Statement of Work
for
Rebuild of the Radio Set, AN/GRC-193
NSN 5820-01-067-8359

SOW-01-847-2-07749A-1/1

Prepared by
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1.0 Scope. This Statement of Work (SOW) establishes and sets forth tasks and identifies the work efforts that shall be performed by the Contractor (for purposes of this SOW, Contractor is defined as the commercial or government entity performing the rebuild in the rebuild effort of the Radio Set. This document contains requirements to restore the Radio Set to Condition Code "A." Condition Code A is defined as "serviceable/issuable without qualification, new, used, repaired or reconditioned materiel which is serviceable and issuable to all customers without limitation or restriction, including materiel with more than 6 months shelf-life remaining."

1.1 Background. Rebuild is defined as "That maintenance technique to restore an item to a standard as near as possible to original or new condition in appearance, performance, and life expectancy. This is accomplished through a maintenance technique or complete disassembly of the item, inspection of all parts or components, repairs or replacement of worn or unserviceable elements using original manufacturing tolerances and/or specifications and subsequent reassembly of the items."

2.0 Applicable Documents. The following documents form a part of this SOW to the extent specified. Unless otherwise specified, the issues of these documents are those listed in the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto which is in effect on the date of solicitation. In the event of conflict between the documents referenced herein and the contents of this SOW, the contents of this SOW shall be the superseding requirement.

2.1 Military Standards.

MIL-STD-129	DoD Standard Practice for Military Marking
MIL-STD-2073-1C	DoD Standard Practice for Military Packaging

Military Standards (For Reference Only).

MIL-STD-973	Configuration Management

2.2 Other Government Documents and Publications. The issues of those documents cited below shall be used.

TM-07749A/07743-12/1A	Radio Set AN/GRC-193 Radio Set AN/MRC-138A System Instructions	Dec 1986 PCN 184 075260 00
TM-07749B-45/2 TM -115820-1045-34	General Support, Direct Support, & Depot Maintenance Manual	June 1992 PCN 184 077491 00

TM-07748A-45/2 TO31R2-2PR-104-2	Field Maintenance Instruction AN/PRC-104	Jan 1979 PCN 184 075258 00
TM-07748A-45/3	Maintenance Prints AN/PRC-104	Nov 1981 PCN 184 075259 00
SL-4-07748A TO31R2-2-PRC-104-4	Repair Parts List AN/PRC-104	Apr 1979 PCN 124 077480 00
SL-4-07743A/07749A	Repair Parts List For Radio Set AN/MRC-138 /GRC-193	Dec 1980 PCN 124 077430 00
Design Control Reference	Cage 14304	P/N 755017A1010
TM-4750-15/2	Painting and Registration Marking for Marine Corps Combat and Tactical Equipment	
Drawing 755017A1010	Radio Set, AN/GRC-193	
Drawing 755017A4010	Plate, Identification, Radio Set, AN/GRC-193	
TI-5820-25/22	Electromagnetic Enviroment Effects(E^3) Procedures for Installation of Communication Equipment on U.S. Marine Corps Platforms	PCN 168 047801 00
DOD 4000.25-1-M	MILSTRIP Manual	
NAVICPINST 4491.2A	Requisitioning of Contractor Furnished Material From The Federal Supply System	

2.3 Industry Standards.

ANSI/EIA 625	Requirements for Handling Electrostatic-Discharge Sensitive ESDS Devices
ANSI/ISO/ASQC Q9002-1994	Quality Systems-Model for Quality Assurance in Production, Installation and Servicing

Copies of Military Standards and Specifications are available from the DOD Single Stock Point, Defense Automation Production Service Philadelphia, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Telephone (215) 697-2179 or DSN 442-2179, or http://www.dodssp.daps.mil. Copies of other government documents and publications required

by contractors in connection with specific SOW requirements shall be obtained through the Weapon System Manager: Life Cycle Management Center, Attn: Code 847-2, 814 Radford Blvd. STE 20320, Albany, Georgia 31704-0320, commercial telephone number (912) 439- 6543 or DSN 567-6543. Copies of engineering drawings, if applicable, shall be obtained from Life Cycle Management Center, Attn: Code 825-3, 814 Radford Blvd. STE 20320, Albany, Georgia 31704-0320, commercial telephone number (912) 439-6410 or DSN 567-6410.

