

COMSCINST **9441.1**

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**DEPARTMENT OF THE NAVY**  
COMMANDER MILITARY SEALIFT COMMAND  
WASHINGTON NAVY YARD BLDG 210  
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COMSCINST 9441.1  
N7  
31 May 1994

COMSC INSTRUCTION 9441.1

Subj: RADIO COMMUNICATION SYSTEM DEMONSTRATION TEST PACKAGE

1. Purpose. To achieve a higher state of radio communication system readiness for deployment.

2. Applicability. This instruction is applicable to the following MSC ships:

T-AFS 1 MARS  
T-AFS 3 NIAGARA FALLS  
T-AFS 5 CONCORD  
T-AFS 6 SAN DIEGO  
T-AFS 7 SAN JOSE  
T-AFS 8 SIRIUS  
T-AFS 9 SPICA  
T-AFS 10 SATURN

T-AGOS 1 STALWART  
T-AGOS 4 TRIUMPH  
T-AGOS 7 INDOMITABLE  
T-AGOS 8 PREVAIL  
T-AGOS 9 ASSERTIVE  
T-AGOS 10 INVINCIBLE  
T-AGOS 11 AUDACIOUS  
T-AGOS 12 BOLD  
T-AGOS 16 CAPABLE  
T-AGOS 17 TENACIOUS  
T-AGOS 19 VICTORIOUS  
T-AGOS ABLE  
T-AGOS LOYAL  
T-AGOS EFFECTIVE

T-AGS 45 WATERS

T-AE KILAUEA

T-AH 19 MERCY  
T-AH 20 COMFORT

T-AK 3000 CPL LOUIS J HAUGE  
T-AK 3004 FRANKLIN J PHILLIPS  
T-AK 3006 PFC EUGENE OBREGON  
T-AK 3008 2ND LT JOHN P BOBO  
T-AK 3011 LT JACK LUMUS  
T-AK 3012 SGT WILLIAM R BUTTON

T-ARC 7 ZEUS

T-AO 187 HENRY J KAISER  
T-AO 188 JOSHUA HUMPHREYS  
T-AO 189 JOHN LENTHALL  
T-AO 190 ANDREW J HIGGINS  
T-AO 193 WALTER S DIEHL  
T-AO 194 JOHN ERICSSON  
T-AO 195 LEROY GRUMMAN  
T-AO 196 KANAWHA  
T-AO 197 PECOS  
T-AO 198 BIG HORN  
T-AO 199 TIPPECANOE  
T-AO 200 GUADALUPE  
T-AO PATUXENT  
T-AO YUKON  
T-AO LARAMIE  
T-AO RAPPAHANNOCK

T-ATF 166 POWHATAN  
T-ATF 167 NARRAGANSETT  
T-ATF 168 CATAWBA  
T-ATF 169 NAVAJO  
T-ATF 170 MOHAWK  
T-ATF 171 SIOUX  
T-ATF 172 APACHE

3. Background. The applicable ships are outfitted with standard Navy communication equipment which is operated and maintained by assigned U.S. Navy personnel. This instruction was developed to improve the overall readiness of the radio communication system for deployment.
4. Action. Addressees shall ensure that procedures outlined in this instruction are followed.
5. Forms. Copies of MSC 9441/1 and 9441/2 are available from COMSC (N0021).

Distribution:

COMSCINST 5000.19

List I (*Case A*)

SNDL 41B (*MSC Area Commanders*) (*LANT & PAC only*) (*50*)  
41F (*MSCCENTACT*)  
41L (*COMPSRONS*)  
41M (*MSC TAGOS Units*)  
T-100 (*Masters, civil service manned ships*)

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## FOREWORD

The Radio Communication System Demonstration Test package is a comprehensive system testing program developed to assist ship's force in achieving a high state of radio communication system readiness for deployment. Implicit in this goal are the following objectives:

- a. To assess the readiness of the ship's radio communication system material and personnel and report the status to appropriate seniors.
- b. To assist ship's force and IUCs in correcting material problems.
- c. To provide on-the-job training for ship's force personnel and improve self-sufficiency.
- d. To provide a current inventory and arrangement of equipment for all Radio Communication System Spaces.

## **SAFETY SUMMARY**

The Master or designated representative is responsible for the safety of all personnel and equipment. Permission must be obtained from the Master or his representative prior to the start of any task.

The following are general safety precautions that are not related to any specific procedures and therefore do not appear elsewhere in this document. These are safety precautions that personnel must understand and apply during all phases of operation and maintenance.

### **KEEP AWAY FROM ENERGIZED CIRCUITS**

Operating personnel must observe all safety regulations at all times. Do not replace components or make adjustments to energized equipment. Under certain conditions charges may be retained by capacitors in circuits although the power control is in the OFF position. To avoid casualties, always remove power, discharge to ground all circuits before coming into contact with any components.

### **DO NOT SERVICE OR ADJUST ALONE**

Under no circumstances should any person reach into or enter an enclosure to service or adjust equipment without the immediate presence of another person capable of rendering aid.

### **RESUSCITATION**

Personnel working with or near high voltages should be familiar with methods of emergency resuscitation.

### **ELECTROMAGNETIC RADIATION**

All Hazards of Electromagnetic Radiation to Ordinance (HERO) requirements shall be enforced during munitions handling.

### **WARNINGS AND CAUTIONS**

Observe all WARNINGS and CAUTIONS referenced in the Maintenance Requirement Cards (MRCs).

## CHAPTER 1

### GENERAL

#### 1-1 INTRODUCTION

a. This document contains the test and maintenance requirements for the installed Radio Communication System during Underway Material Inspections (*UMIs*) and Combat System Readiness Tests (*CSRTs*). The appropriate Maintenance Requirement Cards (*MRCs*) that are applicable to each evaluation are specified at the end of this chapter in the Radio Communication System Demonstration MIP/MRC Applicability Matrix. Additional non-PMS test procedures are provided as appendices.

b. Prior to the evaluation, cognizant ship personnel should become proficient in conducting the test procedures in accordance with problems encountered when interfacing with other systems. Each referenced MRC should be available in the appropriate work space for the associated equipment. The MRCs referenced are based on the MRC update provided in the Semi-Annual Force Revision.

