

NAVSHIPS 0967-000-0070

NON-REGISTERED

(Formerly NAVSHIPS 9,000,000.7)

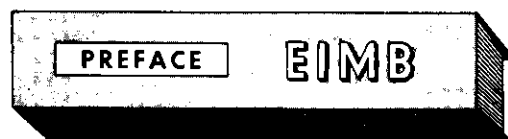
**ELECTRONICS
INSTALLATION
AND
MAINTENANCE BOOK

COUNTERMEASURES**

**DEPARTMENT OF THE NAVY
BUREAU OF SHIPS**

PUBLISHED: JANUARY 1962

Change 3: April 1966 (0967-000-0073)



POLICY AND PURPOSE

The Electronics Installation and Maintenance Book (EIMB) has been established as the means for collecting, publishing, and distributing, in one convenient documentation source, those subordinate maintenance and repair policies, installation practices, and overall electronics equipment and material-handling procedures required to implement the major policies set forth in Chapter 67 of the Bureau of Ships Technical Manual. All data contained within the EIMB are authoritative, and derive their authority from Chapter 67 of the Bureau of Ships Technical Manual, as established in accordance with Article 1201, U. S. Navy Regulations.

Since its inception, however, EIMB has been expanded to include selected information items of general interest to electronics installation and maintenance personnel. These items are such as would generally be contained in text books, periodicals, or technical papers, and form, along with the information cited above, a comprehensive, single-source reference document. In application, the EIMB is to be used for information and guidance by all military and civilian personnel involved in the installation, maintenance, or repair of electronic equipment under cognizance, or technical control, of the Bureau of Ships. All information, instructions, and procedures in the EIMB supplement such instructions and data supplied in equipment technical manuals and other approved maintenance publications.

ORGANIZATION

The EIMB is organized into a series of handbooks to afford maximum flexibility and ease in handling. The handbooks are stocked and issued as separate items so that activities requiring extra copies of any handbook may obtain them with relative ease.

The handbooks fall within two categories: general information handbooks and equipment oriented handbooks. The general information handbooks contain data which are of interest to all personnel involved in installation and maintenance, regardless of their equipment specialty. The titles of the various general information handbooks give only an overall idea of their data content; a more complete description of each handbook is provided in the "General" handbook.

The equipment handbooks are devoted to information on a particular equipment class and provide general test procedures, adjustments, general servicing information, and field change identification data.

The following table lists all handbooks of the series, together with their old and new NAVSHIPS numbers. (The new NAVSHIPS numbers, although not presently imprinted on all handbooks of the EIMB series, serve also as the stock numbers which are to be used on any requisitions submitted.)

HANDBOOK TITLE	OLD NAVSHIPS NO.	NEW NAVSHIPS NO.
(General Information Handbooks)		
General and Index	900,000.100	0967-000-0100
Installation Standards	900,000.101	0967-000-0110
Electronic Circuits	900,000.102	0967-000-0120
Test Methods and Practices	900,000.103	0967-000-0130
Reference Data	900,000.104	0967-000-0140
RFI Reduction	900,000.105	0967-000-0150
General Maintenance	- - -	0967-000-0160

INSTRUCTION SHEET

This sheet provides instructions for inserting Change 3 to the Countermeasures Handbook, NAVSHIPS 0967-000-0070 (formerly NAVSHIPS 900,000.7), Countermeasures chapter of the Electronics Installation and Maintenance Book.

The purpose of this change is to update the FRONT MATTER and Section 3, FCIG.

It should take no more than ten minutes to complete this change, if the following instructions are followed.

1. Remove superseded pages and insert changed pages as indicated below:

<u>Page</u>	<u>Remove</u>	<u>Insert</u>
FRONT MATTER		
TP/ii	Change 2/Change 2	Change 3/Change 3
iii/iv	Change 2/Original	Change 3/Change 3
v/vi	Change 1/Change 1	Change 3/Blank
vii/viii	- / -	Change 3/Change 3
Section 3 - FCIG		
3-1/3-iii	Change 1/Change 1	Change 3/Change 3
3-iii/Blank	Change 1/Blank	Change 3/Blank
3-1/3-2	Change 2/Change 2	Change 3/Change 3
3-3/3-4	Change 2/Change 2	Change 3/Change 3
3-5/3-6	Change 2/Change 2	Change 3/Change 3
3-7/3-8	Change 2/Change 2	Change 3/Change 3
3-9/3-10	- / -	Change 3/Change 3

2. Destroy superseded pages only after a check has been made against this instruction to assure that changed pages and final tear-out page have been inserted.
3. Record all previous entries of changes and the accomplishment of this change in pen-and-ink on the RECORD OF CORRECTIONS MADE page.
4. Insert USER ACTIVITY TECHNICAL MANUAL COMMENT SHEET, NAVSHIPS 4914, as last page of handbook.

HANDBOOK TITLE	OLD NAVSHIPS NO.	NEW NAVSHIPS NO.
(Equipment Oriented Handbooks)		
Communications	900,000.1	0967-000-0010
Radar	900,000.2	0967-000-0020
Sonar	900,000.3	0967-000-0030
Test Equipment	900,000.4	0967-000-0040
Radiac	900,000.5	0967-000-0050
Countermeasures	900,000.7	0967-000-0070

INFORMATION SOURCES

Periodic revisions are made to provide the best current data in the EIMB and to keep abreast of new developments. In doing this, many source documents are researched to obtain pertinent information. Some of these sources include the Electronics Information Bulletin (EIB), the Bureau of Ships Journal, electronics and other text books, industry magazines and periodicals, and various military installation- and maintenance-related publications. In certain cases, Bureau of Ships publications have been incorporated into the EIMB in their entirety and, as a result, have been cancelled. A list of the documents which have been superseded by the EIMB and are no longer available is given in Section 1 of the "General" handbook.

Chief, Bureau of Ships
Department of the Navy
Washington, D. C. 20360
Attn: Fleet Electronics Effectiveness
Branch, Code 678

CORRECTIONS

Report all inaccuracies and deficiencies noted in all Bureau of Ships technical publications (including this manual, ship information books, equipment manuals, drawings, and such) by a "Planned Maintenance System (PMS) Feedback Report, OPNAV 4700.7 (Rev. 5-65)" or superseding form. If PMS is not yet installed in this ship, report technical publication deficiencies to the Bureau of Ships by any convenient means.

SUGGESTIONS

The Bureau of Ships recognizes that users of the EIMB will have occasion to offer comments or suggestions. To encourage more active participation, a self-addressed comment sheet is provided in the back of each handbook. Complete information should be given when preparing suggestions. It is most desirable that the suggestor include his name and mailing address on the form to facilitate direct correspondence in the event that further information or clarification is required by the Bureau. An additional advantage in supplying name and address is the fact that all such comments received can be given an immediate reply from the Bureau regarding the suggestion; the lengthy delay before learning of its disposition or action being taken will be eliminated. Any communication from the Bureau of Ships to a suggestor will be made through a personal letter to the individual concerned.

If a comment sheet is not available or correspondence is lengthy, suggestions should be directed to the following:

DISTRIBUTION

The Electronics Installation and Maintenance Book is transmitted to using activities through automatic distribution procedures. Activities not already on the EIMB distribution list and those requiring changes to the list should submit correspondence to the following:

Chief, Bureau of Ships
Department of the Navy
Washington, D. C. 20360
Attn: Code 679A2

Activities desiring extra copies of EIMB handbooks or binders should submit requisitions directly to Naval Supply Depot, Philadelphia, Pennsylvania. Complete instructions for ordering publications are given in the Navy Stock List of Forms and Publications, NAVSANDA Publication 2002.

RECORD OF CORRECTIONS MADE

[illegible]

LIST OF EFFECTIVE PAGES

PAGE NUMBERS	CHANGE IN EFFECT	PAGE NUMBERS	CHANGE IN EFFECT
FRONT MATTER			
Title Page	Change 3	AN/BLR-1:5-7	Change 2
ii thru viii	Change 3	AN/SLR-2:1	Change 2
		AN/SLR-3:1	Change 1
		AN/SLR-10:1	Change 1
Section 1 - General		AN/SRD-7:1	Change 1
Title Page	Change 1	AN/SYA-4:1	Change 2
1	Change 2	AN/ULQ-6:1	Change 2
2 to 6	Original	AN/URD-4:1	Change 2
7	Change 2	AN/WLR-1:1	Change 1
8 to 10	Original	AN/WLR-1:2-5	Change 2
11 to 13	Change 1	AS-371B/S:1	Change 1
		AS-393/BLR:1	Original
Section 2 - Circuit Applications		AS-570/SLR:1	Original
Title Page	Change 1	AS-571/SLR:1	Change 1
2-1	Change 1	AS-616/SLR:1	Change 1
		AS-626/BLR-1:1, 2	Original
Section 3 - Field Change Identification Guide		AS-714/SRD-7:1	Change 1
Title Page	Change 1	AS-944/BLR:1	Change 1
3-i to 3-iii	Change 3	AS-962/BLR:1	Change 1
3-1 to 3-10	Change 3	AS-994/BLR:1	Change 1
		AS-1071/BLR:1	Change 1
Section 4 - Service Notes		IP-480/WLR-1:1	Change 1
Title Page	Change 1	N. T. 66132:1	Change 2
4-1	Change 1	N. T. 66132A:1	Original
AM-1017/SLR:1	Change 2		
AN/BLA-1:1	Change 1	Section 5 - Reference Data	
AN/BLR-1:1-3	Original	Title Page	Change 1
AN/BLR-1:4	Change 1	5-1	Change 1

NOTE

The effective cut-off date for the FCIG in this change is 21 December 1965. Field change information received after the above date will be included in Change 4 of this handbook.

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* Paragraph numbers in Section 1 have not been changed for the purpose of economy and will not be changed until complete revision is required.

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3-1. POLICY

a. The Bureau of Ships Manual, Chapter 67, which establishes the policy for alterations and modifications to electronic equipment, defines alterations as any change in hull, machinery, fittings, or equipment affecting design, material, number, location, or relationship of the component parts of an assembly or system.

b. Only in actual emergencies will alterations to, or modification of, electronic equipment under the cognizance of the Bureau of Ships be undertaken without prior approval of, or direction by, the Bureau. All requests for approval shall be forwarded via the chain of command; state the exact nature of the proposed alteration or modification, reason therefor (also whether for permanent or for special temporary use), and appropriation to which chargeable. Unauthorized alterations to equipment under contractual guarantee may result in the nullification or cancellation of the guarantee and financial loss to the Government, and may result in failure of the equipment to provide the service for which it was installed. If alterations are accomplished under emergency conditions, adequate consideration must be given to safety of personnel and equipment and to the basic performance requirements. The Bureau should be advised at the earliest practicable date of the actual changes made.

c. Field changes are the means by which approved and authorized alterations or modifications are made to the Bureau of Ships electronic equipments. These changes are mandatory and shall be accomplished on equipment affected in accordance with the instructions contained in the field change bulletin.

d. Certain field change bulletins include the statement that "Bureau of Ships approval is required prior to accomplishment." Such statements should be disregarded. The only restrictions on the accomplishment of official field changes are those indicated in the Field Change Identification Guide (FCIG). Examples of such restrictions are as follows:

(1) Funding (funds must be cited).

(2) Field Change is equivalent to an alteration (ShipAlt must be assigned).

(3) Field Change is not applicable:

(a) Limited to specified serial numbered equipments (5-AN/SRT-14 applies only to serials 6 through 21).

(b) Limited to specific equipment configurations (1-RDR - applies only if equipment includes every type 10508 shock mount).

(c) Limited to applications requiring compatible interface (12-AN/SPA-8A to produce AN/SPA-32 for use in AN/SPS-39).

3-2. DOCUMENTATION

This guide is a revised list of field changes to electronics equipment under the technical control of the Bureau of Ships. It is in effect upon receipt.

3-3. OBJECTIVE

a. The objective of the FCIG is to provide a current list of field changes together with information enabling technical personnel to determine by inspection the applicable field changes that have been accomplished.

b. This guide does not indicate availability of the field change or correction material within the supply system.

3-4. DEFINITIONS

a. **FIELD CHANGE.** A field change is any modification or alteration authorized by the Bureau of Ships or agency concerned to be made to an electronics equipment subsequent to delivery to the government. Official field change numbers are published in the Electronics Information Bulletin (EIB) and this FCIG.

b. **FIELD CHANGE KIT.** A field change kit is the formal means made available to permit accomplishment of a field change. A kit may consist only of published matter or be an assembly of published matter and required material.

c. **CLASSIFICATION OF FIELD CHANGE.** Field changes are of the following types and classes:

(1) Types

(a) Type 1 - A Type 1 field change includes a publications package and all parts and materials required to accomplish the change to a single equipment and to revise equipment nameplates and manuals.

(b) Type 2 - A Type 2 field change consists only of publications material which provides instructions for accomplishing the change and revising the equipment nameplates and manuals. A Type 2 field change may or may not require that parts be requisitioned.

(c) Type 3 - A Type 3 field change includes a publications package and a portion of the parts and materials required to accomplish the change to a single equipment and to revise equipment nameplates and manuals.

(2) Classes (added as a hyphenated suffix to the type)

(a) Class A - Funding for installation is not required. These field changes are approved for accomplishment by forces afloat or station personnel without further reference to the Bureau of Ships.

(b) Class B - Fleet or shore funding for installation is required. These field changes are approved for accomplishment by Naval shipyards, tenders, repair facilities or shore maintenance authority without further reference to the Bureau of Ships.

(c) Class C - Bureau of Ships funding for installation is required. To meet urgent operational commitments, the Bureau may approve accomplishment of Class C field changes subject to Type Commander's funding. This class of field change includes, but is not limited to, those changes in operational improvement. Such changes are accomplished in the Material Improvement Program's order of priority. These field changes are approved for accomplishment by Naval shipyards, tenders, repair facilities, or shore maintenance activities.

3-5. INSTRUCTIONS REGARDING ACCOMPLISHMENT

a. BACKGROUND. Accomplishment of applicable field changes is essential to the proper functioning, identity, and logistic support of electronics equipments. Effective 1 October 1957, electronics field change kits were transferred from "N" to "F" cognizance. This permits the issue of field changes to ships and activities without charge to their allotments.

b. RECORDING. The completion of all official field changes, alterations, and modifications to electronic equipment shall be recorded on the Electronics Equipment History card, NAVSHIPS 536.

c. REPORTING. Except as required in Bureau of Ships Instruction 10550, 1B Series, accomplishment of field changes should not be reported to the Bureau of Ships. However, the performance and operational reports, required on certain equipments, should list the field changes that have not been accomplished.