3.0 Requirements.

3.1 General Tasks. In fulfilling the specified requirements, the Contractor shall:

a. Provide materials, labor, equipment, facilities and missing/repair parts, necessary to inspect, diagnose, restore, and test and calibrate the Radio Set. Upon completion of rebuild, the subject item shall be Condition Code "A."

b. Conduct in-process and final on-site testing for witness by a Marine Corps authorized representative.

3.2 Detail Tasks. The following tasks describe the different phases for rebuild of the Radio Set.

3.2.1 Phase I- Pre-Induction. A pre-induction inspection analysis shall be performed for each Radio Set using the Contractor Facility's diagnosis, inspection and testing techniques to determine extent of work and parts required. These findings shall be annotated on the Pre-Induction Checklist (Appendix A).

3.2.2 Phase II -Rebuild. After pre-induction tests and inspections have been completed, repair of the Radio Set shall be accomplished in accordance with this SOW. Deficiencies noted on the Pre-Induction Checklist (Appendix A) during Phase I shall be repaired/replaced. Components or assemblies shall not be disassembled for replacement of parts unless that part has failed, or the component assembly wherein the part is located is disassembled for repair.

a. Data Plate. Each repaired Radio Set shall have a rebuild data plate affixed to the Radio Set in accordance with drawings 755017A4010 and 755017A1010.

b. Hardware.

(1) Replace broken, unserviceable and/or missing hardware including nuts, bolts, screws, washers, turn lock fasteners, mandatory replacement items, safety, and one-time use items, etc., in accordance with this SOW. Unserviceable would include any of the above that failed to function properly.

(2) Ensure proper hardware locking devices are present on all moving mechanical assemblies.

(3) Hardware normally supplied with commercial parts shall be used unless specifically prohibited.

3.2.3 Phase III - Inspection, Testing and Acceptance.

a. Inspection, Testing and Acceptance of the Radio Set shall be conducted in accordance with TM-07749A/07743-12/A; TM-07749B-45/2; TM-155820-1045-34; TM-07748A-45/2; TO31R2-2PR-104/2; TM-07748A-45/3; SL-4-07748A; TO31R2-2-PRC-104-4; SL-4-07743A/07749A; Design Control Reference, Cage 14304, P/N 755017A1010; Incorporate all current Engineering Change Proposals (ECPs) and Modification Instructions (MIs); TM-4750-15/2; Drawings 755017A4010 and 755017A1010; TI-5820-25/22.

b. The Contractor shall be responsible for conducting required tests and shall ensure all necessary personnel are notified prior to completion of the final acceptance. Acceptance tests shall be held at the contractor's facility, MCLB (Code 891), Albany, Georgia, representatives shall be given a minimum of two weeks notice prior to commencement of acceptance testing.

c. The Contractor shall be responsible for correcting any deficiencies identified during inspection/testing. MCLB (Code 891), Albany, Georgia, representatives may require the Contractor to repeat tests or portions thereof, if the original tests fail to demonstrate compliance with this SOW.

3.2.4 Packaging, Handling, Storage and Transportation (PHS&T)

a. The Contractor shall be responsible for preservation and packaging of equipment being repaired under the terms of this statement of work. Items being prepared for long term storage or shipment to overseas destinations shall be preserved and packaged in accordance with the level "A" requirements of MIL-STD-2073-1C, Appendix A., Table A.VI., Electronic Equipment. Items being prepared for domestic shipment and immediate use shall be to level "B" requirements.

b. Marking shall be in accordance with MIL-STD-129.

c. The Marine Corps will provide the contractor with the shipping address(es) for delivery of the rebuilt equipment. The contractor shall be responsible for arranging for shipment to the pre-designated site(s). The Marine Corps will be responsible for transportation costs associated with shipping the subject equipment to and from the Contractor.

