**

Transportation and Material Moving

**Skills**

*Complex Problem Solving*

*Operation Monitoring*

*Critical Thinking*

*Mathematics*

*Equipment Selection*

*Operation and Control*

*Systems Evaluation*

*Equipment Maintenance*

*Technology Design*

*Active Learning*

**Abilities**

*Information Ordering*

*Deductive Reasoning*

*Flexibility of Closure*

*Inductive Reasoning*

*Problem Sensitivity*

*Auditory Attention*

*Mathematical Reasoning*

*Speed of Closure*

*Perceptual Speed*

*Written Comprehension*

**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

**ADMINISTRATION**

**Paygrade**

**Task Type**

**Task Statements**

E5

CORE

Prepare Acoustic Intelligence (ACINT) recording packages

E4

CORE

Record towed array handling data

## MAINTENANCE

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Align sonar equipment for system maintenance
E4	CORE	Conduct preventive maintenance on sonar equipment
E4	CORE	Conduct sound isolation surveys
E4	CORE	Correct sound isolation deficiencies
E4	CORE	Isolate electrical and hydraulic sonar equipment
E5	NON-CORE	Prepare sonar dome for entry and ship's evolutions

## OCEANOGRAPHY

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

## SONAR EMPLOYMENT

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze plots (e.g., contact evaluation plot (CEP), time-frequency plot, etc.)
E4	CORE	Classify sonar contacts (e.g., 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 contact data using sonar equipment
E4	CORE	Analyze contact transient emissions
E4	CORE	Conduct towed array handling evolutions
E4	CORE	Configure workstation for system employment
E4	CORE	Correlate contacts using multiple sensors (i.e., spherical array, towed array, and other hull sensors)
E4	CORE	Detect navigation hazards using sonar equipment (active and passive)
E4	CORE	Track contact data using sonar equipment

## SONAR FUNDAMENTALS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze own ship noise offenders
E4	CORE	Analyze relative motion for contact management
E4	CORE	Analyze self-noise data to determine ship's signature
E4	CORE	Calculate contact ranges using available ranging techniques
E4	CORE	Calculate range rates
E4	CORE	Calculate shaft Revolutions Per Minute (RPMs) by aural or system employment
E4	CORE	Detect contacts using passive sensors

**Job Title**

**Advanced Sonar Operator**

**Job Code**

**001760**

**Job Family**

Protective Service

**NOC**

TBD

**Short Title (30 Characters)**

SONAR OPERATOR

**Short Title (14 Characters)**

ADV SONAR OPER

**Pay Plan**

Enlisted

**Career Field**

STS

**Other Relationships and Rules**

NECs TXXX series and other NECs as assigned

**Job Description**

Advanced Sonar Operators 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**

**Group Title**

Sonar, General

**DoD Code**

113000

**O\*NET Relationship**

**Occupation Title**

Intelligence Analysts

**SOC Code**

33-3021.06

**Job Family**

Protective Service

**Skills**

*Complex Problem Solving*

*Operation Monitoring*

*Critical Thinking*

*Equipment Selection*

*Mathematics*

*Operation and Control*

*Systems Evaluation*

*Coordination*

*Equipment Maintenance*

*Active Learning*

**Abilities**

*Information Ordering*

*Deductive Reasoning*

*Flexibility of Closure*

*Problem Sensitivity*

*Inductive Reasoning*

*Speed of Closure*

*Auditory Attention*

*Mathematical Reasoning*

*Written Comprehension*

*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

**ADMINISTRATION**

**Paygrade**

**Task Type**

**Task Statements**

E5

CORE

Manage Acoustic Signature Maintenance Log (ASML) entries

E5

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 for system maintenance

E5

CORE

Conduct corrective maintenance on sonar equipment

E4

CORE

Conduct preventive maintenance on sonar equipment

E4

CORE

Conduct sound isolation surveys

### MAINTENANCE (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Correct sound isolation deficiencies
E4	CORE	Isolate electrical and hydraulic sonar equipment
E5	NON-CORE	Prepare sonar dome for entry and ship's evolutions
E5	CORE	Supervise sonar preventive maintenance
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
E4	CORE	Analyze effects of environment on sonar operations
E4	CORE	Analyze real-time oceanographic data
E5	CORE	Develop recommendations based on real-time oceanographic data
E4	CORE	Develop sonar search plans

### SONAR EMPLOYMENT

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze active return characteristics for solution of contact
E4	CORE	Analyze plots (e.g., contact evaluation plot (CEP), time-frequency plot, etc.)
E5	CORE	Analyze tactical security conditions on sonar operations
E4	CORE	Classify sonar contacts (e.g., spherical, towed, etc.)
E4	CORE	Provide contact management recommendations
E6	CORE	Verify conditions for towed array employment