3-6. HOW TO USE THIS GUIDE

a. USE. Equipment designations are arranged alphanumerically. Space has been provided on each page for pen and ink additions or corrections published in the EIB. Periodically, the Index will be updated by the issuing of revised pages.

(1) Information on each field change is given in the following sequence:

(a) The field change number

(b) The field change title

(c) Correction material - temporary corrections, and revisions to existing equipment publications, complementary technical manuals, and technical manuals accomplishing field change kits.

(d) The type - class (the type and preferred activity to accomplish the field change, i.e., Types 1, 2, and 3, Classes A, B, and C.

(e) The modifying activity (i.e., FA - forces afloat, YF - yard forces) and the number of manhours required to accomplish the field change.

(f) The bulletin NAVSHIPS number or other reference.

(g) The Federal Stock Number assigned to a particular field change. Suffixes are given to identify various categories and for record purposes. They are as follows:

SUFFIX MEANING

C	FSN cancelled; material disposed of
C1	FSN cancelled in accordance with BUSHIPS ltr ser 880-276 of 18 April 1957
C2	FSN cancelled in accordance with BUSHIPS ltr ser 880C-285 of 22 April 1957
C3	FSN cancelled in accordance with BUSHIPS ltr ser 880C-295 of 26 April 1957
C4	FSN cancelled in accordance with BUSHIPS ltr ser 880D-398 of 22 May 1957

Where the word "None" appears, the field change is either a Type 1 kit which was not converted to a Federal Stock Number or a Type 2 kit not requiring a stock number.

(h) The serial numbers or applicable conditions of specific equipments affected by a particular field change. "BUSHIPS" indicates that specific field changes to indicated equipments are as designated by the Bureau of Ships. Accomplishment of these changes should be arranged for in accordance with current instructions.

(i) The identification information applicable to each field change for use in determining its accomplishment.

(2) Reference to field changes should always be by use of the assigned field change number and the equipment designation; for example, 6-AN/SPS-6C represents the 6th field change to AN/SPS-6C.

b. ABBREVIATIONS. Except for those listed below, the abbreviations used in the FCIG were taken from Standard Abbreviations (JANAP 169), Military Standard Abbreviations for Use on Drawings (MIL-STD-12A).

ACU	Antenna control unit
ATDIR	Attack director
ATF	Automatic target follower
ATR	Anti-transmit-receive
BDI	Bearing direction indicator
BKT	Bracket
CCL	Communication control link
CPLR	Coupler
DLVD	Delivered
DPLXR	Duplexer
FC	Field Change
FE	Field engineer
FS	Frequency shift
GTT	Generated target training
HYDPH	Hydrophone
IMPED	Impedance
I & S	Installation and Service Bulletin
LSTN	Listening
MAGGY	Magnetron

MCC	Maintenance close contact
MFD	Microfarad
MFI	Multiple feature
MODIF	Modification
MTB	Maintenance true bearing
MTR	Meter
NLM	Noise level monitor
NOR	Norfolk
NRTC	Naval Reserve Training Center
NS	NavShips
N. T. -	Navy type
ODN	Own doppler nullifier
PERFRM	Performance
P/N	Part number
P/O	Part of
RA	Receiver-amplifier
RAI	Receiver-amplifier-indicator
RCG	Reverberation controlled gain
RECVR	Receiver
RHI	Remote height indicator
RIB	Radio Installation Bulletin
RMB	Radio Maintenance Bulletin
RNG	Range
RPPI	Remote plan position indicator
RTRB	Reliable true and relative bearing
SMB	Sonar Maintenance Bulletin
TB	Terminal board
TDC	Torpedo data computer
TDR	Time delay relay
TRB	True and relative bearing
TVG	Time variation of gain
VSWR	Voltage standing wave ratio
WGT	Weight
XDUCER	Transducer
XFMR	Transformer
()	Series

c. CORRECTIONS. Recommendations for correction of errors and the addition of pertinent information to this guide should be reported to the Electronics Publications Section (Code 679A2), Bureau of Ships, and include:

- (1) Designation of affected equipment.
- (2) Location of error by page and line.
- (3) Description of error and indication of what change should be made.

COUNTERMEASURES**NAVSHIPS****900,000.7****FIELD CHANGE
IDENTIFICATION GUIDE**

1-AN/BLA-1 - Make compatible with AN/WLR-1 (modifies equip. to AN/BLA-2C)

Correction material:

1-A FA-20 NS981623 F5895-987-9523

SERIAL: A1 through A100 (made only when the AN/WLR-1 is being installed)

IDENTITY: The horizontal synchro and resolver housed in a casting on the base plate is replaced by a three-tier construction containing a vertically placed synchro and resolver, a two gear assembly with slotted disc and a transistorized component board with photo-diode pickup and amplifier circuitry.

1-AN/BLA-2A - Reduction of AS-1070/BLR Antenna Rotation Speed.

Correction Material: T- to NS93690, NS94890, NS94238

2-A FA-1

SERIAL: All when used with Antenna Assembly AS-1071/BLR

IDENTITY: When speed of rotation of the antenna is approximately 150 RPM, when it is in the Auto-Spin mode.

1-AN/BLA-2B - Same as 1-AN/BLA-2

1-AN/BLA-2C - Same as 1-AN/BLA-2

1-AN/BLR-1 - Crt display and if. amps, improve

Correction material: Change 3 to NS 92419(A)

1-A YF-48 NS98811 F5895-507-5603

SERIAL: 1-31

IDENTITY: V908 is 6ah6 on mixer amp. chassis CV-69/ULR.

2-AN/BLR-1 - Temp. Test adaptor to permit use of TS-907/ULR and improve oscillator stability

Correction material: T-5 to NS 91973

1-A FA-2 NS98723 F5895-501-0765

SERIAL: 1-174

IDENTITY: 0-345 added to new osc. adj-assy. of rf tuner.

3-AN/BLR-1 - Test adaptor, permits use of TS-907/ULR

Correction material: T-6 to NS 91973

1-A FA-2 NS98724 F5895-501-0797

SERIAL: 1-269

IDENTITY: Brg blk of rf tuner mtd by filler head screws.

4-AN/BLR-1 - Add of sound powered telephone jacks

2-A FA-2 NS935-254-9192

SERIAL: All

IDENTITY: Presence of sound powered telephone jacks

5-AN/BLR-1 - Wiring Changes Required to Provide Delay of 115 VAC to Tuning Motor B-1701

Correction material:

2-A FA-2 NS981438 None

SERIAL: All

IDENTITY: Presence of two (2) wires on pin 6 of relay K-1702 in Indicator Control IP-10/ULR

6-AN/BLR-1 - Installation of Antenna Test Set AN/WLM-2
Correction material: Complementary Technical Manual for AN/WLM-2, NS94290

1-A FA-6 NS981375

SERIAL: All

IDENTITY: Observe Interference Generator SG-450/WLM-2 mounted in antenna assembly and Power Supply PP-3133/WLM-2 mounted near antenna system receiver.

7-AN/BLR-1 - Synchronization of the Sweep Generator to Improve Unstable Sawtooth Voltages

Correction material: to NS91973

2-A FA-1 None

SERIAL: ALL CV-60/ULR and CV-70/ULR

IDENTITY: Visually inspect the CV-69 for a 4-inch length of insulated wire connected from pin 4 of V-909 to R-949; CV-70 for a 4-inch length of insulated wire connected from pin 4 of V-1112 to 4-1118

8-AN/BLR-1 - Modification to Tube Socket Caps

Correction material: to NS91973

2-A FA-2 None

SERIAL: All

IDENTITY: Presence of longer tube caps which extend and cover the base of tube 2K48 in TN-142/ULR of the subject equipment.

9-AN/BLR-1 - Use of OB2WA Tubes in the Power Supply and the RF Tuners

Correction material:

2-A FA-4 None

SERIAL: All

IDENTITY: A capacitor (0.022 mfd) connected between pins 5 & 7 of tube socket XV-405, XV-406, XV-407, XV-508, XV-607, XV-608, XV-806, XV-807, and XV-808 respectively of RF tuners, TN-138/ULR, TN-139/ULR, TN-140/ULR, and TN-142/ULR

10-AN/BLR-1 - Relocation of F-2801 in PP-312/ULR

Power Supply

Correction material: to NS91973

2-A FA-8 None

SERIAL: All

IDENTITY: This field change has been accomplished if fuseholders are located on the front panel of PP-312/ULR Power Supply.

11-AN/BLR-1 - Substitution of Tube Type 8113 for Type 6AK5

Correction material:

2-A FA-1½ None

SERIAL: All

IDENTITY: Presence of type 8113 tubes in place of type 6AK5 tubes in tuners

COUNTERMEASURES

NAVSHIPS

900,000.7

FIELD CHANGE
IDENTIFICATION GUIDE

12-AN/BLR-1 - Addition of Relay in AC Interlock Circuit and Fusing of Power Transformers.

Correction material: T-10 to NS91973

2-A FA-8 NS0285-080-0100 None

SERIAL: All

IDENTITY: Presence of a relay mounted on inner left cross-brace on bottom of Power Supply PP-312/ULR

13-AN/BLR-1 - Provides Monitor Jacks for Band 7 Klystron Anode

Correction material: T- to NS91973

2-A FA-4

SERIAL: All

IDENTITY: Presence of two new test jacks, labeled "Klystron I", in Power Supply PP-312/ULR

1-AN/FLR-7 - Same as 1-AN/FRA-44 except: Ampex Tape Recorder Model FA-11AB, Units 5-T and 6-T of AN/FLR-7(XN-1) and Ampex Tape Reproducer Model FR-114B, Unit OFF 1-T of AN/FLR-7(XN-1).

1-AN/FLR-11(V) - Same as 1-AN/FRA-54(V)

2-AN/FLR-11(V) - Modifies Head Cable Assemblies of Ampex FR-114B Magnetic Tape Recorder and Reproducer

Correction Material: T- to NS

1-A YF-2 981780 None

SERIAL: Magnetic Tape Recorder RO-219/F, Units 1 and 2 of AN/FLR-11(V) and Magnetic Tape Reproducer RP-135F, Unit 15 of AN/FLR-11(V)

3-AN/FLR-11(V) - RFI Reduction in CED Recorder/Reproducer (RO-247 and RP-132)

Correction material: T-1 to NS95738
NS981804

4-AN/FLR-11(V) -

Correction material: T- to NS
NS94563

SERIAL: Signal Data Converter CV-1474/FLR-11(V) and Core Memory Unit MV-464(FLR-11(V))

1-AN/FRA-44 - Modified Head Cable Assemblies of Ampex FR-114B Magnetic Tape Recorder and Reproducer

Correction material: T-1 to NS94585

1-A YF-2 NS981780 None

SERIAL: Ampex Tape Recorder Model FR-114B, Units 5-T and 6-T of AN/FRA-44(XN-1, 2, 3), and OFF-1T of AN/FRA-44(XN-1) and unit 10 of AN/FRA-44(XN-2, -3)

1-AN/FRA-54(V) - Same as 1-AN/FRA-44 except: Magnetic Tape Recorder RO-219/F, Units 1 and 2 of AN/FRA-54(V) and Magnetic Tape Reproducer RB-135/F, Unit of AN/FRA-54(V)

1-A YF-4 NS981025 F5895-543-1510

SERIAL: All

IDENTITY: Installation of metal divider in CY-1273/ULR between TN-139/ULR and TN-140/ULR.

2-AN/FRA-54(V) - Modifies Head Cable Assemblies of Ampex FR-114B Magnetic Tape Recorder and Reproducer.

Correction material: T- to NS

1-A YF-2 NS981780

SERIAL: Magnetic Recorder RO-219/F, Units 1 and 2 of AN/FRA-54(V); and Magnetic Tape Reproducer RP-135/F, unit of AN/FRA-54(V)

3-AN/FRA-54(V) - To Prevent Frequency Multiplier Board Breaking into Self Oscillation.

Correction material: T- to NS

NS981800

SERIAL: CP-699/FRA-54(V) and CP-756/FRA-54(V)

4-AN/FRA-54(V) - To Provide a Continuous Bearing Tone Signal.

Correction material: T- to NS

NS981801

SERIAL: TD-620/FRA-54(V) and TD-705/FRA-54(V)

5-AN/FRA-54(V) - RFI Reduction in CEC Recorder/Reproducer RO-247 and RP-132)

Correction material: T- 1 to NS95738

NS981804

1-AN/FSA-17 - Improvement of the fault alarm system.

Correction material: Change 1 to NS93207(A)

1-C FA-37 NS981498 None

SERIAL: 1 through 11

IDENTITY: Designation plate: "Fault Alarm" on panel of Power Transfer Unit is change to "AUX EQUIPMENT ALARM" and connector J1207 is added. Diode CR 1803 is added to relay K1209 in each of the detector units, Change No. 1 is indicated on the title page of NAVSHIPS 93207(A).

1-AN/FSH-1 - Increase in record time.

Correction material: T-1 to NS94143

1-C FA-5 NS981376 None

SERIAL: A1 through A18. All other sets were corrected by an identical production change

IDENTITY: The new carriage drive shaft has 26 threads per inch, as compared to 18 threads per inch on the shaft originally supplied with the equipment.

1-AN/SLA-1 - Cathode-ray socket, modif

Correction material: None

A FA-1 NS98241 None

SERIAL: 1-6

IDENTITY: C/R tube socket, X-250A, drilled in pin 1 with #29 drill for oversize pin #1 of new type K-1052-P-2 C/R tube.

2-AN/SLA-1 - Cathode-ray protective circuit

Correction material: None

A FA-4 NS98260 F5895-346-4650

SERIAL: 3-12

IDENTITY: Addition of 2 NE-2 neon tubes of TB-20A of the clamping diode chassis

3-AN/SLA-1 - Circuit chg

Correction material: None

A FA-4 NS98262 None

SERIAL: 3, 4, 5

IDENTITY: C-303 (470 mmf), is added in parallel with R-215 on TB-203.

4-AN/SLA-1 - Resistor values, chg

Correction material: None

A FA-4 NS98264 F5895-301-9181

SERIAL: 3-12

IDENTITY: 4 resistors added: three 82K 10% 1 watt and one 220K 10% in C/R circuit. R-220, R-222 on TB-203 are now 82K. R-252, R-254 on TB-206 are now 82K.

1-AN/SLA-2 - Stability improvement of AN/SLA-2A.