3.3 Configuration Management.

3.3.1 Configuration Control. The contractor shall implement configuration control to established configuration items. The baseline configuration has been established in the Technical Data Package and applicable MIs and ECPs. Deviation from the established baseline configuration will not be allowed without the approval in writing from the Weapon

System/Equipment Manager (Code 847-2). If necessary to temporarily depart from the authorized configuration, the contractor shall prepare and submit a Request for Deviation/Request for Waiver. MIL-STD-973, paragraph 5.4.3 or 5.4.4 and Appendix E may be used as a guide.

3.4 Government Furnished Equipment (GFE)/Government Furnished Materiel (GFM). GFE is government owned equipment authorized by contract for use by a Commercial/Government Contractor. It is neither consumed during production not incorporated into any product. GFM is materiel furnished to a contractor that will be consumed during the course of production or incorporated into the product being manufactured/remanufactured under a contract/statement of work. In the event the Marine Corps does have GFE/GFM requirements the Management Control Activity (MCA/827-2), Marine Corps Logistics Bases, Albany, Georgia, will coordinate required GFE and will maintain a central control on Marine Corps assets in the Contractor's possession. The MCA will forward a GFE Accountability agreement to the Contractor Facility for signature to establish a chain of custody and property responsibilities for Marine Corps assets.

3.5 Contractor Furnished Materiel. The Marine Corps has adopted the Navy's procedures regarding Contractor Furnished Materiel (NAVICPINST 4491.2A). In the event that Contractor Furnished Materiel is required for repair parts, the contractor shall requisition through the DOD Supply System. DOD 4000.25-1-M, (MILSTRIP) Chapter 11 authorizes contractors to requisition through the DOD Supply System will be responsible for transportation costs associated with shipping the Radio Set to the Contractor. The Contractor shall be responsible for shipment of the Radio Set to a pre-designated site. MCLB Albany, GA, Code 847-2, (912) 439-6544 or DSN 567-6544, will provide shipping instructions to the contractor.

3.6 Electrostatic Discharge (ESD) Control Program. The contractor shall establish, implement and document an ESD control program following the guidelines provided in EIA-625. ESD protective measures shall be used during manufacturing, handling, inspection, test, marking, packaging, storing and transporting ESD sensitive components.

3.7 Electromagnetic Environmental Effects (E3) Procedures. The Contractor shall plan for and use proper (E3) control procedures in the Rebuild process and shall utilize TI-5820-25/22 in conjunction with the detailed requirements specified in this document.

3.8 Quality Assurance Provisions.

The Contractor shall provide and maintain a Quality System that as a minimum, adheres to the requirements of ANSI/ISO/ASQC Q9002-1994, Quality System Model for Quality Assurance in Production, Installation, and Servicing. The program shall ensure quality throughout all areas to include fabrication, processing, assembly, inspection, test, maintenance, and preparation for delivery and shipping. Unless otherwise specified in the contract, the contractor shall be responsible for performance of all inspection requirements. The Government reserves the right to perform any of the inspections set forth in the contract where such inspections are deemed necessary to assure products and services conform to the prescribed requirements. The

Contractor shall provide an Inspection and Test Plan that will ensure the Radio Set will meet or exceed the original performance characteristics of the Radio Set.

3.9 Acceptance.

The performance of the Contractor and the quality of work delivered, including all equipment furnished and documentation written or compiled, shall be subject to in-process review and inspection during performance. Inspection may be accomplished in-plant or at any work site or location, and Marine Corps representatives shall be permitted to observe the work or to conduct an inspection. Final inspection and acceptance testing shall be conducted at the Contractor's Facility. Final acceptance shall be conducted on 100 percent of items to verify that the units meet all requirements.