#### 1-2 EVALUATION REQUIREMENTS

a. All Radio Communication Systems equipment shall be checked and aligned in accordance with applicable documentation prior to the evaluation.

b. Equipment listed herein is typical of MSC ships and not meant to be all inclusive.

c. The recorded results of previously conducted MRC procedures shall be provided to the evaluation coordinator.

d. The ship shall supply data sheets, provide data collectors, supervise and schedule the conduct of all MRC procedures.

e. All MRC procedures and associated testing shall be performed using ship's power.

f. If any adjustments are made on equipment as a result of testing or MRC procedures, all affected procedures/tests will be repeated to verify accuracy.

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g. The test procedures/MRCs identified in this document constitute the minimum required testing necessary to demonstrate the Radio Communication System. During this evaluation, the observer may request other test demonstrations in addition to those listed. The test observers may also request that procedures performed prior to their arrival be repeated. A final test agenda will be submitted to, and approved by, the evaluation coordinator.

h. Where possible, ship's personnel provide configuration equipment list 2 weeks prior to test.

### **1-3 TABLE OF CONTENTS AND EVALUATION SUMMARY RATINGS**

The evaluation summary ratings are to be recorded by the test observers on forms provided as Appendices B and C. An "S" indicates that the inspection or testing was satisfactorily completed, a "P" indicates that part of the inspection or test was satisfactorily completed and a "U" indicates that the inspection or test was unsatisfactorily completed or not attempted.

### **1-4 MRC REQUIREMENTS TO BE PERFORMED PRIOR TO THE EVALUATION**

Section 1 of each chapter contains a list of MRC requirements to be performed by ship personnel. For UMIs and CSRRs, these procedures shall be completed no earlier than 2 weeks prior to the evaluation. Ship personnel shall mark each MRC with an "S" if satisfactorily completed, with a "P" if only part of the MRC was satisfactorily completed and with a "U" if unsatisfactorily completed or not attempted. Those cards marked with a "U" or "P" require a written explanation. Although there is no provision in this document for recording test data for the MRCs listed in Section 1, ship personnel shall record and retain pertinent test data for presentation to the evaluation coordinator at the commencement of the evaluation. Where possible, ship personnel shall provide ship's configuration equipment list NLT 2 weeks prior to test date. Ship personnel shall record and retain test data for the following types of functions and parameters:

- a. Receiver/transmitter characteristics (i.e., power out, sensitivity, etc.)
- b. Results of special surveys (i.e., INSURV) and TEMPEST inspections.

### **1-5 OPERATIONAL DEMONSTRATIONS**

a. Section 2 of each chapter lists the operational testing and/or MRC procedures to be performed during the evaluation. Provisions have been made in Section 2 to provide a reduced demonstration if the ship is in port. Test procedures/MRCs which would

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normally be run at sea are marked with an asterisk (\*) and explanatory note (i.e., Radiation Restrictions, etc.) as applicable. The procedures so marked may sometimes be simulated in port. The conduct of test procedures under these conditions constitutes a reduced demonstration of the Radio Communication System.

b. Test observers will record the evaluation and test rating for each procedure/inspection listed in Section 2. The ratings shall be either "S", "P" or "U" as previously defined.

## **1-6 EQUIPMENT CONFIGURATION**

a. A complete RCS equipment inventory including ancillary equipment i.e., antenna, handsets, power supplies or remote control devices, shall be provided 2 weeks prior to conducting test.

b. This inventory package will consist of overall system nomenclature, serial number, model number of subsystems, assemblies with serial number (if different from system serial number) and location (space in which equipment is located or tech/leveled frame number for topside equipment).

c. Arrangement sketched (plan and elevation views) for all RCS spaces shall be included in the inventory package.



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## RADIO COMMUNICATION SYSTEM DEMONSTRATION MIP/MRC APPLICABILITY MATRIX

CHAP/SWBS	SYSTEMS EQUIPMENT	MIP	MRC
1	<b>RADIO COMMUNICATIONS</b>		
441	RADIO SYSTEM (LOW FREQUENCY)		
441	RADIO SYSTEM (MED/ HIGH FREQUENCY)	4414-002-58	Q-19 M-38/Q-34 S-12R
		4413/004-58	Q-1R M-3 M-38/Q-34 S-11R
		4413/005-58	M-16
		C-056/001-95	Q-1
		C-045/001-B3	S-1
		4411/011-58	S-1 R-1
		C-389/001-87	Q-1 M-1 S-1
		Demonstration 1	"G"
		Demonstration 2	"N"
		Demonstration 3	"W"
		Demonstration 4	"VV"
		Demonstration 5	"Y"
		Demonstration 6	"B"
		Demonstration 7	"S"
441	RADIO SYSTEM (VERY HIGH FREQUENCY)	C-023/001-38	Q-1 A-1 R-1D
		C-922/011-38	M-2R
		C-923/001-38	Q-1
		4411/006/76	S-66
		Demonstration 1	"U"
		Demonstration 2	"R"
441	RADIO SYSTEM (ULTRA HIGH FREQUENCY)	4402/002-58	S-1R A-44 R-1 S-2
		C-962/001-38	M-1 R-1 A-2
		4402/003-58	Q-1R S-64
		4411/006-76	S-66
		4402/001-58	R-4W
		Demonstration 1	"B"
		Demonstration 2	"U"
		Demonstration 3	FLTSATCOM
		Demonstration 4	"VV"
		Demonstration 5	"R"
441	RADIO SYSTEM (PORTABLE COMMUNICATION SYSTEMS)	4415/004-58	A-1 R-6
441	RADIO SYSTEM (QUALITY MONITORING SYSTEMS)	4414/002-58	M-38/Q-34 Q-19 S-12R
		C-776/001-38	Q-1
		4418/008-17	M-40