Correction material: T-3 to NS92005

2-A FA-1 NS981291 None

SERIAL: All

IDENTITY: Resistor R101 replaced by a 120 K ohm resistor.

2-AN/SLA-2 - Video output, add

Correction material: See NS 981133

2-A FA-1 NS981133 None

SERIAL: All

IDENTITY: Coaxial connector on front end of panel

3-AN/SLA-2 - Stability Improvement of AN/SLA-2A

Correction material: T-3 to 92005

2-A FA-1 NS981291 None

SERIAL: All

IDENTITY:

4-AN/SLA-2 - Replacement of Selenium Rectifier CR-101 with Silicon Diodes in +28 Volt Supply of PP-874/SLA-2 and PP-874/SLA-2A

Correction material: T-4 to NS92005

2-A FA-8 NS981588 None

SERIAL: All

IDENTITY: Absence of selenium rectifier stack CR-101, capacitor C-116 and by the presence of a sub-chassis mounting four 1N248 silicon diodes in PP-874 of AN/SLA-2 and AN/SLA-2A.

4-AN/SLA-2A - Same as 4-AN/SLA-2**1-AN/SLR-2** - Cathode-ray display, improve

Correction material: Change 3 to NS 92419(A)

1-A YF-150 NS98811 F5895-507-5603

SERIAL: 1-291

IDENTITY: R120 "meter zero" added on main chassis

2-AN/SLR-2 - Test adaptor and osc temp comp

Correction material: T-5 to NS 91973

1-A FA-2 NS98723 F5895-501-0765

SERIAL: 1-174

IDENTITY: Add temp comp. 0-345, to rf tuner tn-137/ULR

3-AN/SLR-2 - Test adaptor

Correction material: T-6 to NS 91973

1-A FA-2 NS98724 F5895-501-0797

SERIAL: 1-269

IDENTITY: Brg block of RF tuner TN-137/ULR mtd by fillister-head screws.

4-AN/SLR-2 - R.F. shield for band 5 & 6

Correction material: None

-4

F5895-543-1510

SERIAL: All

IDENTITY:

5-AN/SLR-2 - Same as 4-AN/BLR-1**6-AN/SLR-2** - Wiring Changes Required to Provide Delay

115 VAC to Tuning Motor B-1701

Correction material:

2-A FA-2 NS981438 None

SERIAL: All

IDENTITY: Presence of two (2) wires on pin 6 of relay K-1702 in Indicator Control IP-10/ULR

7-AN/SLR-2 - Same as 7-AN/BLR-1**8-AN/SLR-2** - Same as 8-AN/BLR-1**9-AN/SLR-2** - Same as 9-AN/BLR-1**10-AN/SLR-2** - Same as 10-AN/BLR-1**11-AN/SLR-2** - Same as 11-AN/BLR-1**12-AN/SLR-2** - Same as 12-AN/BLR-1**13-AN/SLR-2** - Same as 13-AN/BLR-1**1-AN/SLR-9** - Increase of Audio Level

Correction material:

NS981577

SERIAL: A1 through A4, A6 through A14

IDENTITY:

1-AN/SLR-10 - Modification to True Relative Switching

Correction material: T- to NS94162

2-A FA

SERIAL: All

IDENTITY: Resistor R215 connected between pins A and B of Relay K204, and R216 connected between pins A and B of Relay K214.

1-AN/SLT-1 - Ant cont, add

Correction material: Change 1 to NS 91258

A FA-10 NS98 03 F5895-301-9043

SERIAL: 2-40

IDENTITY: One antenna cont. unit, C-805/SLT-1, is mounted on the right side of the xmtr cont. C-584/SLT-1. The other antenna cont. unit is mounted on the right side of the cont. indicator modulator group, OA-125/SLT-1.

COUNTERMEASURES**NAVSHIPS**

900,000.7

**FIELD CHANGE
IDENTIFICATION GUIDE****2-AN/SLT-1** - Pump filter in cooling sys, repl

Correction material: T-2 to NS 91258

A FA-1/2 NS98229 F5895-301-9046

SERIAL: 1-32

IDENTITY: New type filter mfr-12 #1013-CT-1

3-AN/SLT-1 - S604, duct O-824, repl: fuse covers, add

Correction material: None

A FA-4 NS98230 F5820-301-9094

SERIAL: 1-18

IDENTITY: Addition of fuse panel

4-AN/SLT-1 - Lead in PP-452/SLT-1, add

Correction Material: T-2 to NS 91258

A FA-1 NS98232 F5895-508-7592

SERIAL: 1-39

IDENTITY: An additional or larger wire is installed between K-102-11 and TB-111-5 in top left section of control power supply unit. This new lead is #10 wire, black, and is laced to existing cabling.

5-AN/SLT-1 - Modulator meter kit

A FA-3 NS98270 F5895-346-4651

SERIAL: 2-40

IDENTITY: New terminal board installed near meter, M-302, containing C-322 and R-355.

6-AN/SLT-1 - AN-301/SLT-1, Modif

Correction material: Change 2 to NS 91258

A FA-4 NS98297 F5895-301-9650

SERIAL: 1-40

IDENTITY: One additional stuffing tube is mounted, making a total of 6. The new tube is mounted seven inches from the side of the chassis.

7-AN/SLT-1 - Osc #1 output meter, modif

Correction material: Change 2 to NS 91258

A FA-2 NS98323 F5895-325-6319

SERIAL: 1-40

IDENTITY: In control power supply #20 black wire added from K-601-8 to TB-618-6. Buss jumper wire added from K-601-2 to K-601-8. A #20 red wire added from TB-618-8 to K-601-6.

1-AN/ULA-3 - Circuit Modification

Correction material: T- to NS95674

2-A FA-10

SERIAL: Units up through #74

1-AN/ULA-4 - Same as 1-AN/ULA-3 except -

Correction Material: to NS96067

1-AN/ULQ-5 - Replacement of Electron Tube 7270 and its separate associated Filament Transformer, TE-9554 with Electron Tube 7271 and its associated Filament Transformer TE-12247.

Correction material:

2-A FA-1 NS None

SERIAL: All when maintenance to subassembly 1A1 is required when tube 7270 (1A1V8) and its separate associated filament transformer (1A1T2) in subassembly 1A1 have been replaced by tube 7271 and its separate associated filament transformer.

1-AN/ULQ-6 - Replacement of High Level Traveling Wave Tube 2V1

Correction material: T-8 to NS93825 (0280-6/2-3009)

2-A FA-3 NS 0285-079-0900

SERIAL: All

IDENTITY: The new high level traveling wave tube, type D2048 has a round 6-pin miniature connector plug with a lock ring.

2-AN/ULQ-6 - Installation of AN/ULQ-6 TWT Data Nameplate

Correction material: T- to NS93825

2-A FA-1/2

SERIAL: All

IDENTITY: AN/ULQ-6() TWT nameplate adhered to top of unit 1

1-AN/ULQ-6A - Elimination of Antenna Hunting

Correction material: T- to NS94551

2-A FA-1/2

SERIAL: All (AN-ULQ-6A and AM-3562/ULQ-6 (Unit 7)

IDENTITY: Determining that resistor R4 in unit 7 of the Electronic Control Amplifier is 10,000 ohms, 1/2 watt in lieu of 47,000 ohms, 1/2 watt.

2-AN/ULQ-6A - Replacement of High level traveling wave tube 2V1

Correction material: NS 0280-796-3002 and

NS 0280-796-3601

1-A FA-8 NS F5895-909-7547

SERIAL: All

IDENTITY: Tube 2V1, and the focus coil replaced by a new permanent periodic magnet traveling wave tube.

3-AN/ULQ-6A - Elimination of 28V Power Supply Failures

Correction material: T- to NS94551

2-A FA-1 NS

SERIAL: All

IDENTITY: Diodes 1CR8, 1CR9 (unit 1) are JAN 1N12C2 in lieu of 1N1614

1-AN/UNQ-7 — Modification to Improve Recording Capability
Correction material: T- to NS None required
2-A FA-2 NS None

SERIAL: All

IDENTITY: Presence of three capacitors (15 uf, 0.47 uf, and 0.01 uf) mounted in terminal box with attenuator board of AN/UNQ-7 series equipments

1-AN/UNQ-7A — Same as 1-AN/UNQ-7

1-AN/UNQ-7B — Same as 1-AN/UNQ-7

1-AN/UNQ-7C — Same as 1-AN/UNQ-7

1-AN/WLR-1 — Replacement of Capacitors 14A1C22, 14A1C23 and 14A1C24

Correction material: T-2 to 93422

2-A FA-2 NS981305 F5895-086-6675

SERIAL: A1 through A16 (RF-89/WLR-1) A17 through A56

IDENTITY: Both side covers from sub-assembly A1 of Electrical Frequency Discriminator RE-89/WLR-1 have been removed and capacitors C-22, C-23, and C-24 are of the fixed type with a rating of 1000 uuf.

2-AN/WLR-1 — Installation of Antenna Test Set AN/WLM-2

Correction material: Complementary Technical Manual for AN/WLM-2, NS94290

1-A FA-6 NS981375 F5895-086-6676

SERIAL: All

IDENTITY: Observe Interference Generator SG-450/WLM-2 mounted in antenna assembly and Power Supply PP-3133/WLM-2 mounted near antenna system receiver.

3-AN/WLR-1 — Production Changes

Correction material: Change 1 to NS93422

3-B FA-33 NS981397 F5895-991-0516

SERIAL: All through A16

IDENTITY: See bulletin

4-AN/WLR-1 — Same as 3-AN/WLR-1 except SERIAL A1 through A56 and Type 3, Class A — F5895-991-2177

5-AN/WLR-1 — Same as 3-AN/WLR-1 except SERIAL: A57 through A106 and Type 2, Class A — F5895-991-0517

6-AN/WLR-1 — Provide External Audio Connection

Correction material: T-4 to NS93422

2-A FA-6 NS981541 None

SERIAL: All

IDENTITY: A shielded wire connected to the tip lug of the Audio Jack, J-17

7-AN/WLR-1 — Install Filters to Protect Mixer Crystal Diodes. Applicable only to Sylvania equipment. Refer to 7-AN/WLR-1A

Correction material:

1-A FA-14 NS981649 F5895-956-8984

SERIAL: S/N B-2 — B-29 and S/N B-31 and B-51

IDENTITY: The filters are clearly visible on tuners CV-732 through CV-735 and CV-737 through CV-740. The presence of screws in the two holes on the side apron of the wired chassis, directly under the SERVO potentiometers, indicates that the filter has been installed in the CV-736.

8-AN/WLR-1 — Substitution of Variable Resistor:

RA20LASA252A for RA20A25A252AK

Correction material: To NS93422

2-A FA-6 None

SERIAL: All

IDENTITY: Presence of locking type potentiometers for R-1 and R-3 of each tuner in place of the non-locking type presently used.

9-AN/WLR-1 — Installation of Improvements in CV-739 and CV-740 Preselectors. Applicable only to Sylvania equipment. Refer to 9-AN/WLR-1A

Correction material:

-A FA-4 NS981666 F5895-050-9000

SERIAL: AN/WLR-1 S/N B-2 — S/N B-109. All others have this production change

IDENTITY: See bulletin

10-AN/WLR-1 — Installation of New Preselector Can Screws to all Cam Dials. Applicable only to Sylvania equipment. Refer to 10-AN/WLR-1A

Correction material: None

1-A JA-1 NS981704 F5895-066-4446

SERIAL: S/N B-2 — B-151

IDENTITY: Examination of the spring on CV-736 in question when related to the sketch will easily identify accomplishment.

11-AN/WLR-1 — Corrects nomenclature of equipments manufactured by Sylvania on NObsr-81365 (Modifies equipment to AN/WLR-1A)

Correction material: None required

2-A FA-2

SERIAL: All equipments manufactured by Sylvania under NObsr-81365

IDENTITY: All units and all literature will be marked "AN/WLR-1A" instead of "AN/WLR-1".

12-AN/WLR-1 — Relocation of High Voltage Receptacle 6J2 in CV-737/WLR-1 and 7J2 in CV-738/WLR-1 Tuners.

Correction material: None

2-A FA-1 None

SERIAL: All Collins Equipment

IDENTITY: The CV-737/WLR-1 and CV-738/WLR-1 high voltage receptacles being located forward of the filament transformer T1 instead of aft of it.

COUNTERMEASURES**NAVSHIPS****900,000.7****FIELD CHANGE
IDENTIFICATION GUIDE**

13-AN/WLR-1 - Modification of IP-480/WLR-1 to permit analysis and scan scopes to function simultaneously.

Correction Material: T- to NS93422

2-A FA-2 NS None

SERIAL: All

IDENTITY: Presence of DPST in lieu of SPST as Photo-Normal Switch on IP-480/WLR-1.

14-AN/WLR-1 - Addition of a New AC line interlock circuit relay to eliminate voltage drop in klystron power supply.

Correction material: T-5 to NS93422; T-1 to NS94932;

T-1 to NS93422.61

2-A FA-2 NS 0285-007-9000 None

SERIAL: All

IDENTITY: Presence of relay 15K5 mounted on a bracket at bottom, left side of power supply PP-2156/WLR-1 chassis

15-AN/WLR-1 - Monitor Jacks for Band 8 Klystron Anode Current

Correction material: T- to NS93422

2-A FA-4 NS None

SERIAL: All

IDENTITY: Presence of two new test jacks, labelled "KLYSTRON I," in Power Supply PP-2156/WLR-1.

16-AN/WLR-1 - Provides a "STANDBY" mode where equipment is not being used

Correction material: T- to NS93422

2-A FA-2 NS

SERIAL: All

IDENTITY: Double throw "POWER" Switch on the IP-480/WLR-1.

1-AN/WLR-1A - Same as 12-AN/WLR-1

2-AN/WLR-1A - Same as 13-AN/WLR-1

3-AN/WLR-1A - Same as 14-AN/WLR-1

4-AN/WLR-1A - Same as 15-AN/WLR-1

5-AN/WLR-1A - Same as 16-AN/WLR-1

6-AN/WLR-1A - Same as 6-AN/WLR-1

7-AN/WLR-1A - Same as 7-AN/WLR-1

8-AN/WLR-1A - Same as 8-AN/WLR-1

9-AN/WLR-1A - Same as 9-AN/WLR-1

10-AN/WLR-1A - Same as 10-AN/WLR-1

1-AN/WLR-1B - Improves High Frequency Performance

Correction material: T- to NS94932

3-C FA- NS981766

SERIAL: 1 thru 9 (Part A) - 19 thru 21 (Part B)

IDENTITY: There are three items which indicate that the field change described herein has been accomplished, All three are visible on the secondary capacitor A2 (54 of figure 3-9) in Overhaul and Repair Manual (NAVSHIPS 94932.61). A spacer (8 of figure 1), has been installed between the casting and the forward bearing retainer. One elastic clinch nut (14 of figure 1) has been removed from the spring plate. The drive shaft is metal clad for 1-15/32" from the front surface instead of 1-31/32".