3.10 Rejection.

Failure to comply with any of the specified requirements listed herein shall be reason for rejection by MCLB (Code 891), Albany, representative. The Contractor shall, at no additional cost to MCLB, Albany, Georgia, correct the deficiencies and repeat the verification until an acceptable compliance with acceptance test procedures is demonstrated.

Pre-Induction Checklist
AN/GRC-193

1. Using the following criteria, inspect the items listed below.

   a. Refer to SOW-8352-08770A-1/1 for HMMWV inspection checklist.
   b. Inspect for dirt, dust, sand, etc.
   c. Inspect for rust and/or corrosion damage.
   d. Inspect for any physical damage to different units. (cuts, dents, cracks, broken pins, etc.)
   e. Ensure that all screws, washers, nuts, bolts, etc. are attached.
   f. Inspect for dry rot on all rubber and plastic components.
   g. Ensure that all covers and caps are attached.
   h. Ensure that all knobs, switches and breakers operate freely and properly.
   I. Inventory for accountability.

S - Serviceable **U** - Unserviceable **M** - Missing

Rack Assembly and Hardware:	Qty	Condition	Remarks
1. Rack, Electrical Equipment, MT-6014	1	_____	_____
2. MT-4874/URC, RT-1209 & AM-6879 mount	1	_____	_____
3. RT 1209 Clamps	2	_____	_____
4. AM-6879 Clamps	2	_____	_____
5. MT-4495, CU-2064 mount	1	_____	_____
6. Coupler hold down clamps, bolted down, fixed.	2	_____	_____
7. Coupler hold down clamps, thumb screw, adj.	2	_____	_____
8. MT-4497, AM-6545 mount	1	_____	_____
9. Amplifier hold down clamps, bolted down, fixed.	2	_____	_____
10. Amplifier hold down clamps, thumb screw, adj.	2	_____	_____
11. Hanger, Fiberglass, for W5, Coupler coax cable	1	_____	_____

Cable Assemblies:			
1. W3, Power Supply PP-7333 to AM6545	1	_____	_____
2. W1, RF, AM-6545 to AM-6879	1	_____	_____
3. W2, Audio, RT-1209 to AM-6879	1	_____	_____
4. W1, Pwr/Control and RF, RT-1209 to AM-6879	1	_____	_____
5. W6, Pwr/Control., AM-6545 to CU-2064	1	_____	_____
6. W7, KY-65 to AM-6879	1	_____	_____
7. W2, Pwr/Control, AM-6879 to AM-6545	1	_____	_____
8. W5, RF, CU-2064-AM-6545	1	_____	_____
9. W14, KY-65 to AM-6545	1	_____	_____
10. High Voltage RF, CU-2064 to Antenna	1	_____	_____

CU-2064 Antenna Coupler Inventory/Serviceabilty Check:		
1. 50 Ohm Antenna Connector, J3	_____	_____

2. Pressure relief valve _____ _____
3. Whip Antenna Connector, J4 _____ _____
4. Ground Studs, w/wingnuts _____ _____
5. CONT Connector, J2 _____ _____
6. RF Connector, J1 _____ _____
7. Fan Intake _____ _____
8. Flag Switch _____ _____
9. Handles _____ _____
10. Chassis _____ _____

AM 6545 Power Amplifier Inventory/Serviceability Check:

1. Meter, M1 _____ _____
2. RDY Light, DS1 _____ _____
3. XMT Light, DS2 _____ _____
4. TUN Light, DS3 _____ _____
5. FIL Fault Light, DS4 _____ _____
6. PA Fault Light, DS5 _____ _____
7. CPLR Fault Light, DS6 _____ _____
8. Fan Intake _____ _____
9. FAN/LAMP TEST Switch _____ _____
10. RF Connector, J5 _____ _____
11. PWR Connector, J3 _____ _____
12. RT CONT Connector, J2 _____ _____
13. CB1, Circuit Breaker _____ _____
14. ANT/CPLR CONT Connector, J1 _____ _____
15. ANT/CPLR RF Connector, J4 _____ _____
16. Handles _____ _____
17. Chassis _____ _____