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CHAP/SWBS	SYSTEMS EQUIPMENT	MIP	MRC
1	<b>RADIO COMMUNICATIONS (Cont'd)</b>		
441	RADIO SYSTEM (AUTOMATED COMMUNICATION SYSTEM)	4451/R13-47	Q-23R
		4419/R07-17	R-1W
		4121/R28-87	Q-1
		Demonstration 1	RD-397/UG
		Demonstration 2	AN/SYQ-7(V)
		Demonstration 3	FALLBACK
		Demonstration 4	AN/UYK-20
		Demonstration 5	AN/UGC-20
		Demonstration 6	TT-187/UG
441	RADIO SYSTEMS (ASSOCIATED EQUIPMENT)	H-313/004-04	Q-1
			R-1
		H-414/003-38	S-1
		C-014/002-B6	S-1
441	RADIO SYSTEMS	Appendix A	Mat Insp
445	TELETYPE (TTY) AND FACSIMILE SYSTEMS	4451/R34-B7	S-2
		4451/R02-47	Q-51R
		4451/R13-47	Q-23R
		4451/R14-47	Q-24R
		4451/R21-27	S-1
		4451/R25-A6	A-1
			A-2
		4451/R23-47	R-7
		Demonstration 1	"I"
		Appendix A	Mat Insp
446	SECURITY SYSTEMS	4461/R09-97	OT-1
		4461/R14-87	A-9R
			S-9
		4461/R24-B7	R-3
		Demonstration 1	TSEC/KY8
		Demonstration 2	TSEC/KY5
		Demonstration 3	TSEC/KY75
		Appendix A	Mat Insp
446	SECURITY SYSTEMS SINGLE AUDIO SYSTEM (SAS)	Demonstration 1	REMOTE
		Demonstration 2	TRUNKS
		Appendix A	Mat Insp

**CHAPTER 2**

**OBSERVERS AND AREA OF RESPONSIBILITY**

<u>NO. OF OBSERVERS</u>	<u>SWBS</u>	<u>AREA OF RESPONSIBILITY</u>
As Required	441, 4443, 445, 446	<u>Radio Communications</u>

**CHAPTER 3**

**RADIO COMMUNICATION SYSTEMS**

SWBS 441-RADIO SYSTEMS (LOW FREQUENCY)

1. MRC PROCEDURES TO BE PERFORMED PRIOR TO EVALUATION (WITHIN 2 WKS OF EVAL DATE)

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
	A-1 (1.0)	<u>R-2368 LF/MF</u> 1. Test operate.	—

SWBS 441-RADIO SYSTEMS (MED/HIGH FREQUENCY)

1. MRC PROCEDURES TO BE PERFORMED PRIOR TO EVALUATION (WITHIN 2 WKS OF EVAL DATE)

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
4414/002-58	Q-19 (0.4)	<u>R-1051B/URR</u> 1. Measure receiver sensitivity.	—
4413/004-58	Q-1R (1.5)	<u>AN/URT-23 ( )</u> 1. Measure transmitter power output and frequency accuracy.	—
C-045/001-B3	S-1 (0.4)	<u>CU-2007/SRR</u> 2. Measure combiner-multicoupler gain.	—
4411/011-58	S-1 (0.5)	<u>Whip Antenna</u> 3. Measure antenna insulation resistance. 4. Measure metal whip antenna continuity.	—
C-056/001-95	Q-1 (1.0)	<u>AN/SRA-49 ( )</u> 2. Measure resistance of electrical filter assembly.	—

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C-389/001-87	Q-1 (0.5)	<u>AN/URA-38</u> 1. Test operate coupler group	_____
	S-1 (0.4)	1. Inspect coupler group	_____

**NOTE: All power out measurements are to be made with calibrated wattmeters.**

**2. OPERATIONAL MRC PROCEDURES TO BE PERFORMED DURING EVALUATION - OBSERVERS MAY ALSO REQUIRE REPETITION OF SECTION 1 MRC PROCEDURES (cont)**

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
4413/004-58	M-3 (0.1)	<u>AN/URT-23()</u> 1. Test operation of air vane switch and alarm circuit.	_____
	M-38/ Q-34 (0.3)	1. Test T-827( )/URT internal frequency standard.	_____
	Q-1R (1.5)	1. Select random frequencies to check output power	_____
	S-11R (0.3)	1. Test radio transmitting set safety interlock switches.	_____
4414/002-58	Q-19 (0.6)	<u>R-1051()/URR</u> 1. Select random frequencies to check received AGC circuit. 2. Test frequency locking action.	_____
	M-38/ Q-34 (0.3)	1. Test receiver internal frequency standard.	_____
	S-12R (0.1)	1. Test receiver interlock.	_____
4413/005-58	M-16 (0.1)	<u>CU-937/UR</u> 1. Observe antenna coupler pressure.	_____

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SWBS 441-RADIO SYSTEMS (MED/HIGH FREQUENCY) (cont)2. OPERATIONAL MRC PROCEDURES TO BE PERFORMED DURING EVALUATION - OBSERVERS MAY ALSO REQUIRE REPETITION OF SECTION 1 MRC PROCEDURES (cont)

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
C-56/001-95	Q-1 (1.0)	<u>AN/SRA-49()</u> 1. Inspect electrical filter assembly. 3. Test filter assembly.	—
C-389/001-87	Q-1 (0.3)	<u>AN/URA-38A</u> 1. Select random frequencies to check antenna coupler operations.	—
	M-1 (0.3)	2. Observe antenna coupler group pressure.	—
	S-1 (0.3)	1. Inspect antenna coupler group control.	—
4411/011-58	S-1 (0.5)	<u>Whip Antenna</u> 1. Inspect antenna. 2. Inspect matching unit, coupler, tuner or junction box. 3. Inspect antenna insulators.	—
	R-1 (0.2)	1. Inspect antenna tilting platform locking device.	—
<u>Demonstration 1</u>		Demonstrate a Type "G" circuit configuration with the following characteristics; single channel teletypewriter, secure, duplex (RFCS), high frequency.	—
<u>Demonstration 2</u>		Demonstrate a Type "N" circuit configuration with the following characteristics; multichannel teletypewriter, secure, half duplex (Receive), (AFTS), high frequency.	—