2-AN/WLR-1B - Same as 12-AN/WLR-1

3-AN/WLR-1B - Same as 13-AN/WLR-1

4-AN/WLR-1B - Same as 14-AN/WLR-1

5-AN/WLR-1B - Same as 15-AN/WLR-1

6-AN/WLR-1B - Same as 16-AN/WLR-1

1-AN/WLR-3 - F.C. Kit modifies the Detector Switching

Unit RF-81/WLR-3 to Detector Switching Unit RF-134/WLR-3A and modifies the Amplifier Control AM-1936/WLR-3 to AM-2996/WLR-3A for operation with the AN/BLR-1 equipment.

Correction material: Change 1 to NS93139(A)

1-A YF-24 NS981299 F5895-473-5118

SERIAL: For submarine installations only.

IDENTITY: Equipment nomenclature changed to AN/WLR-3A

1-AN/WLR-3 - Supplement Information to Field Change

1-AN/WLR-3 for operation with AN/WLR-1 equipment

Correction material: T-1 to NS93139(A)

1-A FA-30 NS981299 None

SERIAL: For submarine installations only

IDENTITY: Equipment nomenclature changed to AN/WLR-3A

2-AN/WLR-3 - Same as 2-AN/WLR-1

1-AS-570/SLR - Reflector counter wgt replace: refl size reduce; breather holes, install

Correction material: T-2 to NS 91997(A)

B YF-5 NS98533 F5985-324-2067

SERIAL: 1-130

IDENTITY: New counterweight is cylindrical; mounted on threaded bolt attached to the antenna mounting ring.

Note: FC 1-OA-473/SLR must be accomplished prior to this FC.

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900, 000.7

**FIELD CHANGE
IDENTIFICATION GUIDE**

2-AS-570/SLR - Freq coverage of AS-570/SLR, extend (changes to AS-605/SLR)

A YF-8 NS98619 F5985-324-9933

SERIAL: SHIPS w/AN/SLR-2 having AS-570/SLR and AS-571/SLR (50)

IDENTITY: Ant nameplate changed to AS-605/SLR.

3-AS-570/SLR - Maintenance improvements

Correction material: T-1 to NS 92366

B YF-1 NS98701 None

SERIAL: 1-209

IDENTITY: Access hole drilled on side of rate generator, 1/2" in dia. 2-1/2" from top. (Rate generator housing)

1-AS-571/SLR - Radome assy on CW-456/SLR, add

Correction material: T-1 to NS 92388

1-B YF-8 NS98998 F5985-543-1478

SERIAL: All

IDENTITY: Addition of radome assy.

2-AS-571/SLR - Prevention of Antenna Rotation During Maintenance

Correction material: To NS92388 - T-3 and T-3 to NS92085 (A)

2-A FA-1 NS981386 None

SERIAL: When FC-1 (Addition of Radomes) is completed

IDENTITY: Presence of watertight switch mounted at the base of the antenna.

3-AS-571/SLR - Cancelled.

1-AS-605/SLR - Maintenance improvements

Correction material: T-4 to NS 91997(A)

2-A FA-1 NS98701 None

SERIAL: 1-209

IDENTITY: Safety wire installed on the four 6-32 x 7/16" long fillister-head screws of servo motor shaft adapter.

1-AS-616/SLR - Mechanical improvements

Correction material: None

2-A FA-3 NS981082 None

SERIAL: 1-363

IDENTITY: Lower main shaft oil seal KZ-5330-291-7140 installed (symbol 0-410).

2-AS-616/SLR - Radome assy CW-456/SLR, add

Correction material: T-2 to NS 92085(A)

1-B YF-8 NS98998 F5985-543-1478

SERIAL: All

IDENTITY: Addition of radome assy

3-AS-616/SLR - Same as 2-AS-571/SLR except Serial:

When F.C. 2 has been completed.

Correction material: To NS92085 (A)

IDENTITY:

4-AS-616/SLR - Cancelled.

1-AS-899/SLR - Antenna Direction Indicator

Correction material: None

2-A FA-12 None

SERIAL: All

IDENTITY: Aluminum arrow located on antenna reflector assembly and extended over and below antenna main bearing.

2-AS-899/SLR - Filter Bandpass 120 Cycle

Correction material: T-1 to NS94272(A)

1-A FA-1 NS981797 F5895-763-1375

SERIAL: Numbers Unknown

IDENTITY: Filter, when installed, lies behind C1201 in base of antenna.

3-AS-899/SLR - Wiring Change required for Compatible

Operation with the AN/WLR-1 ECM equipment and Antenna Control unit

Correction material: T-1 to NS93489(0967-080-7011)

2-C FA-1 NS0967-080-7040 None

SERIAL: All

IDENTITY: This Field Change can be identified by viewing from above the antenna and noting the clockwise rotation of the AS-899/SLR or AS-899A/SLR antenna when the Antenna Control-Indicator unit is in the "Automatic" operation mode.

1-AS-899A/SLR - Same as 2-AS-899/SLR

2-AS-899A/SLR - Replacement for Motor Coupling

Correction material: T-2 to NS94272(A)

1-A FA- NS

SERIAL: All

IDENTITY: Refer to Technical Manual NS94272(A) tables 7-1 and 7-2

3-AS-899A/SLR - Same as 3-AS-899/SLR

3-C-1068/SLR - Change of Nomenclature

2-A FA-1/2

SERIAL: All equipments to which the MK-483/SLR modification has been installed.

IDENTITY: When the letter A has been added to the equipment designation on the nameplate of each applicable equipment

1-C-1213/SLR - Same as 3-C-1068/SLR

1-C-1608/SLR - Polarization sw. wiring, chg

Correction material: Change 1 to NS 92490

1-A FA-2 NS98924 F5895-536-2412

SERIAL: When using AS-605/SLR

IDENTITY: Instruction decal affixed to left of polarization sw. on front panel.

COUNTERMEASURES**NAVSHIPS****900,000.7****FIELD CHANGE
IDENTIFICATION GUIDE**

2-C-1608/SLR - Installation of Control Relay to Remove
115 VAC from DF Antennas and Magnetic Amplifier
Reactors

Correction material: NS92490

2-A FA-2 NS981641

SERIAL: All

IDENTITY: Presence of a relay installed next to K203.

3-C-1608/SLR - Change of Nomenclature

Correction material: T- to NS

2-A FA-1/2

SERIAL: All equipments to which the MK-483/SLR modification Kit has been installed.

IDENTITY: When the letter "A" has been added to the equipment designation on the name plate of each applicable equipment.

1-C-1608A/SLR - Installation of a Safety Cover to Protect
Video Scanner

Correction material:

2-A FA-2

SERIAL: All

IDENTITY: Aluminum shield installed to protect photo-electric scanner assembly of MK-483/SLR kit.

1-C-1609/SLR - Wiring chg

Correction material: T-1 to NS 92595

A FA-2 NS98598 None

SERIAL: 1-11, 31 360

IDENTITY: A jumper is added from term P of TB-605 to term P of TB-606 and to term F of TB-607 (located underside of chassis).

2-C-1609/SLR - Synchro mount insert, add

Correction material: None

1-A FA-2 NS98858 F5895-699-5500

SERIAL: 1-360

IDENTITY: Housing of synchro B-603 counterbored to accept a granite cup.

3-C-1609/SLR - Antenna Control Change

Correction material: T-2 to NS 92595

2-A FA-1 NS981091 None

SERIAL: 1-448

IDENTITY: New conductor running from term #2 to TB-602 to term "B" of switch S-604.

4-C-1609/SLR - Polarization sw wiring, chg

Correction material: Change 1 to NS 92595

1-A FA-2 NS98924 F5895-526-2412

SERIAL: When using AS-605/SLR

IDENTITY: Instruction decal affixed to left of polarization sw. on front panel.

5-C-1609/SLR - Modifies to C-3118/WLR

Correction material: 92595 (C-1609/SLR); 93505

(C-3118/WLR)

1-B FA-4 NS981493

SERIAL: All used with AN/WLR-1() equipment

IDENTITY: Installs a MK-483/WLR or MK-483B/WLR transistorized calibrating assembly for use with AN/WLR-1(). Nomenclature change to C-3118/WLR or C-3118B/WLR

6-C-1609/SLR - Control Indicator Protector Plate for Time
Relay K-601

Correction material:

2-A FA-1 None

SERIAL:

IDENTITY:

7-C-1609/SLR - Modification of Control Indicator C-1609/
SLR for use with Countermeasures Receiver AN/WLR-1
(Modifies equipment to C-3118A/WLR)

Correction material: None required

1-A FA-4 NS981656 FSN F5895-961-9604

NOTE: Field Change 5-C-1609/SLR and 7-C-1609/SLR accomplish the same result, hence, one or the other is applicable.

SERIAL: C-1609/SLR equipments when operated with AN/WLR-1

IDENTITY: Modified units will have a modification plate mounted in the vicinity of the original nameplate indicating a change in nomenclature from C-1609/SLR to C-3118A/WLR.

8-C-1609/SLR - Addition of Protective Circuit for D.F.
Antennas

Correction material: Incorporated in revised Technical
Manuals

2-A FA-6 NS 0285-081-1200 None

SERIAL: All C-1609/SLR serial numbers

IDENTITY: Automatic speed control potentiometer incorporates "ON-OFF" switch to preclude switching DF antennas while automatic speed control is in maximum speed position.

1-C-3118/WLR - Same as 8-C-1609/SLR

1-C-3118A/WLR - Same as 8-C-1609/SLR

1-C-3118B/WLR - Same as 8-C-1609/SLR

1-CU-352/BRR - Replacement of Antenna Loop Selector
Switch S-101

Correction material: Ch 3 to NS92182

2-A FA-12 NS981296 None

SERIAL: All

IDENTITY: Presence of "SHIP" position of the Antenna Loop Selector Switch Nameplate.

1-DAK - Not applicable**1-DBM-1** - S107, chg wiring

A FA-6 FC-2-45 F5825-301-8440C1
SERIAL: 1-100

IDENTITY: If oscillation of the true bearing dial occurs while the selector switch is in the relative bearing position the field change is not accomplished.

2-DBM-1 - Scanning cap, coupling, chg

A FA-½ FC-10-45 F5840-311-2475C1
SERIAL: 1-100

IDENTITY: The rubber scanning capacitor coupling is replaced by metal.

3-DBM-1 - Bullet in ant. R.F. rotary joint, chg

A FA-1 FC-26-45 F5840-311-2473C1
SERIAL: 1-252

IDENTITY: In the antenna new pins are silver plated soft brass.

4-DBM-1 - Equalizer for If ant., install

B YF-1 FC-49-46 F5840-311-2474C1
SERIAL: 1-289

IDENTITY: A 20 mmfd capacitor is placed in series with the vertical antenna and relay K-201, from the junction of capacitor and relay is inductance L-203 in series with a 47 ohm resistor to ground.

1-DUUG-1B - Addition of New Interlock Micro-Switch

Correction material: TM for DUUG-1B and 1C - T-1 to NS93717

2-A FA or YF-8 NS981589 None

SERIAL: All

IDENTITY: Presence of a red and white wire running to the interlocks of the upper and lower units of the DUUG-1.

2-DUUG-1B - Replacement of Primary Power Fuses

Correction material: T-2 to NS93717

2-A FA-2 None

SERIAL: All

IDENTITY: Fuse identification plate attached to the lower chassis front panel under the primary fuse holders.

1-DUUG-1C - Same as 1-DUUG-1B**2-DUUG-1C** - Same as 2-DUUG-1B**3-DUUG-1C** - Replacement of Resistor

Correction material: None required

2-A FA-1 NS None

SERIAL: All

IDENTITY: Proper recording of field change number on Field Changes Accomplished plate.

1-OA-473/SLR - Nom chg OA-473/SLR to 9A-570/SLR
cont-ind C-1213/SLR; ampl cont AM-825/SLR

Correction material: T-2 to NS 91997(A)

1-A FA-3 NS98532 F5985-324-2066
SERIAL: 1-160

IDENTITY: New nameplates appear on AS-570 & C-1213.

1-OA-532/BLR-1 - Install dual rotary joint

1-A YF-20 NS98997 F5985-626-2319

SERIAL: Concurrent with installation of AN/WLR-3

IDENTITY: Modifies equip designation to OA-1903/BLR-1

1-OA-1903/BLR-1 - Replacement of Servo Amplifier with
IF Synchro in C-1164/BLR-1

Correction material: T-3 to NS91974

2-A FA-12 NS981387 None
SERIAL: All

IDENTITY: Noting the Absence of the servo amplifier and the presence of an IF synchro in C-1164/BLR-1.

2-OA-1903/BLR-1 - Replacing Non-Polarized Connectors
with Polarized Connectors

Correction material: T-2 to 91974

2-A FA-1½ NS981579 None

SERIAL: AM-793/BLR-1, C-1164/BLR-1 in the OA-532/
BLR-1 Antenna Group

IDENTITY: Presence of polarized connectors for J-4103
and J-4109

1-AO-6416/FRD-10A(V) - Change in Cabling

Correction material: T- to NS95744

2-A FA-1/4 NS None

SERIAL: Applies only to OA-6416/FRD-10A(V), channel
watcher

IDENTITY: Position 1; other channel watcher positions not
affected turning off the Power Supply PP-3950/FRD-10A(V)
for the Azimuth Indicator and the Control Indicator and
observing that this does not render the Angle Counter In-
operative.

2-OA-6416/FRD-10A(V) - Addition of Connector in Leads
to the Airflyte Monitor Beam Selector Switch, used with
Direction Finder Set AN/FRD-10(V)

Correction material: T- to NS95744

2-A FA-2 NS None

SERIAL: All used with AN/FRD-10A(V)

IDENTITY: Sliding the Report Control Unit forward and
observing that there is a connector installed in the leads to
the Airflyte Monitor Beam Selector Switch.

1-PP-1092/U - Installation of thermal time delay relay in
primary circuit of T-2.