### SONAR EQUIPMENT OPERATIONS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze contact data using sonar equipment
E4	CORE	Analyze contact transient emissions
E5	CORE	Collect Acoustic Intelligence (ACINT) data
E5	CORE	Collect scientific oceanographic data
E4	CORE	Conduct towed array handling evolutions
E4	CORE	Configure workstation for system employment
E4	CORE	Correlate contacts using multiple sensors (i.e., spherical array, towed array, and other hull sensors)
E4	CORE	Detect navigation hazards using sonar equipment (active and passive)
E4	CORE	Track contact data using sonar equipment
E4	CORE	Verify sonar system status

## SONAR FUNDAMENTALS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze own ship noise offenders
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 contact ranges using available ranging techniques
E4	CORE	Calculate range rates
E4	CORE	Calculate shaft Revolutions Per Minute (RPMs) by aural or system employment
E5	CORE	Coordinate sound silencing procedures (e.g., housekeeping surveys, Level of Sound (LOS) cuts, etc.)
E4	CORE	Detect contacts using passive sensors
E4	CORE	Detect contacts utilizing own ship's active sonar

**Job Title**  
**Sonar Supervisor**

**Job Code**  
**001765**

**Job Family**  
 Military Specific

**NOC**  
 TBD

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

**Short Title (14 Characters)**  
 SONAR SUPV

**Pay Plan**  
 Enlisted

**Career Field**  
 STS

**Other Relationships and Rules**  
 NECs TXXX series and other NECs as assigned

**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; conduct critical work functions to support producing intelligence, processing and attacking targets; supervise equipment maintenance and repair; and provide personnel support.

**DoD Relationship**

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

**O\*NET Relationship**

**Occupation Title**                      **SOC Code**                      **Job Family**  
 Command and Control Center                      55-1015.00                      Military Specific Officers

**Skills**

*Complex Problem Solving*  
*Operation Monitoring*  
*Critical Thinking*  
*Coordination*  
*Mathematics*  
*Equipment Selection*  
*Management of Material Resources*  
*Management of Personnel Resources*  
*Systems Evaluation*  
*Active Learning*

**Abilities**

*Information Ordering*  
*Deductive Reasoning*  
*Problem Sensitivity*  
*Flexibility of Closure*  
*Inductive Reasoning*  
*Speed of Closure*  
*Mathematical Reasoning*  
*Written Expression*  
*Perceptual Speed*  
*Auditory Attention*

**ACOUSTIC INTELLIGENCE**

<b>Paygrade</b>	<b>Task Type</b>	<b>Task Statements</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>Paygrade</b>	<b>Task Type</b>	<b>Task Statements</b>
E5	CORE	Manage Acoustic Signature Maintenance Log (ASML) entries
E7	CORE	Manage sonar division administrative requirements (e.g., tactical decision aids, search plans, etc.)
E7	NON-CORE	Manage sonar dome for entry and ship's evolutions
E5	CORE	Prepare Acoustic Intelligence (ACINT) recording packages
E4	CORE	Record towed array handling data

## MAINTENANCE

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E6	CORE	Coordinate equipment modifications
E7	CORE	Coordinate external agency support for major sonar equipment
E7	CORE	Supervise sonar corrective maintenance
E5	CORE	Supervise sonar preventive maintenance
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
E4	CORE	Analyze effects of environment on sonar operations
E4	CORE	Analyze real-time oceanographic data
E5	CORE	Develop recommendations based on real-time oceanographic data
E4	CORE	Develop sonar search plans

## SONAR EMPLOYMENT

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze active return characteristics for solution of contact
E4	CORE	Analyze plots (e.g., contact evaluation plot (CEP), time-frequency plot, etc.)
E5	CORE	Analyze tactical security conditions on sonar operations
E5	CORE	Conduct acoustic briefings (e.g., environmental conditions, expected frequencies, ship equipment characteristics, etc.)
E5	CORE	Perform post watch reconstruction for data collection and analysis
E4	CORE	Provide contact management recommendations
E5	CORE	Supervise sonar system employment
E6	CORE	Verify conditions for towed array employment

## SONAR EQUIPMENT OPERATIONS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze contact data using sonar equipment
E4	CORE	Analyze contact transient emissions
E5	CORE	Collect Acoustic Intelligence (ACINT) data
E4	CORE	Conduct towed array handling evolutions
E4	CORE	Configure workstation for system employment
E4	CORE	Correlate contacts using multiple sensors (i.e., spherical array, towed array, and other hull sensors)
E4	CORE	Detect navigation hazards using sonar equipment (active and passive)
E6	CORE	Supervise towed array handling operations
E4	CORE	Track contact data using sonar equipment
E4	CORE	Verify sonar system status

## SONAR FUNDAMENTALS

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Analyze own ship noise offenders
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 contact ranges using available ranging techniques
E4	CORE	Calculate range rates
E4	CORE	Calculate shaft Revolutions Per Minute (RPMs) by aural or system employment
E5	CORE	Coordinate sound silencing procedures (e.g., housekeeping surveys, Level of Sound (LOS) cuts, etc.)