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SWBS 441-RADIO SYSTEMS (MED/HIGH FREQUENCY) (cont)2. OPERATIONAL MRC PROCEDURES TO BE PERFORMED DURING EVALUATION - OBSERVERS MAY ALSO REQUIRE REPETITION OF SECTION 1 MRC PROCEDURES (cont)

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
<u>Demonstration 3</u>		Demonstrate a Type "W" circuit configuration with the following characteristics; CW, simplex, high frequency.	_____
<u>Demonstration 4</u>		Demonstrate a Type "VV" circuit configuration with the following characteristics; single channel teletypewriter, non-secure, simplex (AFTS), high frequency.	_____
<u>Demonstration 5</u>		Demonstrate a Type "Y" circuit configuration with the following characteristics; narrowband voice, non-secure, simplex/duplex, high frequency.	_____
<u>Demonstration 6</u>		Demonstrate a Type "B" circuit configuration with the following characteristics; single channel teletypewriter, secure, simplex (AFTS), med/high frequency.	_____
<u>Demonstration 7</u>		Demonstrate a Type "S" circuit configuration with the following characteristics; voice, secure, simplex, narrowband, single sideband (SSB), high frequency.	_____

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SWBS 441-RADIO SYSTEMS (VERY HIGH FREQUENCY)1. MRC PROCEDURES TO BE PERFORMED PRIOR TO EVALUATION (WITHIN 2 WKS OF EVAL DATE)

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
C-023/001-38	Q-1 (0.8)	<u>AN/URC-80()</u> 1. Measure transmitter forward and reflected (VSWR) power. 2. Measure receiver sensitivity.	_____
	A-1 (0.8)	1. Measure transmitter frequency.	_____
C-922/001-38	M-2R (0.3)	<u>AN/GRT-21()</u> 1. Observe exciter carrier level. 2. Observe modulation. 3. Observe power output and VSWR.	_____
C-923/001-38	Q-1 (0.2)	<u>AN/GRR-23()</u> 3. Measure receiver sensitivity.	_____
4411/006-76	S-66 (0.8)	<u>Dipole Antennas</u> 2. Measure VSWR.	_____

**NOTE: All power out measurements are to be made with calibrated wattmeters.**

2. OPERATIONAL MRC PROCEDURES TO BE PERFORMED DURING EVALUATION - OBSERVERS MAY ALSO REQUIRE REPETITION OF SECTION 1 MRC PROCEDURES

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
C-023/001-38	R-1D (0.2)	<u>AN/URC-80()</u> 1. Test operate transceiver set.	_____
C-923/001-38	Q-1 (0.4)	<u>AN/GRR-23()</u> 4. Test main audio and receiver AGC. 5. Test receiver squelch action.	_____
4411/006-76	S-66 (0.7)	<u>Dipole Antennas</u> 1. Inspect antennas.	_____



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SWBS 441-RADIO SYSTEMS (VERY HIGH FREQUENCY)

2. OPERATIONAL MRC PROCEDURES TO BE PERFORMED DURING EVALUATION - OBSERVERS MAY ALSO REQUIRE REPETITION OF SECTION 1 MRC PROCEDURES (cont)

MIP CONTROL NO.	PER CODE (TIME)	MAINTENANCE REQUIREMENT DESCRIPTION	S,P,U
<u>Demonstration 1</u>		Demonstrate a Type "U" circuit configuration with the following characteristics; voice, non-secure, simple, very high frequency.	_____
<u>Demonstration 2</u>		Demonstrate a Type "R" circuit configuration with the following characteristics; wideband, voice, secure, simplex.	_____

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SWBS 441-RADIO SYSTEMS (ULTRA HIGH FREQUENCY)1. MRC PROCEDURES TO BE PERFORMED PRIOR TO EVALUATION (WITHIN 2 WKS OF EVAL DATE)

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
4402/002-58	S-1R (1.1)	<u>OE-82( )/WSC-1(V) Antenna Group</u> 1. Measure preamplifier gain.	___
	A-44 (1.6)	1. Measure RF transmission line losses.	___
C-962/001-38	M-1 (0.3)	<u>AN/WSC-3(V)</u> 1. Measure 5 Mhz frequency output. 2. Measure VCXO control voltage.	___
	A-2 (0.6)	1. Measure IF bandwidth.	___
4411/006-76	S-66 (0.8)	<u>Dipole Antennas</u> 2. Measure reflected power (VSWR).	___

**NOTE: All power out measurements are to be made with calibrated wattmeters.**

2. OPERATIONAL MRC PROCEDURES TO BE PERFORMED DURING EVALUATION - OBSERVERS MAY ALSO REQUIRE REPETITION OF SECTION 1 MRC PROCEDURES

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
<u>4402/002-58</u>	R-1 (0.5)	<u>OE-82( )/WSC-1(V) Antenna Group</u> 1. Conduct antenna group performance tests.	___
	S-2	1. Inspect antenna group.	___
4402/003-58	Q-1R (1.0)	<u>AN/SSR-1</u> 1. Perform system operational test.	___
	S-64 (1.0)	1. Inspect amplifier-converters and antennas.	___

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SWBS 441-RADIO SYSTEMS (ULTRA HIGH FREQUENCY) (cont)2. OPERATIONAL MRC PROCEDURES TO BE PERFORMED DURING EVALUATION - OBSERVERS MAY ALSO REQUIRE REPETITION OF SECTION 1 MRC PROCEDURES (cont)

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
C-962/001-38	R-1 (0.7)	<u>AN/WSC-3()</u> 1. Conduct communication set performance tests.	_____
4411/006-76	S-66 (0.7)	<u>Dipole Antennas</u> 1. Inspect antennas.	_____
4402/001-58	R-4W (0.1)	<u>OK-454/WSC</u> 1. Perform alarm and lamp test.	_____
<u>Demonstration 1</u>		Demonstration a Type "B" circuit configuration with the following characteristics; single channel teletypewriter, secure, simplex (AFTS), ultra high frequency.	_____
<u>Demonstration 2</u>		Demonstrate a Type "U" circuit configuration with the following characteristics; voice, non-secure, simplex, ultra high frequency.	_____
<u>Demonstration 3</u>		Demonstrate a FLTSATCOM circuit configuration with the following characteristics; voice, secure, narrowband, digital, ultra high frequency.	_____
<u>Demonstration 4</u>		Demonstrate a Type "VV" circuit configuration with the following characteristics; single channel teletypewriter, non-secure, simplex (AFTS), ultra high frequency.	_____

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Demonstration 5

Demonstrate a Type "R" circuit configuration with the following characteristics; single channel, wideband, voice, secure, simplex, ultra high frequency.