Correction material:

2-A FA-2 NS None

SERIAL: Equipments when installed for use with AN/ARC-
1, -1A

IDENTITY: Presence of a thermal time delay relay installed
on the bottom of the power supply chassis adjacent to C-4.

1-PU-383/M - Improved Engine Speed Control and Shutdown

Correction material:

1-A YF-8 NS981492

SERIAL: 100 Navy owned equipments

IDENTITY: New solenoid valve attached to governor
Output and the Audio Level**1-R-839/FLR-2** - Minimizing Interaction Between the Video

Correction material: NS93148

2-A FA-1 NS981308 None

SERIAL: All

IDENTITY: Substitution of resistor R-124 (47K) with a
22K and a 16K resistor connected in series to the plate
pin 6 of V-106.**1-R-839A/FLR-2** - Same as 1-R-839/FLR-2**1-R-839B/FLR-2** - Same as 1-R-839/FLR-2**1-R-839C/FLR-2** - Same as 1-R-839/FLR-2**1-X-RDJ** - Pulse Analyzer Operation, Improve

A FA-3 NS98876 None

SERIAL: 1-25

IDENTITY: R-201, 1.2 meg between hi side of horiz
positioning cont R194A and R194B.**1-RDJ** - Pulse analyzer operation, improve

A FA-2 NS98876 None

SERIAL: 1-250

IDENTITY: Ser 1-67 only, R-201, 1.2 meg, connected
between R-194A and R-194B; high side of R-194A and
R-192B connected to 150V DC unregulated supply. Ser
1-216 only: C-147 (between pin 5 of V-11) and position
2 & 3 of S-104B connected to pin 5 of V-111 and R-178.
R-128 and R-129 replaced with 6800 ohm 2 watt resistors
each. (All ser. nos. 1-250).**1-RDP** - Sweep osc shaft extension

Correction material: See NS 98734

2-A FA- NS98734 None

SERIAL: All

IDENTITY: Allows adjust of osc-tuning slug thru access
hole.**2-RDP** - through **3-RDP** - Cancelled**4-RDP** - Reverse capacitor connections

Correction material: None

2-A FA-1 NS98258 F5820-321-2821

SERIAL: All

IDENTITY: Leads connecting C-105 to V-104 run parallel
and connect to pins 3 & 6.**1-SA-1136/FRD-10A(V)** - Corrects Excessive Cable and
Connector Protrusion.

Correction material: None

2-A FA-4 NS0285-077- None
8000

SERIAL: All

1-SA-1137/FRD-10A(V) - Same as 1-SA-1136/FRD-10A(V)**1-66132(CAGW)** - Improved stub repl (makes 66132-A)

Correction material: None

A FA-1/2 NS98570 F5985-324-2065

SERIAL: All

IDENTITY: Base for new stub is approx. 7-1/2" wide.
Old one is 3-1/2" approx. New stub is fibre glass and old
one is wood.

INSTRUCTION SHEET

This sheet provides instructions for inserting Change 3 to the Countermeasures Handbook, NAVSHIPS 0967-000-0070 (formerly NAVSHIPS 900,000.7), Countermeasures chapter of the Electronics Installation and Maintenance Book.

The purpose of this change is to update the FRONT MATTER and Section 3, FCIG.

It should take no more than ten minutes to complete this change, if the following instructions are followed.

1. Remove superseded pages and insert changed pages as indicated below:

<u>Page</u>	<u>Remove</u>	<u>Insert</u>
FRONT MATTER		
TP/ii	Change 2/Change 2	Change 3/Change 3
iii/iv	Change 2/Original	Change 3/Change 3
v/vi	Change 1/Change 1	Change 3/Blank
vii/viii	- / -	Change 3/Change 3
Section 3 - FCIG		
3-i/3-iii	Change 1/Change 1	Change 3/Change 3
3-iii/Blank	Change 1/Blank	Change 3/Blank
3-1/3-2	Change 2/Change 2	Change 3/Change 3
3-3/3-4	Change 2/Change 2	Change 3/Change 3
3-5/3-6	Change 2/Change 2	Change 3/Change 3
3-7/3-8	Change 2/Change 2	Change 3/Change 3
3-9/3-10	- / -	Change 3/Change 3

2. Destroy superseded pages only after a check has been made against this instruction to assure that changed pages and final tear-out page have been inserted.

3. Record all previous entries of changes and the accomplishment of this change in pen-and-ink on the RECORD OF CORRECTIONS MADE page.

4. Insert USER ACTIVITY TECHNICAL MANUAL COMMENT SHEET, NAVSHIPS 4914, as last page of handbook.

HANDBOOK TITLE	OLD NAVSHIPS NO.	NEW NAVSHIPS NO.
(Equipment Oriented Handbooks)		
Communications	900,000.1	0967-000-0010
Radar	900,000.2	0967-000-0020
Sonar	900,000.3	0967-000-0030
Test Equipment	900,000.4	0967-000-0040
Radiac	900,000.5	0967-000-0050
Countermeasures	900,000.7	0967-000-0070

INFORMATION SOURCES

Periodic revisions are made to provide the best current data in the EIMB and to keep abreast of new developments. In doing this, many source documents are researched to obtain pertinent information. Some of these sources include the Electronics Information Bulletin (EIB), the Bureau of Ships Journal, electronics and other text books, industry magazines and periodicals, and various military installation- and maintenance-related publications. In certain cases, Bureau of Ships publications have been incorporated into the EIMB in their entirety and, as a result, have been cancelled. A list of the documents which have been superseded by the EIMB and are no longer available is given in Section 1 of the "General" handbook.

Chief, Bureau of Ships
Department of the Navy
Washington, D. C. 20360
Attn: Fleet Electronics Effectiveness
Branch, Code 678

CORRECTIONS

Report all inaccuracies and deficiencies noted in all Bureau of Ships technical publications (including this manual, ship information books, equipment manuals, drawings, and such) by a "Planned Maintenance System (PMS) Feedback Report, OPNAV 4700.7 (Rev. 5-65)" or superseding form. If PMS is not yet installed in this ship, report technical publication deficiencies to the Bureau of Ships by any convenient means.

SUGGESTIONS

The Bureau of Ships recognizes that users of the EIMB will have occasion to offer comments or suggestions. To encourage more active participation, a self-addressed comment sheet is provided in the back of each handbook. Complete information should be given when preparing suggestions. It is most desirable that the suggestor include his name and mailing address on the form to facilitate direct correspondence in the event that further information or clarification is required by the Bureau. An additional advantage in supplying name and address is the fact that all such comments received can be given an immediate reply from the Bureau regarding the suggestion; the lengthy delay before learning of its disposition or action being taken will be eliminated. Any communication from the Bureau of Ships to a suggestor will be made through a personal letter to the individual concerned.

If a comment sheet is not available or correspondence is lengthy, suggestions should be directed to the following:

DISTRIBUTION

The Electronics Installation and Maintenance Book is transmitted to using activities through automatic distribution procedures. Activities not already on the EIMB distribution list and those requiring changes to the list should submit correspondence to the following:

Chief, Bureau of Ships
Department of the Navy
Washington, D. C. 20360
Attn: Code 679A2

Activities desiring extra copies of EIMB handbooks or binders should submit requisitions directly to Naval Supply Depot, Philadelphia, Pennsylvania. Complete instructions for ordering publications are given in the Navy Stock List of Forms and Publications, NAVSANDA Publication 2002.

3-1. POLICY

a. The Bureau of Ships Manual, Chapter 67, which establishes the policy for alterations and modifications to electronic equipment, defines alterations as any change in hull, machinery, fittings, or equipment affecting design, material, number, location, or relationship of the component parts of an assembly or system.

b. Only in actual emergencies will alterations to, or modification of, electronic equipment under the cognizance of the Bureau of Ships be undertaken without prior approval of, or direction by, the Bureau. All requests for approval shall be forwarded via the chain of command; state the exact nature of the proposed alteration or modification, reason therefor (also whether for permanent or for special temporary use), and appropriation to which chargeable. Unauthorized alterations to equipment under contractual guarantee may result in the nullification or cancellation of the guarantee and financial loss to the Government, and may result in failure of the equipment to provide the service for which it was installed. If alterations are accomplished under emergency conditions, adequate consideration must be given to safety of personnel and equipment and to the basic performance requirements. The Bureau should be advised at the earliest practicable date of the actual changes made.

c. Field changes are the means by which approved and authorized alterations or modifications are made to the Bureau of Ships electronic equipments. These changes are mandatory and shall be accomplished on equipment affected in accordance with the instructions contained in the field change bulletin.

d. Certain field change bulletins include the statement that "Bureau of Ships approval is required prior to accomplishment." Such statements should be disregarded. The only restrictions on the accomplishment of official field changes are those indicated in the Field Change Identification Guide (FCIG). Examples of such restrictions are as follows:

(1) Funding (funds must be cited).

(2) Field Change is equivalent to an alteration (ShipAlt must be assigned).

(3) Field Change is not applicable:

(a) Limited to specified serial numbered equipments (5-AN/SRT-14 applies only to serials 6 through 21).

(b) Limited to specific equipment configurations (1-RDR - applies only if equipment includes every type 10508 shock mount).

(c) Limited to applications requiring compatible interface (12-AN/SPA-8A to produce AN/SPA-32 for use in AN/SPS-39).

3-2. DOCUMENTATION

This guide is a revised list of field changes to electronics equipment under the technical control of the Bureau of Ships. It is in effect upon receipt.

3-3. OBJECTIVE

a. The objective of the FCIG is to provide a current list of field changes together with information enabling technical personnel to determine by inspection the applicable field changes that have been accomplished.

b. This guide does not indicate availability of the field change or correction material within the supply system.

3-4. DEFINITIONS

a. **FIELD CHANGE.** A field change is any modification or alteration authorized by the Bureau of Ships or agency concerned to be made to an electronics equipment subsequent to delivery to the government. Official field change numbers are published in the Electronics Information Bulletin (EIB) and this FCIG.

b. **FIELD CHANGE KIT.** A field change kit is the formal means made available to permit accomplishment of a field change. A kit may consist only of published matter or be an assembly of published matter and required material.

c. **CLASSIFICATION OF FIELD CHANGE.** Field changes are of the following types and classes:

(1) Types

(a) **Type 1 -** A Type 1 field change includes a publications package and all parts and materials required to accomplish the change to a single equipment and to revise equipment nameplates and manuals.

(b) Type 2 - A Type 2 field change consists only of publications material which provides instructions for accomplishing the change and revising the equipment nameplates and manuals. A Type 2 field change may or may not require that parts be requisitioned.

(c) Type 3 - A Type 3 field change includes a publications package and a portion of the parts and materials required to accomplish the change to a single equipment and to revise equipment nameplates and manuals.

(2) Classes (added as a hyphenated suffix to the type)

(a) Class A - Funding for installation is not required. These field changes are approved for accomplishment by forces afloat or station personnel without further reference to the Bureau of Ships.

(b) Class B - Fleet or shore funding for installation is required. These field changes are approved for accomplishment by Naval shipyards, tenders, repair facilities or shore maintenance authority without further reference to the Bureau of Ships.

(c) Class C - Bureau of Ships funding for installation is required. To meet urgent operational commitments, the Bureau may approve accomplishment of Class C field changes subject to Type Commander's funding. This class of field change includes, but is not limited to, those changes in operational improvement. Such changes are accomplished in the Material Improvement Program's order of priority. These field changes are approved for accomplishment by Naval shipyards, tenders, repair facilities, or shore maintenance activities.

3-5. INSTRUCTIONS REGARDING ACCOMPLISHMENT

a. BACKGROUND. Accomplishment of applicable field changes is essential to the proper functioning, identity, and logistic support of electronics equipments. Effective 1 October 1957, electronics field change kits were transferred from "N" to "F" cognizance. This permits the issue of field changes to ships and activities without charge to their allotments.

b. RECORDING. The completion of all official field changes, alterations, and modifications to electronic equipment shall be recorded on the Electronics Equipment History card, NAVSHIPS 536.

c. REPORTING. Except as required in Bureau of Ships Instruction 10550.1B Series, accomplishment of field changes should not be reported to the Bureau of Ships. However, the performance and operational reports, required on certain equipments, should list the field changes that have not been accomplished.

3-6. HOW TO USE THIS GUIDE

a. USE. Equipment designations are arranged alphanumerically. Space has been provided on each page for pen and ink additions or corrections published in the EIB. Periodically, the Index will be updated by the issuing of revised pages.

(1) Information on each field change is given in the following sequence:

(a) The field change number

(b) The field change title

(c) Correction material - temporary corrections, and revisions to existing equipment publications, complementary technical manuals, and technical manuals accomplishing field change kits.

(d) The type - class (the type and preferred activity to accomplish the field change, i. e., Types 1, 2, and 3, Classes A, B, and C.

(e) The modifying activity (i. e., FA - forces afloat, YF - yard forces) and the number of manhours required to accomplish the field change.

(f) The bulletin NAVSHIPS number or other reference.

(g) The Federal Stock Number assigned to a particular field change. Suffixes are given to identify various categories and for record purposes. They are as follows:

SUFFIX MEANING

C	FSN cancelled; material disposed of
C1	FSN cancelled in accordance with BUSHIPS ltr ser 880-276 of 18 April 1957
C2	FSN cancelled in accordance with BUSHIPS ltr ser 880C-285 of 22 April 1957
C3	FSN cancelled in accordance with BUSHIPS ltr ser 880C-295 of 26 April 1957
C4	FSN cancelled in accordance with BUSHIPS ltr ser 880D-398 of 22 May 1957

Where the word "None" appears, the field change is either a Type 1 kit which was not converted to a Federal Stock Number or a Type 2 kit not requiring a stock number.

(h) The serial numbers or applicable conditions of specific equipments affected by a particular field change. "BUSHIPS" indicates that specific field changes to indicated equipments are as designated by the Bureau of Ships. Accomplishment of these changes should be arranged for in accordance with current instructions.

(i) The identification information applicable to each field change for use in determining its accomplishment.

(2) Reference to field changes should always be by use of the assigned field change number and the equipment designation; for example, 6-AN/SPS-6C represents the 6th field change to AN/SPS-6C.

b. ABBREVIATIONS. Except for those listed below, the abbreviations used in the FCIG were taken from Standard Abbreviations (JANAP 169), Military Standard Abbreviations for Use on Drawings (MIL-STD-12A).