RT 1209 Receiver/Transmitter Inventory/Serviceability check:

1. MODE Switch, (V REC, V TR, D TR, D REC), S8 _____ _____
2. ON/OFF VOLUME Switch, S9/R1 _____ _____
3. LIGHT, S10 _____ _____
4. SB Switch, (LSB, USB) S7 _____ _____
5. Audio Connector, A2J1 and A2J2 _____ _____
6. Frequency Selector Pushbutton Switch, S1-S6 _____ _____
7. RT Connector, J1 _____ _____
8. Handles _____ _____
9. Chassis _____ _____

AM-6879 Amplifier-Converter Inventory/Serviceability Check:

1. Speaker, LS1 _____ _____

2.	Adjust Knob, R2	_____	_____
3.	Selector Switch, S3	_____	_____
4.	Meter Jacks, TP1 and TP2	_____	_____
5.	TTY/OFF/SPKR Switch, S1	_____	_____
6.	Audio/Handset Connector, J1 and J2	_____	_____
7.	3 Amp Fuse, F1	_____	_____
8.	On/Off/Squelch Switch, S2/R1	_____	_____
9.	TTY Key Binding Post, E1 and E2	_____	_____
10.	DC Loop Binding Post, E3 and E4	_____	_____

AT-1011/U Antenna Inventory/Serviceability Check:		Qty	Condition	Remarks
1.	Antenna Element, AT-1043	4	_____	_____
2.	Antenna Element, AT-1039	1	_____	_____
3.	Antenna Element, AT-1042	1	_____	_____
4.	Antenna Element, AT-1040	1	_____	_____
5.	Antenna Element, AT-1041	1	_____	_____
6.	Antenna Mast Plate, MT-26525	1	_____	_____
7.	Antenna Case, Cotton	1	_____	_____
8.	Antenna Cover, Safety	1	_____	_____

Accessories Inventory/Serviceability Check:		Qty	Condition	Remarks
1.	Adapter, Antenna to Antenna Base (NVIS)	1	_____	_____
2.	Case, Accesory	1	_____	_____
3.	Handset, H250A	1	_____	_____
4.	CW Key, Telegraph	1	_____	_____
5.	Lead, Electrical	1	_____	_____

CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Form Approved
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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP ____ TM ____ OTHER X

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
Radio Set, AN/GRC-193		

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A001	Request For Deviation	Configuration Management

4. AUTHORITY (Data Acquisition Document No.)	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-CMAN-80640B	SOW 3.3.1	MCLBA (825)

7. DD 250 REQ	8. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT		ASREQ	SEE BLK 16

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
A		

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
MCLBA (825-2)	0	1	0
15. TOTAL →	0	1	0

16. REMARKS

Blk 4 - Contractor format is authorized.

Blks 10 & 12 - RFDs shall be submitted to obtain authorization to deliver nonconforming material which does not meet prescribed configuration documentation.

RFDs will be reviewed and disposition determined within 30 calendar days upon receipt by the Government.

RFDs shall be transmitted via E-Mail to the following address: mbmatcomconfigmngmnt@matcom.usmc.mil

Distribution Statement A: Approved for public release, distribution is unlimited

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
Gene Collins	18 Jan 00	Robert A Edwards	000302

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CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

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D. SYSTEM/ITEM: Radio Set, AN/GRC-193	E. CONTRACT/PR NO.	F. CONTRACTOR

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
A002	Request For Waiver	Configuration Management	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE	18. ESTIMATED TOTAL PRICE
DI-CMAN-80641B	SOW 3.3.1	MCLBA (825)	

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT		ASREQ	SEE BLK 16
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
	A		

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14. DISTRIBUTION

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Gene Collins	18Jan00	Robert H. Edwards	000302

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