\_\_\_\_\_

SWBS 441-RADIO SYSTEMS (PORTABLE COMMUNICATION SYSTEM)1. MRC PROCEDURES TO BE PERFORMED PRIOR TO EVALUATION (WITHIN 2 WKS OF EVAL DATE)

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
4415/004-58	A-1 (0.5)	<u>VHF-FM Transceiver</u> 1. Measure VHF-FM radio set receiver quieting and squelch sensitivity. 2. Measure transmitter power output and frequency.	_____

**NOTE: All power out measurements are to be made with calibrated wattmeters.**

2. OPERATIONAL MRC PROCEDURES TO BE PERFORMED DURING EVALUATION - OBSERVERS MAY ALSO REQUIRE REPETITION OF SECTION 1 MRC PROCEDURES

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
4415/004-AO	R-6 (0.1)	<u>VHF-FM Transceiver</u> 1. Test operation of portable hand-held VHF-FM transceiver.	_____
4415/004-AO	S-6	<u>AN/CRT-3A</u> 1. Test and inspect.	_____
4415/004-AO	S-7	<u>AN/CRT-3B</u> 1. Test and inspect.	_____
4415/004-AO	S-9	<u>AN/PRC-96</u> 1. Test and inspect.	_____

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SWBS 441-RADIO SYSTEMS (QUALITY MONITORING CONTROL SYSTEM)1. MRC PROCEDURES TO BE PERFORMED PRIOR TO EVALUATION (WITHIN 2 WKS OF EVAL DATE)

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
4414/002-58	Q-19 (0.4)	<u>R-1051( )/URR</u> 1. Measure receiver sensitivity.	_____
C-776/001-38	Q-1 (0.2)	<u>AM-2123A(V)U</u> 1. Measure preamplifier and channel outputs.	_____

2. OPERATIONAL MRC PROCEDURES TO BE PERFORMED DURING EVALUATION - OBSERVERS MAY ALSO REQUIRE REPETITION OF SECTION 1 MRC PROCEDURES

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
4414/002-58	M-38/ Q-34 (0.3)	<u>R-1051( )/URR</u> 1. Test and adjust receiver internal frequency standard.	_____
	Q-19 (0.4)	1. Test radio receiver AGC circuit. 2. Test frequency locking action.	_____
	S-12R (0.2)	1. Test radio receiver interlock.	_____
4418/008-17	M-40 (0.5)	<u>AN/URO-23</u> 1. Test operate frequency time standard. 2. Test frequency time standard automatic power switchover functions.	_____
4403/001-32	M-1 (1.5)	<u>AN/URQ-10</u> 1. Test operate frequency time standard. 2. Exercise battery.	_____

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SWBS 441-RADIO SYSTEMS (AUTOMATED COMMUNICATION SYSTEMS)1. MRC PROCEDURES TO BE PERFORMED PRIOR TO EVALUATION (WITHIN 2 WKS OF EVAL DATE)

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
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There are no MIPs listed for this ship which are applicable for use in this section.

2. OPERATIONAL MRC PROCEDURES TO BE PERFORMED DURING EVALUATION - OBSERVERS MAY ALSO REQUIRE REPETITION OF SECTION 1 MRC PROCEDURES

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
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4451/R13-47	Q-23R (0.3)	<u>AN/UGC-20( )/AN/UGC-74</u> 1. Test operating parameters of teletypewriter set.	_____
4419/R07-17	R-1W (0.5)	<u>RD-397B(V)1/U</u> 3. Perform reader-punch off-line test.	_____
4121/R28-87	Q-1 (0.6)	<u>AN/UYK-20(V)</u> 2. Perform diagnostic test.	_____

For operational demonstration, the NAVMACS system is utilized as a part of the FLTSATCOM in the previous UHF section and in the type "N" circuit in the HF section. There is no PMS documentation for this requirement. Additional operational tests to verify proper operation should be accomplished as follows:

<u>Demonstration 1</u>	(0.5)	Load and perform RD-397(V)1/U maintenance test tool program per NAVELEX San Diego Doc. No. 6F000-AA.	_____
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SWBS 441-RADIO SYSTEMS (AUTOMATED COMMUNICATION SYSTEMS)  
(cont)

2. OPERATIONAL MRC PROCEDURES TO BE PERFORMED DURING  
EVALUATION - OBSERVERS MAY ALSO REQUIRE REPETITION OF SECTION 1  
MRC PROCEDURES (cont)

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
<u>Demonstration 2</u>		Demonstrate that the AN/SYQ-7(V)1 system is operational and capable of: receiving on all Broadcast Input (BI) circuits; outputting on all printers; transmitting and receiving on the SATCOM link.	_____
<u>Demonstration 3</u>		Demonstrate that the system is operational with the fallback program loaded.	_____
<u>Demonstration 4</u>	(3.0)	Load and perform AN/UYK-20X(V) diagnostic test per NAVELEX 0967-FP-598-1040.	_____
<u>Demonstration 5</u>	(0.3)	Load and perform AN/UGC-20 maintenance test tool program per NAVELEX San Diego Doc. No. 6F003-AA.	_____
<u>Demonstration 6</u>	(0.3)	Load and perform TT-187( )/UG maintenance test tool program per NAVELEX San Diego Doc No. 6F011-AA.	_____

**NOTE: A SUBSCRIBER IDENTIFICATION (SID) IS REQUIRED TO TEST NAVMACS. IF NOT AVAILABLE, SUBMIT TERMINATION REQUEST TO AREA NAVCAMS PER NTP-4 PART 03.04.0300.**

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SWBS 441-RADIO SYSTEMS (ASSOCIATED COMMUNICATIONS EQUIPMENT)1. MRC PROCEDURES TO BE PERFORMED PRIOR TO EVALUATION (WITHIN 2 WKS OF EVAL DATE)

MIP CONTROL NO.	PER CODE (TIME)	MAINTENANCE REQUIREMENT DESCRIPTION	S,P,U
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There are no MIPs listed for this ship which are applicable for use in this section.