ACU	Antenna control unit
ATDIR	Attack director
ATF	Automatic target follower
ATR	Anti-transmit-receive
BDI	Bearing direction indicator
BKT	Bracket
CCL	Communication control link
CPLR	Coupler
DLVD	Delivered
DPLXR	Duplexer
FC	Field Change
FE	Field engineer
FS	Frequency shift
GTT	Generated target training
HYDPH	Hydrophone
IMPED	Impedance
I & S	Installation and Service Bulletin
LSTN	Listening
MAGGY	Magnetron

MCC	Maintenance close contact
MFD	Microfarad
MFI	Multiple feature
MODIF	Modification
MTB	Maintenance true bearing
MTR	Meter
NLM	Noise level monitor
NOR	Norfolk
NRTC	Naval Reserve Training Center
NS	NavShips
N. T. -	Navy type
ODN	Own doppler nullifier
PERFRM	Performance
P/N	Part number
P/O	Part of
RA	Receiver-amplifier
RAI	Receiver-amplifier-indicator
RCG	Reverberation controlled gain
RECVR	Receiver
RHI	Remote height indicator
RIB	Radio Installation Bulletin
RMB	Radio Maintenance Bulletin
RNG	Range
RPPI	Remote plan position indicator
RTRB	Reliable true and relative bearing
SMB	Sonar Maintenance Bulletin
TB	Terminal board
TDC	Torpedo data computer
TDR	Time delay relay
TRB	True and relative bearing
TVG	Time variation of gain
VSWR	Voltage standing wave ratio
WGT	Weight
XDUCER	Transducer
XFMR	Transformer
()	Series

c. CORRECTIONS. Recommendations for correction of errors and the addition of pertinent information to this guide should be reported to the Electronics Publications Section (Code 679A2), Bureau of Ships, and include:

- (1) Designation of affected equipment.
- (2) Location of error by page and line.
- (3) Description of error and indication of what change should be made.

COUNTERMEASURES**NAVSHIPS****900,000.7****FIELD CHANGE
IDENTIFICATION GUIDE**

1-AN/BLA-1 - Make compatible with AN/WLR-1 (modifies equip. to AN/BLA-2C)

Correction material:

1-A FA-20 NS981623 F5895-987-9523

SERIAL: A1 through A100 (made only when the AN/WLR-1 is being installed)

IDENTITY: The horizontal synchro and resolver housed in a casting on the base plate is replaced by a three-tier construction containing a vertically placed synchro and resolver, a two gear assembly with slotted disc and a transistorized component board with photo-diode pickup and amplifier circuitry.

1-AN/BLA-2A - Reduction of AS-1070/BLR Antenna Rotation Speed.

Correction Material: T- to NS93690, NS94890, NS94238

2-A FA-1

SERIAL: All when used with Antenna Assembly AS-1071/BLR

IDENTITY: When speed of rotation of the antenna is approximately 150 RPM, when it is in the Auto-Spin mode.

1-AN/BLA-2B - Same as 1-AN/BLA-2

1-AN/BLA-2C - Same as 1-AN/BLA-2

1-AN/BLR-1 - Crt display and if. amps, improve

Correction material: Change 3 to NS 92419(A)

1-A YF-48 NS98811 F5895-507-5603

SERIAL: 1-31

IDENTITY: V908 is 6ah6 on mixer amp. chassis CV-69/ULR.

2-AN/BLR-1 - Temp. Test adaptor to permit use of TS-907/ULR and improve oscillator stability

Correction material: T-5 to NS 91973

1-A FA-2 NS98723 F5895-501-0765

SERIAL: 1-174

IDENTITY: 0-345 added to new osc. adj-assy. of rf tuner.

3-AN/BLR-1 - Test adaptor, permits use of TS-907/ULR

Correction material: T-6 to NS 91973

1-A FA-2 NS98724 F5895-501-0797

SERIAL: 1-269

IDENTITY: Brg blk of rf tuner mtd by fillester head screws.

4-AN/BLR-1 - Add of sound powered telephone jacks

2-A FA-2 NS935-254-9192

SERIAL: All

IDENTITY: Presence of sound powered telephone jacks

5-AN/BLR-1 - Wiring Changes Required to Provide Delay of 115 VAC to Tuning Motor B-1701

Correction material:

2-A FA-2 NS981438 None

SERIAL: All

IDENTITY: Presence of two (2) wires on pin 6 of relay K-1702 in Indicator Control IP-10/ULR

6-AN/BLR-1 - Installation of Antenna Test Set AN/WLM-2
Correction material: Complementary Technical Manual for AN/WLM-2, NS94290

1-A FA-6 NS981375

SERIAL: All

IDENTITY: Observe Interference Generator SG-450/WLM-2 mounted in antenna assembly and Power Supply PP-3133/WLM-2 mounted near antenna system receiver.

7-AN/BLR-1 - Synchronization of the Sweep Generator to Improve Unstable Sawtooth Voltages

Correction material: to NS91973

2-A FA-1 None

SERIAL: ALL CV-60/ULR and CV-70/ULR

IDENTITY: Visually inspect the CV-69 for a 4-inch length of insulated wire connected from pin 4 of V-909 to R-949; CV-70 for a 4-inch length of insulated wire connected from pin 4 of V-1112 to 4-1118

8-AN/BLR-1 - Modification to Tube Socket Caps

Correction material: to NS91973

2-A FA-2 None

SERIAL: All

IDENTITY: Presence of longer tube caps which extend and cover the base of tube 2K48 in TN-142/ULR of the subject equipment.

9-AN/BLR-1 - Use of OB2WA Tubes in the Power Supply and the RF Tuners

Correction material:

2-A FA-4 None

SERIAL: All

IDENTITY: A capacitor (0.022 mfd) connected between pins 5 & 7 of tube socket XV-405, XV-406, XV-407, XV-508, XV-607, XV-608, XV-806, XV-807, and XV-808 respectively of RF tuners, TN-138/ULR, TN-139/ULR, TN-140/ULR, and TN-142/ULR

10-AN/BLR-1 - Relocation of F-2801 in PP-312/ULR

Power Supply

Correction material: to NS91973

2-A FA-8 None

SERIAL: All

IDENTITY: This field change has been accomplished if fuseholders are located on the front panel of PP-312/ULR Power Supply.

11-AN/BLR-1 - Substitution of Tube Type 8113 for Type 6AK5

Correction material:

2-A FA-1½ None

SERIAL: All

IDENTITY: Presence of type 8113 tubes in place of type 6AK5 tubes in tuners

COUNTERMEASURES**NAVSHIPS**

900,000.7

**FIELD CHANGE
IDENTIFICATION GUIDE**

12-AN/BLR-1 - Addition of Relay in AC Interlock Circuit and Fusing of Power Transformers.

Correction material: T-10 to NS91973

2-A FA-8 NS0285-080-0100 None

SERIAL: All

IDENTITY: Presence of a relay mounted on inner left cross-brace on bottom of Power Supply PP-312/ULR

13-AN/BLR-1 - Provides Monitor Jacks for Band 7 Klystron Anode

Correction material: T- to NS91973

2-A FA-4

SERIAL: All

IDENTITY: Presence of two new test jacks, labeled "Klystron I", in Power Supply PP-312/ULR

1-AN/FLR-7 - Same as 1-AN/FRA-44 except: Ampex Tape Recorder Model FA-114B, Units 5-T and 6-T of AN/FLR-7(XN-1) and Ampex Tape Reproducer Model FR-114B, Unit OFF 1-T of AN/FLR-7(XN-1).

1-AN/FLR-11(V) - Same as 1-AN/FRA-54(V)

2-AN/FLR-11(V) - Modifies Head Cable Assemblies of Ampex FR-114B Magnetic Tape Recorder and Reproducer

Correction Material: T- to NS

1-A YF-2 981780 None

SERIAL: Magnetic Tape Recorder RO-219/F, Units 1 and 2 of AN/FLR-11(V) and Magnetic Tape Reproducer RP-135F, Unit 15 of AN/FLR-11(V)

3-AN/FLR-11(V) - RFI Reduction in CED Recorder/Reproducer (RO-247 and RP-132)

Correction material: T-1 to NS95738
NS981804

4-AN/FLR-11(V) -

Correction material: T- to NS
NS94563

SERIAL: Signal Data Converter CV-1474/FLR-11(V) and Core Memory Unit MV-464(FLR-11(V))

1-AN/FRA-44 - Modified Head Cable Assemblies of Ampex FR-114B Magnetic Tape Recorder and Reproducer

Correction material: T-1 to NS94585

1-A YF-2 NS981780 None

SERIAL: Ampex Tape Recorder Model FR-114B, Units 5-T and 6-T of AN/FRA-44(XN-1, 2, 3), and OFF-1T of AN/FRA-44(XN-1) and unit 10 of AN/FRA-44(XN-2, -3)

1-AN/FRA-54(V) - Same as 1-AN/FRA-44 except: Magnetic Tape Recorder RO-219/F, Units 1 and 2 of AN/FRA-54(V) and Magnetic Tape Reproducer RB-135/F, Unit of AN/FRA-54(V)

1-A YF-4 NS981025 F5895-543-1510

SERIAL: All

IDENTITY: Installation of metal divider in CY-1273/ULR between TN-139/ULR and TN-140/ULR.

2-AN/FRA-54(V) - Modifies Head Cable Assemblies of Ampex FR-114B Magnetic Tape Recorder and Reproducer.

Correction material: T- to NS

1-A YF-2 NS981780

SERIAL: Magnetic Recorder RO-219/F, Units 1 and 2 of AN/FRA-54(V); and Magnetic Tape Reproducer RP-135/F, unit of AN/FRA-54(V)

3-AN/FRA-54(V) - To Prevent Frequency Multiplier Board Breaking into Self Oscillation.

Correction material: T- to NS

NS981800

SERIAL: CP-699/FRA-54(V) and CP-756/FRA-54(V)

4-AN/FRA-54(V) - To Provide a Continuous Bearing Tone Signal.

Correction material: T- to NS

NS981801

SERIAL: TD-620/FRA-54(V) and TD-705/FRA-54(V)

5-AN/FRA-54(V) - RFI Reduction in CEC Recorder/Reproducer RO-247 and RP-132)

Correction material: T- 1 to NS95738

NS981804

1-AN/FSA-17 - Improvement of the fault alarm system.

Correction material: Change 1 to NS93207(A)

1-C FA-37 NS981498 None

SERIAL: 1 through 11

IDENTITY: Designation plate: "Fault Alarm" on panel of Power Transfer Unit is change to "AUX EQUIPMENT ALARM" and connector J1207 is added. Diode CR 1803 is added to relay K1209 in each of the detector units, Change No. 1 is indicated on the title page of NAVSHIPS 93207(A).

1-AN/FSH-1 - Increase in record time.

Correction material: T-1 to NS94143

1-C FA-5 NS981376 None

SERIAL: A1 through A18. All other sets were corrected by an identical production change

IDENTITY: The new carriage drive shaft has 26 threads per inch, as compared to 18 threads per inch on the shaft originally supplied with the equipment.

1-AN/SLA-1 - Cathode-ray socket, modif

Correction material: None

A FA-1 NS98241 None

SERIAL: 1-6

IDENTITY: C/R tube socket, X-250A, drilled in pin 1 with #29 drill for oversize pin #1 of new type K-1052-P-2 C/R tube.

2-AN/SLA-1 - Cathode-ray protective circuit

Correction material: None

A FA-4 NS98260 F5895-346-4650

SERIAL: 3-12

IDENTITY: Addition of 2 NE-2 neon tubes of TB-20A of the clamping diode chassis

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Correction material: None

A FA-4 NS98262 None

SERIAL: 3, 4, 5

IDENTITY: C-303 (470 mmf), is added in parallel with R-215 on TB-203.

4-AN/SLA-1 - Resistor values, chg

Correction material: None

A FA-4 NS98264 F5895-301-9181

SERIAL: 3-12

IDENTITY: 4 resistors added: three 82K 10% 1 watt and one 220K 10% in C/R circuit. R-220, R-222 on TB-203 are now 82K. R-252, R-254 on TB-206 are now 82K.

1-AN/SLA-2 - Stability improvement of AN/SLA-2A.

Correction material: T-3 to NS92005

2-A FA-1 NS981291 None

SERIAL: All

IDENTITY: Resistor R101 replaced by a 120 K ohm resistor.

2-AN/SLA-2 - Video output, add

Correction material: See NS 981133

2-A FA-1 NS981133 None

SERIAL: All

IDENTITY: Coaxial connector on front end of panel

3-AN/SLA-2 - Stability Improvement of AN/SLA-2A

Correction material: T-3 to 92005

2-A FA-1 NS981291 None

SERIAL: All

IDENTITY:

4-AN/SLA-2 - Replacement of Selenium Rectifier CR-101 with Silicon Diodes in +28 Volt Supply of PP-874/SLA-2 and PP-874/SLA-2A

Correction material: T-4 to NS92005

2-A FA-8 NS981588 None

SERIAL: All

IDENTITY: Absence of selenium rectifier stack CR-101, capacitor C-116 and by the presence of a sub-chassis mounting four 1N248 silicon diodes in PP-874 of AN/SLA-2 and AN/SLA-2A.

4-AN/SLA-2A - Same as 4-AN/SLA-2**1-AN/SLR-2** - Cathode-ray display, improve

Correction material: Change 3 to NS 92419(A)

1-A YF-150 NS98811 F5895-507-5603

SERIAL: 1-291

IDENTITY: R120 "meter zero" added on main chassis

2-AN/SLR-2 - Test adaptor and osc temp comp

Correction material: T-5 to NS 91973

1-A FA-2 NS98723 F5895-501-0765

SERIAL: 1-174

IDENTITY: Add temp comp. 0-345, to rf tuner tn-137/ULR

3-AN/SLR-2 - Test adaptor

Correction material: T-6 to NS 91973

1-A FA-2 NS98724 F5895-501-0797

SERIAL: 1-269

IDENTITY: Brg block of RF tuner TN-137/ULR mtd by fillister-head screws.