2. OPERATIONAL MRC PROCEDURES TO BE PERFORMED DURING EVALUATION - OBSERVERS MAY ALSO REQUIRE REPETITION OF SECTION 1 MRC PROCEDURES

MIP CONTROL NO.	PER CODE (TIME)	MAINTENANCE REQUIREMENT DESCRIPTION	S,P,U
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C-014/002-B6	S-1 (0.2)	<u>Audio Frequency Amplifiers</u> 1. Inspect audio amplifier units.	___
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H-414/003-38	S-1 (0 4)	<u>Safety Harness</u> 1. Conduct detailed inspection of safety harness, safety lanyard, working lanyard, and attachments.	___
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H-313/004-04	Q-1	<u>Climber Safety</u> 1. Inspect climber safety rails.	___
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	R-1	<u>Climber Safety</u> 1. Inspect safety device sleeve.	___
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SWBS 441-RADIO SYSTEMS1. MRC PROCEDURES TO BE PERFORMED PRIOR TO EVALUATION (WITHIN 2 WKS OF EVAL DATE)

MIP CONTROL NO.	PER CODE (TIME)	MAINTENANCE REQUIREMENT DESCRIPTION	S,P,U
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N/A



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2. OPERATIONAL MRC PROCEDURES TO BE PERFORMED DURING EVALUATION - OBSERVERS MAY ALSO REQUIRE REPETITION OF SECTION 1 MRC PROCEDURES

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
Appendix A <u>Inspection and Maintenance</u>		Capability	<u>Material</u>
		1. Condition 2. Cleanliness 3. Installation/Arrangement 4. Safety (Personnel and Equipment) 5. Equipment Configuration 6. PMS/MRC 7. Documentation 8. Test Equipment 9. Software and Related Documentation 10. Logistic Support	

SWBS 445-TELETYPE AND FACSIMILE SYSTEMS

1. MRC PROCEDURES TO BE PERFORMED PRIOR TO EVALUATION (WITHIN 2 WKS OF EVAL DATE)

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
4451/R347-B7	S-2 (2.0)	<u>AN/UCC-1( ) (V)</u> 1. Verify diversity balance of each converter diversity group.	_____
4451/R25-98	A-1 (1.0)	<u>AN/URA-17</u> 1. Measure power supply voltages.	_____

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2. OPERATIONAL MRC PROCEDURES TO BE PERFORMED DURING  
EVALUATION - OBSERVERS MAY ALSO REQUIRE REPETITION OF SECTION 1  
MRC PROCEDURES

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
4451/R02-47	Q-51R (0.3)	<u>TT-192( )/UG</u> 1. Test operating parameters of teletypewriter reperforator set.	_____
4451/R13-47	Q-23R (0..3)	<u>AN/UGC-20( ), AN/UGC-25( ) TT-176/UG</u> 1. Test operating parameters of teletypewriter set.	_____
4451/R14-47	Q-24R (0.5)	<u>AN/UGC-6( )</u> 1. Test operating parameters of teletypewriter set.	_____
4451/R14-81	Q-24R (0.5)	<u>AN/UGC-48( )</u> 1. Test operating parameters of teletypewriter set.	_____
4451/011-32	M-1 (0.5)	<u>AN/UGC-143(V)</u> 1. Test operate teletype terminal set.	_____
4451/R21-27	S-1 (0.2)	<u>SB-1210( )/UGO, SB-1203( )/UG</u> 1. Inspect communication patching panel.	_____
4451/R25-A6	A-1 (1.4)	<u>AN/URA-17</u> 2. Test tuning indicator centering. 3. Test discriminator operation. 4. Test keyer function.	_____
	A-2 (0.4)	2. Test safety interlocks.	_____
4451/R23-47	R-7 (0.3)	<u>TT-187( )/UG</u> 1. Test operating parameters of distributor-transmitter set.	_____
<u>4451/R34-B7</u>	S-2 (2.3)	<u>AN/UCC-1D(V)</u> 2. Test operate test set TS-2232/UC. 3. Test converter discriminator balance.	_____

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SWBS 445-TELETYPE AND FACSIMILE SYSTEMS (cont)

2. OPERATIONAL MRC PROCEDURES TO BE PERFORMED DURING EVALUATION - OBSERVERS MAY ALSO REQUIRE REPETITION OF SECTION 1 MRC PROCEDURES (cont)

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
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Demonstration

Demonstrate a Type "I" teletype-writer tape production system.

There are no MIPs listed for this ship which demonstrate the operational use of the equipment in this section. Operational demonstration of this equipment is accomplished in the Secure Radio Communication Circuits in Section SWBS 441.

Appendix A  
Inspection and Maintenance

Material

Capability

- |                                       |       |
|---------------------------------------|-------|
| 1. Condition                          | _____ |
| 2. Cleanliness                        | _____ |
| 3. Installation/Arrangement           | _____ |
| 4. Safety (Personnel and Equipment)   | _____ |
| 5. Equipment Configuration            | _____ |
| 6. PMS/MRC                            | _____ |
| 7. Documentation                      | _____ |
| 8. Test Equipment                     | _____ |
| 9. Software and Related Documentation | _____ |
| 10. Logistic Support                  | _____ |

SWBS 446-SECURITY SYSTEMS

1. MRC PROCEDURES TO BE PERFORMED PRIOR TO EVALUATION (WITHIN 2 WKS OF EVAL DATE)

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
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There are no MIPs listed for this ship which are applicable for use in this selection.

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SWBS 446-SECURITY SYSTEMS (cont)2. OPERATIONAL MRC PROCEDURES TO BE PERFORMED DURING EVALUATION - OBSERVERS MAY ALSO REQUIRE REPETITION OF SECTION 1 MRC PROCEDURES

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
TBD	R-1Q (0.5)	<u>TSEC/KG-84C</u> 1. Operate equipment on the air or back-to-back.	_____
		<u>TSEC/KWR-46</u> An operational check will be made of this equipment. At this time there is no PMS/MRC documentation to support this requirement.	_____
4461/R14-87	A-9R (0.4)	<u>ON-143(V)/USO</u> 1. Perform interconnecting group self-test.	_____
	S-9 (0.1)	1. Test chassis safety interlock.	_____
4461/R24-B7	R-3 (0.1)	<u>CV-333/U</u> 1. Test operate audio-digital converter.	_____

Communication Security System (CSS)

<u>Demonstration 1</u>		Demonstrate wideband speech security system with VHF and UHF radio equipment in secure and non-secure modes (including remote selection of modes) using TSEC/KY-58.	_____
<u>Demonstration 2</u>		Demonstrate narrowband speech security system with HF radio equipment in secure and non-secure modes (including remote selection of modes) using TSEC/KY-75/ANDVT.	_____

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SWBS 446-SECURITY SYSTEMS (cont)

MIP CONTROL NO.	PER CODE (TIME)	MAINTENANCE REQUIREMENT DESCRIPTION	S,P,U
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There are no MIPs listed for this ship which demonstrate the operational use of the equipment in the section. Operational demonstration of this equipment is accomplished in the Secure Radio Communication Circuits in section SWBS 441.

2. OPERATIONAL MRC PROCEDURES TO BE PERFORMED DURING EVALUATION - OBSERVERS MAY ALSO REQUIRE REPETITION OF SECTION 1 MRC PROCEDURES (cont)

MIP CONTROL NO.	PER CODE (TIME)	MAINTENANCE REQUIREMENT DESCRIPTION	S,P,U
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Appendix A  
Inspection and Maintenance

Material

- Capability
1. Condition \_\_\_\_\_
  2. Cleanliness \_\_\_\_\_
  3. Installation/Arrangement \_\_\_\_\_
  4. Safety (Personnel and Equipment) \_\_\_\_\_
  5. Equipment Configuration \_\_\_\_\_
  6. PMS/MRC \_\_\_\_\_
  7. Documentation \_\_\_\_\_
  8. Test Equipment \_\_\_\_\_
  9. Software and Related \_\_\_\_\_
  10. Logistic Support \_\_\_\_\_

SWBS 446-SECURITY SYSTEMS (SINGLE AUDIO SYSTEM)

1. MRC PROCEDURES TO BE PERFORMED PRIOR TO EVALUATION (WITHIN 2 WKS OF EVAL DATE)

MIP CONTROL NO.	PER CODE (TIME)	MAINTENANCE REQUIREMENT DESCRIPTION	S,P,U
-----------------	--------------------	--	-------

There are no MIPs listed for this ship which are applicable for use in this section.

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2. OPERATIONAL MRC PROCEDURES TO BE PERFORMED DURING EVALUATION - OBSERVERS MAY ALSO REQUIRE REPETITION OF SECTION 1 MRC PROCEDURES

Note: There are no MIPs/MRCs which verify the SAS as a system. The following checks should be performed:

<u>Demonstration 1</u>	An external communication check from each remote operator station in each mode of operation available to that station.	_____
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2. OPERATIONAL MRC PROCEDURES TO BE PERFORMED DURING EVALUATION - OBSERVERS MAY ALSO REQUIRE REPETITION OF SECTION 1 MRC PROCEDURES (cont)

<u>MIP CONTROL NO.</u>	<u>PER CODE (TIME)</u>	<u>MAINTENANCE REQUIREMENT DESCRIPTION</u>	<u>S,P,U</u>
<u>Demonstration 2</u>		A trunk netting test to demonstrate the capability to interface multiple lines with any selected trunks.	_____
<u>Appendix A Inspection and Maintenance</u>		<u>Material</u>	
		<u>Capability</u>	
		1. Condition	_____
		2. Cleanliness	_____
		3. Installation/Arrangement	_____
		4. Safety (Personnel and Equipment)	_____
		5. Equipment Configuration	_____
		6. PMS/MRC	_____
		7. Documentation	_____
		8. Test Equipment	_____
		9. Software and Related Documentation	_____
		10. Logistic Support	_____

## **APPENDIX A**

### **MATERIAL INSPECTION AND MAINTENANCE CAPABILITY**

#### **INSPECTION DESCRIPTION**

The material condition of the equipment is inspected using the lists and appropriate references as a guide. The maintenance capability is verified using the applicable references.

NOTE 1: The following lists do not include all possible checks nor are they intended to limit the inspections to those items listed. The lists do, however, provide a general guideline for use by the inspector. Check those items or sections that are applicable to this system.

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1. MATERIAL INSPECTION - Condition

NOTE: The following list was compiled using various Maintenance Requirement Cards (MRCs), NAVSEA 0967-LP-000-0110 (Installation Standards), and MIL-STD-454G (The Standard General Requirements for Electronic Equipment).

<u>FUNCTION</u>	<u>S,P,U</u>
a. Check liquid lines for leaks.	_____
b. Check blower wheels for corrosion, pits or dents.	_____
c. Check gear trains for chipped or broken gear teeth, metal flakes or chips and foreign material.	_____
d. Check wire terminals for tightness and corrosion.	_____
e. Check wire hanesses for abrasions.	_____
f. Check for loose mechanical and electrical connections.	_____
g. Check for missing hardware.	_____
h. Check for kinks, bends or stresses in wiring.	_____
i. Check for broken or wrinkled cable sheaths.	_____
j. Check for cracked or frayed insulation.	_____
k. Check for damaged or missing lamp assemblies and fuse holder.	_____
l. Check for damaged, missing or loose switch label plates and switch handles.	_____
m. Check that movable parts are free to function.	_____
n. Check for discolored or scorched components.	_____
o. Check for loose circuit cards/boards.	_____
p. Check waveguide condition.	_____
q. Check noise and shock isolation including condition of foundation, hangers and supports.	_____