4-AN/SLR-2 - R.F. shield for band 5 & 6

Correction material: None

-4

F5895-543-1510

SERIAL: All

IDENTITY:

5-AN/SLR-2 - Same as 4-AN/BLR-1**6-AN/SLR-2** - Wiring Changes Required to Provide Delay

115 VAC to Tuning Motor B-1701

Correction material:

2-A FA-2 NS981438 None

SERIAL: All

IDENTITY: Presence of two (2) wires on pin 6 of relay K-1702 in Indicator Control IP-10/ULR

7-AN/SLR-2 - Same as 7-AN/BLR-1**8-AN/SLR-2** - Same as 8-AN/BLR-1**9-AN/SLR-2** - Same as 9-AN/BLR-1**10-AN/SLR-2** - Same as 10-AN/BLR-1**11-AN/SLR-2** - Same as 11-AN/BLR-1**12-AN/SLR-2** - Same as 12-AN/BLR-1**13-AN/SLR-2** - Same as 13-AN/BLR-1**1-AN/SLR-9** - Increase of Audio Level

Correction material:

NS981577

SERIAL: A1 through A4, A6 through A14

IDENTITY:

1-AN/SLR-10 - Modification to True Relative Switching

Correction material: T- to NS94162

2-A FA

SERIAL: All

IDENTITY: Resistor R215 connected between pins A and B of Relay K204, and R216 connected between pins A and B of Relay K214.

1-AN/SLT-1 - Ant cont, add

Correction material: Change 1 to NS 91258

A FA-10 NS98723 F5895-301-9043

SERIAL: 2-40

IDENTITY: One antenna cont. unit, C-805/SLT-1, is mounted on the right side of the xmtr cont. C-584/SLT-1. The other antenna cont. unit is mounted on the right side of the cont. indicator modulator group, OA-125/SLT-1.

2-AN/SLT-1 - Pump filter in cooling sys, repl

Correction material: T-2 to NS 91258

A FA-1/2 NS98229 F5895-301-9046

SERIAL: 1-32

IDENTITY: New type filter mfr-12 #1013-CT-1

3-AN/SLT-1 - S604, duct O-824, repl: fuse covers, add

Correction material: None

A FA-4 NS98230 F5820-301-9094

SERIAL: 1-18

IDENTITY: Addition of fuse panel

4-AN/SLT-1 - Lead in PP-452/SLT-1, add

Correction Material: T-2 to NS 91258

A FA-1 NS98232 F5895-508-7592

SERIAL: 1-39

IDENTITY: An additional or larger wire is installed between K-102-11 and TB-111-5 in top left section of control power supply unit. This new lead is #10 wire, black, and is laced to existing cabling.

5-AN/SLT-1 - Modulator meter kit

A FA-3 NS98270 F5895-346-4651

SERIAL: 2-40

IDENTITY: New terminal board installed near meter, M-302, containing C-322 and R-355.

6-AN/SLT-1 - AN-301/SLT-1, Modif

Correction material: Change 2 to NS 91258

A FA-4 NS98297 F5895-301-9650

SERIAL: 1-40

IDENTITY: One additional stuffing tube is mounted, making a total of 6. The new tube is mounted seven inches from the side of the chassis.

7-AN/SLT-1 - Osc #1 output meter, modif

Correction material: Change 2 to NS 91258

A FA-2 NS98323 F5895-325-6319

SERIAL: 1-40

IDENTITY: In control power supply #20 black wire added from K-601-8 to TB-618-6. Buss jumper wire added from K-601-2 to K-601-8. A #20 red wire added from TB-618-8 to K-601-6.

1-AN/ULA-3 - Circuit Modification

Correction material: T- to NS95674

2-A FA-10

SERIAL: Units up through #74

1-AN/ULA-4 - Same as 1-AN/ULA-3 except -

Correction Material: to NS96067

1-AN/ULQ-5 - Replacement of Electron Tube 7270 and its separate associated Filament Transformer, TE-9554 with Electron Tube 7271 and its associated Filament Transformer TE-12247.

Correction material:

2-A FA-1 NS None

SERIAL: All when maintenance to subassembly 1A1 is required when tube 7270 (1A1V8) and its separate associated filament transformer (1A1T2) in subassembly 1A1 have been replaced by tube 7271 and its separate associated filament transformer.

1-AN/ULQ-6 - Replacement of High Level Traveling Wave Tube 2V1

Correction material: T-8 to NS93825 (0280-672-3009)

2-A FA-3 NS 0285-079-0900

SERIAL: All

IDENTITY: The new high level traveling wave tube, type D2048 has a round 6-pin miniature connector plug with a lock ring.

2-AN/ULQ-6 - Installation of AN/ULQ-6 TWT Data

Name plate

Correction material: T- to NS93825

2-A FA-1/2

SERIAL: All

IDENTITY: AN/ULQ-6() TWT nameplate adhered to top of unit 1

1-AN/ULQ-6A - Elimination of Antenna Hunting

Correction material: T- to NS94551

2-A FA-1/2

SERIAL: All (AN-ULQ-6A and AM-3562/ULQ-6 (Unit 7)

IDENTITY: Determining that resistor R4 in unit 7 of the Electronic Control Amplifier is 10,000 ohms, 1/2 watt in lieu of 47,000 ohms, 1/2 watt.

2-AN/ULQ-6A - Replacement of High level traveling wave tube 2V1

Correction material: NS 0280-796-3002 and

NS 0280-796-3601

1-A FA-8 NS F5895-909-7547

SERIAL: All

IDENTITY: Tube 2V1, and the focus coil replaced by a new permanent periodic magnet traveling wave tube.

3-AN/ULQ-6A - Elimination of 28V Power Supply Failures

Correction material: T- to NS94551

2-A FA-1 NS

SERIAL: All

IDENTITY: Diodes 1CR8, 1CR9 (unit 1) are JAN 1N1232 in lieu of 1N1614

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1-AN/UNQ-7 – Modification to Improve Recording Capability
Correction material: T- to NS None required
2-A FA-2 NS None

SERIAL: All

IDENTITY: Presence of three capacitors (15 uf, 0.4/ uf, and 0.01 uf) mounted in terminal box with attenuator board of AN/UNQ-7 series equipments

1-AN/UNQ-7A – Same as 1-AN/UNQ-7

1-AN/UNQ-7B – Same as 1-AN/UNQ-7

1-AN/UNQ-7C – Same as 1-AN/UNQ-7

1-AN/WLR-1 – Replacement of Capacitors 14A1C22, 14A1C23 and 14A1C24

Correction material: T-2 to 93422

2-A FA-2 NS981305 F5895-086-6675

SERIAL: A1 through A16 (RF-89/WLR-1) A17 through A56

IDENTITY: Both side covers from sub-assembly A1 of Electrical Frequency Discriminator RE-89/WLR-1 have been removed and capacitors C-22, C-23, and C-24 are of the fixed type with a rating of 1000 uuf.

2-AN/WLR-1 – Installation of Antenna Test Set AN/WLM-2

Correction material: Complementary Technical Manual for AN/WLM-2, NS94290

1-A FA-6 NS981375 F5895-086-6676

SERIAL: All

IDENTITY: Observe Interference Generator SG-450/WLM-2 mounted in antenna assembly and Power Supply PP-3133/WLM-2 mounted near antenna system receiver.

3-AN/WLR-1 – Production Changes

Correction material: Change 1 to NS93422

3-B FA-33 NS981397 F5895-991-0516

SERIAL: All through A16

IDENTITY: See bulletin

4-AN/WLR-1 – Same as 3-AN/WLR-1 except SERIAL A1 through A56 and Type 3, Class A – F5895-991-2177

5-AN/WLR-1 – Same as 3-AN/WLR-1 except SERIAL: A57 through A106 and Type 2, Class A – F5895-991-0517

6-AN/WLR-1 – Provide External Audio Connection

Correction material: T-4 to NS93422

2-A FA-6 NS981541 None

SERIAL: All

IDENTITY: A shielded wire connected to the tip lug of the Audio Jack, J-17

7-AN/WLR-1 – Install Filters to Protect Mixer Crystal Diodes. Applicable only to Sylvania equipment. Refer to 7-AN/WLR-1A

Correction material:

1-A FA-14 NS981649 F5895-956-8984

SERIAL: S/N B-2 – B-29 and S/N B-31 and B-51

IDENTITY: The filters are clearly visible on tuners CV-732 through CV-735 and CV-737 through CV-740. The presence of screws in the two holes on the side apron of the wired chassis, directly under the SERVO potentiometers, indicates that the filter has been installed in the CV-736.

8-AN/WLR-1 – Substitution of Variable Resistor:

RA20LASA252A for RA20A25A252AK

Correction material: To NS93422

2-A FA-6 None

SERIAL: All

IDENTITY: Presence of locking type potentiometers for R-1 and R-3 of each tuner in place of the non-locking type presently used.

9-AN/WLR-1 – Installation of Improvements in CV-739 and CV-740 Preselectors. Applicable only to Sylvania equipment. Refer to 9-AN/WLR-1A

Correction material:

-A FA-4 NS981666 F5895-050-9000

SERIAL: AN/WLR-1 S/N B-2 – S/N B-109. All others have this production change

IDENTITY: See bulletin

10-AN/WLR-1 – Installation of New Preselector Can Screws to all Cam Dials. Applicable only to Sylvania equipment. Refer to 10-AN/WLR-1A

Correction material: None

1-A JA-1 NS981704 F5895-066-4446

SERIAL: S/N B-2 – B-151

IDENTITY: Examination of the spring on CV-736 in question when related to the sketch will easily identify accomplishment.

11-AN/WLR-1 – Corrects nomenclature of equipments manufactured by Sylvania on NObsr-81365 (Modifies equipment to AN/WLR-1A)

Correction material: None required

2-A FA-2

SERIAL: All equipments manufactured by Sylvania under NObsr-81365

IDENTITY: All units and all literature will be marked "AN/WLR-1A" instead of "AN/WLR-1".

12-AN/WLR-1 – Relocation of High Voltage Receptacle

6J2 in CV-737/WLR-1 and 7J2 in CV-738/WLR-1 Tuners.

Correction material: None

2-A FA-1 None

SERIAL: All Collins Equipment

IDENTITY: The CV-737/WLR-1 and CV-738/WLR-1 high voltage receptacles being located forward of the filament transformer T1 instead of aft of it.

CHANGE

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13-AN/WLR-1 - Modification of IP-480/WLR-1 to permit analysis and scan scopes to function simultaneously.
Correction Material: T- to NS93422
2-A FA-2 NS None

SERIAL: All

IDENTITY: Presence of DPST in lieu of SPST as Photo-Normal Switch on IP-480/WLR-1.

14-AN/WLR-1 - Addition of a New AC line interlock circuit relay to eliminate voltage drop in klystron power supply.
Correction material: T-5 to NS93422; T-1 to NS94932;
T-1 to NS93422.61

2-A FA-2 NS 0285-007-9000 None

SERIAL: All

IDENTITY: Presence of relay 15K5 mounted on a bracket at bottom, left side of power supply PP-2156/WLR-1 chassis

15-AN/WLR-1 - Monitor Jacks for Band 8 Klystron Anode Current

Correction material: T- to NS93422

2-A FA-4 NS None

SERIAL: All

IDENTITY: Presence of two new test jacks, labelled "KLYSTRON I," in Power Supply PP-2156/WLR-1.

16-AN/WLR-1 - Provides a "STANDBY" mode where equipment is not being used

Correction material: T- to NS93422

2-A FA-2 NS

SERIAL: All

IDENTITY: Double throw "POWER" Switch on the IP-480/WLR-1.

1-AN/WLR-1A - Same as 12-AN/WLR-1**2-AN/WLR-1A** - Same as 13-AN/WLR-1**3-AN/WLR-1A** - Same as 14-AN/WLR-1**4-AN/WLR-1A** - Same as 15-AN/WLR-1**5-AN/WLR-1A** - Same as 16-AN/WLR-1**6-AN/WLR-1A** - Same as 6-AN/WLR-1**7-AN/WLR-1A** - Same as 7-AN/WLR-1**8-AN/WLR-1A** - Same as 8-AN/WLR-1**9-AN/WLR-1A** - Same as 9-AN/WLR-1**10-AN/WLR-1A** - Same as 10-AN/WLR-1**1-AN/WLR-1B** - Improves High Frequency Performance

Correction material: T- to NS94932

3-C FA- NS981766

SERIAL: 1 thru 9 (Part A) - 19 thru 21 (Part B)

IDENTITY: There are three items which indicate that the field change described herein has been accomplished. All three are visible on the secondary capacitor A2 (54 of figure 3-9) in Overhaul and Repair Manual (NAVSHIPS 94932.61). A spacer (8 of figure 1), has been installed between the casting and the forward bearing retainer. One elastic clinch nut (14 of figure 1) has been removed from the spring plate. The drive shaft is metal clad for 1-15/32" from the front surface instead of 1-31/32".

2-AN/WLR-1B - Same as 12-AN/WLR-1**3-AN/WLR-1B** - Same as 13-AN/WLR-1**4-AN/WLR-1B** - Same as 14-AN/WLR-1**5-AN/WLR-1B** - Same as 15-AN/WLR-1**6-AN/WLR-1B** - Same as 16-AN/WLR-1

1-AN/WLR-3 - F.C. Kit modifies the Detector Switching Unit RF-81/WLR-3 to Detector Switching Unit RF-134/WLR-3A and modifies the Amplifier Control AM-1936/WLR-3 to AM-2996/WLR-3A for operation with the AN/WLR-1 equipment.

Correction material: Change 1 to NS93139(A)

1-A YF-24 NS981299 F5895-473-5118

SERIAL: For submarine installations only.

IDENTITY: Equipment nomenclature changed to AN/WLR-3A

1-AN/WLR-3 - Supplement Information to Field Change

1-AN/WLR-3 for operation with AN/WLR-1 equipment

Correction material: T-1 to NS93139(A)

1-A FA-30 NS981299 None

SERIAL: For submarine installations only

IDENTITY: Equipment nomenclature changed to AN/WLR-3A

2-AN/WLR-3 - Same as 2-AN/WLR-1

1-AS-570/SLR - Reflector counter wgt replace: refl size reduce; breather holes, install

Correction material: T-2 to NS 91997(A)

B YF-5 NS98533 F5985-324-2067

SERIAL: 1-130

IDENTITY: New counterweight is cylindrical; mounted on threaded bolt attached to the antenna mounting ring.

Note: FC 1-OA-473/SLR must be accomplished prior to this FC.

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2-AS-570/SLR - Freq coverage of AS-570/SLR, extend (changes to AS-605/SLR)

A YF-8 NS98619 F5985-324-9933

SERIAL: SHIPS w/AN /SLR-2 having AS-570/SLR and AS-571/SLR (50)

IDENTITY: Ant nameplate changed to AS-605/SLR.

3-AS-570/SLR - Maintenance improvements

Correction material: T-1 to NS 92366

B YF-1 NS98701 None

SERIAL: 1-209

IDENTITY: Access hole drilled on side of rate generator, 1/2" in dia. 2-1/2" from top. (Rate generator housing)

1-AS-571/SLR - Radome assy on CW-456/SLR, add

Correction material: T-1 to NS 92388

1-B YF-8 NS98998 F5985-543-1478

SERIAL: All

IDENTITY: Addition of radome assy.

2-AS-571/SLR - Prevention of Antenna Rotation During Maintenance

Correction material: To NS92388 - T-3 and T-3 to NS92085 (A)

2-A FA-1 NS981386 None

SERIAL: When FC-1 (Addition of Radomes) is completed

IDENTITY: Presence of watertight switch mounted at the base of the antenna.

3-AS-571/LSR - Cancelled.

1-AS-605/SLR - Maintenance improvements

Correction material: T-4 to NS 91997(A)

2-A FA-1 NS98701 None

SERIAL: 1-209

IDENTITY: Safety wire installed on the four 6-32 x 7/16" long fillister-head screws of servo motor shaft adapter.

1-AS-616/SLR - Mechanical improvements

Correction material: None

2-A FA-3 NS981082 None

SERIAL: 1-363

IDENTITY: Lower main shaft oil seal KZ-5330-291-7140 installed (symbol 0-410).

2-AS-616/SLR - Radome assy CW-456/SLR, add

Correction material: T-2 to NS 92085(A)

1-B YF-8 NS98998 F5985-543-1478

SERIAL: All

IDENTITY: Addition of radome assy

3-AS-616/SLR - Same as 2-AS-571/SLR except Serial:

When F.C. 2 has been completed.

Correction material: To NS92085 (A)

IDENTITY:

4-AS-616/SLR - Cancelled.

1-AS-899/SLR - Antenna Direction Indicator

Correction material: None

2-A FA-12

None

SERIAL: All

IDENTITY: Aluminum arrow located on antenna reflector assembly and extended over and below antenna main bearing.

2-AS-899/SLR - Filter Bandpass 120 Cycle

Correction material: T-1 to NS94272(A)

1-A FA-1 NS981797 F5895-763-1375

SERIAL: Numbers Unknown

IDENTITY: Filter, when installed, lies behind C1201 in base of antenna.

3-AS-899/SLR - Wiring Change required for Compatible

Operation with the AN/WLR-1 ECM equipment and Antenna Control unit

Correction material: T-1 to NS93489(0967-080-7011)

2-C FA-1 NS0967-080-7040 None

SERIAL: All

IDENTITY: This Field Change can be identified by viewing from above the antenna and noting the clockwise rotation of the AS-899/SLR or AS-899A/SLR antenna when the Antenna Control-Indicator unit is in the "Automatic" operation mode.

1-AS-899A/SLR - Same as 2-AS-899/SLR

2-AS-899A/SLR - Replacement for Motor Coupling

Correction material: T-2 to NS94272(A)

1-A FA- NS

SERIAL: All

IDENTITY: Refer to Technical Manual NS94272(A) tables 7-1 and 7-2

3-AS-899A/SLR - Same as 3-AS-899/SLR

3-C-1068/SLR - Change of Nomenclature

2-A FA-1/2

SERIAL: All equipments to which the MK-483/SLR modification has been installed.

IDENTITY: When the letter A has been added to the equipment designation on the nameplate of each applicable equipment

1-C-1213/SLR - Same as 3-C-1608/SLR

1-C-1608/SLR - Polarization sw. wiring, chg

Correction material: Change 1 to NS 92490

1-A FA-2 NS98924 F5895-536-2412

SERIAL: When using AS-605/SLR

IDENTITY: Instruction decal affixed to left of polarization sw. on front panel.

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2-C-1608/SLR - Installation of Control Relay to Remove
115 VAC from DF Antennas and Magnetic Amplifier
Reactors

Correction material: NS92490

2-A FA-2 NS981641

SERIAL: All

IDENTITY: Presence of a relay installed next to K203.

3-C-1608/SLR - Change of Nomenclature

Correction material: T- to NS

2-A FA-1/2

SERIAL: All equipments to which the MK-483/SLR modification Kit has been installed.

IDENTITY: When the letter "A" has been added to the equipment designation on the name plate of each applicable equipment.

1-C-1608A/SLR - Installation of a Safety Cover to Protect
Video Scanner

Correction material:

2-A FA-2

SERIAL: All

IDENTITY: Aluminum shield installed to protect photo-electric scanner assembly of MK-483/SLR kit.

1-C-1609/SLR - Wiring chg

Correction material: T-1 to NS 92595

A FA-2 NS98598 None

SERIAL: 1-11, 31 360

IDENTITY: A jumper is added from term P of TB-605 to term P of TB-606 and to term F of TB-607 (located under-side of chassis).

2-C-1609/SLR - Synchro mount insert, add

Correction material: None

1-A FA-2 NS98858 F5895-699-5500

SERIAL: 1-360

IDENTITY: Housing of synchro B-603 counterbored to accept a granite cup.

3-C-1609/SLR - Antenna Control Change

Correction material: T-2 to NS 92595

2-A FA-1 NS981091 None

SERIAL: 1-448

IDENTITY: New conductor running from term #2 to TB-602 to term "B" of switch S-604.

4-C-1609/SLR - Polarization sw wiring, chg

Correction material: Change 1 to NS 92595

1-A FA-2 NS98924 F5895-526-2412

SERIAL: When using AS-605/SLR

IDENTITY: Instruction decal affixed to left of polarization sw. on front panel.

5-C-1609/SLR - Modifies to C-3118/WLR

Correction material: 92595 (C-1609/SLR); 93505

(C-3118/WLR)

1-B FA-4 NS981493

SERIAL: All used with AN/WLR-1() equipment

IDENTITY: Installs a MK-483/WLR or MK-483B/WLR transistorized calibrating assembly for use with AN/WLR-1(). Nomenclature change to C-3118/WLR or C-3118B/WLR

6-C-1609/SLR - Control Indicator Protector Plate for Time
Relay K-601

Correction material:

2-A FA-1 None

SERIAL:

IDENTITY:

7-C-1609/SLR - Modification of Control Indicator C-1609/
SLR for use with Countermeasures Receiver AN/WLR-1
(Modifies equipment to C-3118A/WLR)

Correction material: None required

1-A FA-4 NS981656 FSN F5895-961-
9604

NOTE: Field Change 5-C-1609/SLR and 7-C-1609/SLR accomplish the same result, hence, one or the other is applicable.

SERIAL: C-1609/SLR equipments when operated with
AN/WLR-1

IDENTITY: Modified units will have a modification plate mounted in the vicinity of the original nameplate indicating a change in nomenclature from C-1609/SLR to C-3118A/WLR.

8-C-1609/SLR - Addition of Protective Circuit for D.F.
Antennas

Correction material: Incorporated in revised Technical
Manuals

2-A FA-6 NS 0285-081-1200 None

SERIAL: All C-1609/SLR serial numbers

IDENTITY: Automatic speed control potentiometer incorporates "ON-OFF" switch to preclude switching DF antennas while automatic speed control is in maximum speed position.

1-C-3118/WLR - Same as 8-C-1609/SLR

1-C-3118A/WLR - Same as 8-C-1609/SLR

1-C-3118B/WLR - Same as 8-C-1609/SLR

1-CU-352/BRR - Replacement of Antenna Loop Selector
Switch S-101

Correction material: Ch 3 to NS92182

2-A FA-12 NS981296 None

SERIAL: All

IDENTITY: Presence of "SHIP" position of the Antenna
Loop Selector Switch Nameplate.

COUNTERMEASURES

NAVSHIPS

900,000.7

FIELD CHANGE IDENTIFICATION GUIDE

1-DAK - Not applicable

1-DBM-1 - S107, chg wiring

A FA-6 FC-2-45 F5825-301-8440C1
SERIAL: 1-100

IDENTITY: If oscillation of the true bearing dial occurs while the selector switch is in the relative bearing position the field change is not accomplished.

2-DBM-1 - Scanning cap, coupling, chg

A FA-1/2 FC-10-45 F5840-311-2475C1
SERIAL: 1-100

IDENTITY: The rubber scanning capacitor coupling is replaced by metal.

3-DBM-1 - Bullet in ant. R.F. rotary joint, chg

A FA-1 FC-26-45 F5840-311-2473C1
SERIAL: 1-252

IDENTITY: In the antenna new pins are silver plated soft brass.

4-DBM-1 - Equalizer for lf ant., install

B YF-1 FC-49-46 F5840-311-2474C1
SERIAL: 1-289

IDENTITY: A 20 mmfd capacitor is placed in series with the vertical antenna and relay K-201, from the junction of capacitor and relay is inductance L-203 in series with a 47 ohm resistor to ground.

1-DUUG-1B - Addition of New Interlock Micro-Switch

Correction material: TM for DUUG-1B and 1C - T-1 to NS93717

2-A FA or YF-8 NS981589 None

SERIAL: All

IDENTITY: Presence of a red and white wire running to the interlocks of the upper and lower units of the DUUG-1.

2-DUUG-1B - Replacement of Primary Power Fuses

Correction material: T-2 to NS93717

2-A FA-2 None

SERIAL: All

IDENTITY: Fuse identification plate attached to the lower chassis front panel under the primary fuse holders.

1-DUUG-1C - Same as 1-DUUG-1B

2-DUUG-1C - Same as 2-DUUG-1B

3-DUUG-1C - Replacement of Resistor

Correction material: None required

2-A FA-1 NS None

SERIAL: All

IDENTITY: Proper recording of field change number on Field Changes Accomplished plate.

1-OA-473/SLR - Nom chg OA-473/SLR to 9A-570/SLR
cont-ind C-1213/SLR; ampl cont AM-825/SLR

Correction material: T-2 to NS 91997(A)

1-A FA-3 NS98532 F5985-324-2066

SERIAL: 1-160

IDENTITY: New nameplates appear on AS-570 & C-1213.

1-OA-532/BLR-1 - Install dual rotary joint

1-A YF-20 NS98997 F5985-626-2319

SERIAL: Concurrent with installation of AN/WLR-3

IDENTITY: Modifies equip designation to OA-1903/BLR-1

1-OA-1903/BLR-1 - Replacement of Servo Amplifier with IF Synchro in C-1164/BLR-1

Correction material: T-3 to NS91974

2-A FA-12 NS981387 None

SERIAL: All

IDENTITY: Noting the Absence of the servo amplifier and the presence of an IF synchro in C-1164/BLR-1.

2-OA-1903/BLR-1 - Replacing Non-Polarized Connectors with Polarized Connectors

Correction material: T-2 to 91974

2-A FA-1/2 NS981579 None

SERIAL: AM-793/BLR-1, C-1164/BLR-1 in the OA-532/BLR-1 Antenna Group

IDENTITY: Presence of polarized connectors for J-4103 and J-4109

1-AO-6416/FRD-10A(V) - Change in Cabling

Correction material: T- to NS95744

2-A FA-1/4 NS None

SERIAL: Applies only to OA-6416/FRD-10A(V), channel watcher

IDENTITY: Position 1; other channel watcher positions not affected turning off the Power Supply PP-3950/FRD-10A(V) for the Azimuth Indicator and the Control Indicator and observing that this does not render the Angle Counter Inoperative.

2-OA-6416/FRD-10A(V) - Addition of Connector in Leads to the Airflyte Monitor Beam Selector Switch, used with Direction Finder Set AN/FRO-10(V)

Correction material: T- to NS95744

2-A FA-2 NS None

SERIAL: All used with AN/TRD-10A(V)

IDENTITY: Sliding the Repart Control Unit forward and observing that there is a connector installed in the leads to the Airflyte Monitor Beam Selector Switch.

1-PP-1092/U - Installation of thermal time delay relay in primary circuit of T-2.

Correction material:

2-A FA-2 NS None

SERIAL: Equipments when installed for use with AN/ARC-1, -1A

IDENTITY: Presence of a thermal time delay relay installed on the bottom of the power supply chassis adjacent to C-4.

COUNTERMEASURES**NAVSHIPS****900,000.7****FIELD CHANGE
IDENTIFICATION GUIDE****1-PU-383/M** - Improved Engine Speed Control and Shutdown

Correction material:

1-A YF-8 NS981492

SERIAL: 100 Navy owned equipments

IDENTITY: New solenoid valve attached to governor

Output and the Audio Level

1-R-839/FLR-2 - Minimizing Interaction Between the Video

Correction material: NS93148

2-A FA-1 NS981308 None

SERIAL: All

IDENTITY: Substitution of resistor R-124 (47K) with a 22K and a 16K resistor connected in series to the plate pin 6 of V-106.

1-R-839A/FLR-2 - Same as 1-R-839/FLR-2**1-R-839B/FLR-2** - Same as 1-R-839/FLR-2**1-R-839C/FLR-2** - Same as 1-R-839/FLR-2**1-X-RDJ** - Pulse Analyzer Operation, Improve

A FA-3 NS98876 None

SERIAL: 1-25

IDENTITY: R-201, 1.2 meg between hi side of horiz positioning cont R194A and R194B.

1-RDJ - Pulse analyzer operation, improve

A FA-2 NS98876 None

SERIAL: 1-250

IDENTITY: Ser 1-67 only, R-201, 1.2 meg, connected between R-194A and R-194B; high side of R-194A and R-192B connected to 150V DC unregulated supply. Ser 1-216 only: C-147 (between pin 5 of V-11) and position 2 & 3 of S-104B connected to pin 5 of V-111 and R-178. R-128 and R-129 replaced with 6800 ohm 2 watt resistors each. (All ser. nos. 1-250).

1-RDP - Sweep osc shaft extension

Correction material: See NS 98734

2-A FA- NS98734 None

SERIAL: All

IDENTITY: Allows adjust of osc-tuning slug thru access hole.

2-RDP - through **3-RDP** - Cancelled**4-RDP** - Reverse capacitor connections

Correction material: None

2-A FA-1 NS98258 F5820-321-2821

SERIAL: All

IDENTITY: Leads connecting C-105 to V-104 run parallel and connect to pins 3 & 6.

1-SA-1136/FRD-10A(V) - Corrects Excessive Cable and Connector Protrusion.

Correction material: None

2-A FA-4 NS0285-077- None
8000

SERIAL: All

1-SA-1137/FRD-10A(V) - Same as 1-SA-1136/FRD-10A(V)**1-66132(CAGW)** - Improved stub repl (makes 66132-A)

Correction material: None

A FA-1/2 NS98570 F5985-324-2065

SERIAL: All

IDENTITY: Base for new stub is approx. 7-1/2" wide.

Old one is 3-1/2" approx. New stub is fibre glass and old one is wood.