<u>FUNCTION</u>	<u>S,P,U</u>
2. <u>MATERIAL INSPECTIONS - Cleanliness</u>	
a. Check that area is clean and free of debris.	_____
b. Check that a trash/litter receptacle is provided.	_____
c. Verify that tops of electrical/electronic equipment are free of foreign objects.	_____
d. Verify that there are no flammable materials in space.	_____
3. <u>MATERIAL INSPECTION - Installation/Arrangement</u>	
a. Verify that the location of equipment is such that design ambient temperature is not exceeded.	_____
b. Verify that each unit is raised above deck to prevent water/dirt entry.	_____
c. Verify that units with excessive noise levels are not located in or near living or control spaces.	_____
d. Verify that unit does not unnecessarily obstruct passage or reduce headroom.	_____
e. Verify that there is adequate space for operation, maintenance and repair of equipment.	_____
f. Verify that grounding/bonding is per MIL-STD-1310.	_____
g. Verify that operation instructions (is applicable) are posted.	_____
h. Check general space condition including paint, tile, air conditioning and lighting.	_____

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4. MATERIAL INSPECTION - Safety (Personnel and Equipment)

NOTE: The following list was compiled using MIL-STD-454G (Requirement 1) and NAVSEA 0967-LP-000-0110 (Electronics Installation and Maintenance Book).

<u>FUNCTION</u>	<u>S.P.U</u>
a. Grounding/Bonding.	_____
b. Voltage guards/barriers.	_____
c. High voltage guarding.	_____
d. RF voltage guarding.	_____
e. By-passable interlocks.	_____
f. Non by-passable interlocks.	_____
g. Shorting rods.	_____
h. High voltage protection.	_____
i. High current protection.	_____
j. Discharging devices.	_____
k. Interlock switches.	_____
l. Battleshort switches.	_____
m. Safety switches.	_____
n. Mechanical hazards. (Moving part contact prevention, sharp projections, drawer/door/rack stops and supports.)	_____
o. Temperature (exposed equipment).	_____
p. Hazard markers.	_____
q. Hazard signs.	_____

5. MAINTENANCE CAPABILITY - Equipment Configuration

NOTE: Spot checks will suffice; the number of checks will be determined by the inspector.

<u>FUNCTION</u>	<u>S.P.U</u>
a. Using Ship Configuration and Logistics Support Information System (SCLSIS) Report #502.1A, verify/determine each electronics equipment configuration (equipment/field changes/mods installed).	_____

6. MAINTENANCE CAPABILITY - PMS/MRC

NOTE: Spot checks will suffice; the number of checks will be determined by the PMS coordinator/inspector.

a. Using latest PMS-5 semi-annual report, List of Effective Pages (LOEP), verify that the appropriate PMS/MRC package is aboard for the installed equipment configuration.	_____
b. Verify that MRC requirements are scheduled properly and are conducted in accordance with the prepared schedule.	_____

7. MAINTENANCE CAPABILITY - Documentation

NOTE: Spot checks will suffice; the number of checks will be determined by the inspector.

a. IAW COMNAVSURFLANTINST 9000.1C or COMNANSURFPACINST 4700.1, verify electronics technical publications are onboard for the installed equipment configuration (as applicable).	_____
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8. MAINTENANCE CAPABILITY - Test Equipment

a. Using Ship Portable Electrical/Electronic Test Equipment Requirements List (SPETERL), verify specified test equipment is on board for installed equipment/system.	_____
b. Verify that each unit of test equipment has a current calibration	_____

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<u>FUNCTION</u>	<u>S,P,U</u>
c. Verify that each unit of test equipment is operational.	_____
d. Verify that test equipment stowage facilities are as follows:	_____
(1) Free from excessive shock/vibration.	_____
(2) Test equipment can be stowed for adverse sea conditions.	_____
(3) Accessible for use.	_____
(4) Exposed components are protected.	_____
9. <u>MAINTENANCE CAPABILITY - Software and Related Documentation</u>	
a. Verify that the appropriate ship operational program and related documents (operators manual, program performance specifications) are aboard for installed equipment configuration.	_____
b. Using 0967-LP-011-0172 (Combat Direction Systems Test Software User Documentation Index) as a reference, verify that the appropriate test software and related documentation are aboard for installed equipment configuration.	_____
10. <u>MAINTENANCE CAPABILITY - Logistic Support</u>	
NOTE: Spot checks will suffice; the number of checks will be determined by the inspector.	
a. Using the Coordinated Shipboard Allowance List (COSAL), determine (within reason) the adequacy and currency of Part II (Allowance Parts List - APL)	_____
b. Using the Coordinated Shipboard Allowance List (COSAL), determine (within reason) the adequacy and currency of Part III (aboard repair parts list).	_____

**APPENDIX B**

**RADIO COMMUNICATION SYSTEM**

**READINESS REVIEW**

**DETAILED DISCREPANCY**

**REPORT**



**APPENDIX C**

**RADIO COMMUNICATION SYSTEM**

**READINESS REVIEW**

**SUMMARY REPORT**

**RADIO COMMUNICATION SYSTEMS READINESS REVIEW SUMMARY REPORT**

SHIP USNS	SYSTEM EQUIPMENT	DATE		
SHIP LOCATION	TEST ENGINEER/TECHNICIAN <i>(Provide name and Command/Company)</i>			
DEFICIENCIES DISCOVERED:	NO. OF MAJOR	NO. CORRECTED	NO. OF MINOR	NO. CORRECTED
CURRENT STATUS:				
FULLY OPERATIONAL	<input type="checkbox"/>	MARGINALLY OPERATIONAL (EXPLAIN BELOW)	<input type="checkbox"/>	
NON-OPERATIONAL (EXPLAIN BELOW)	<input type="checkbox"/>	CASREP (DATE/TIME GROUP)	<input type="checkbox"/>	CASREPT (SER NO.) <input data-bbox="1600 703 1696 760" type="checkbox"/>
MAJOR DEFICIENCIES REMAINING: <i>(LIST CASUALTY AND RESULTING LIMITATIONS)</i>				
TEST PLAN ADEQUACY:	SAT <input type="checkbox"/>	UNSAT (EXPLAIN ON REVERSE)	<input type="checkbox"/>	