

TECHNICAL MANUAL

**ORGANIZATIONAL MAINTENANCE REPAIR PARTS
AND SPECIAL TOOLS LIST**

FOR

**NAVIGATIONAL SETS, TACAN
AN/ARN-103(V)1 (NSN 5826-00-167-1027)
AND
AN/ARN-103(V)2 (NSN 5826-00-167-1026)**



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AND
AN/ARN-103(V)2 (NSN 5826-00-167-1026)**

Current as of 3 April 1980

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 20282 located in back of this manual direct to: Commander, US Army Communications and Electronics Materiel Readiness Command, ATTN: DRSELME-MQ, Fort Monmouth, New Jersey 07703.

In either case, a reply will be furnished direct to you.

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0101 Chassis Assembly (Unit 1) (No parts authorized)		
0102 Blower Assembly (1BI) (See Group 01 for listing of parts)		
0103 Power Amplifier/Modulator Assembly (1A1) (No parts authorized)		
010301 Tube Assemblies (1A2V1 thru 1A1V4) (No parts authorized)		
010302 Modulator Driver Subassembly (1A1A6) (No parts authorized)		
010303 Filament Regulator Assembly (1A1A7) (No parts authorized)		
0104 Receiver Assembly (1RE1) (No parts authorized)		
010401 Amplifier, 2nd IF (1RE1R2) (No parts authorized)		
010402 CCA, Self Test Yig Tuning (1RE1A1) (No parts authorized)		
010403 Amplifier, 1st IF (1RE1AR1) (No parts authorized)		
0105 Power Supply (1PS1) (No parts authorized)		
010501 CCA, High Voltage (1PS1A6) (No parts authorized)		
010502 Capacitor-Diode Assembly (1PS1A2) (No parts authorized)		
010503 CCA, Power Supply (1PS1A1) (No parts authorized)		
010504 Heat Exchange (1PS1A5) (No parts authorized)		
010505 Capacitor Assembly (1PS1A3) (No parts authorized)		
010506 Diode Assembly (1PS1A4) (No parts authorized)		
010507 CCA, Power Supply (1PS1A7) (No parts authorized)		
0106 Module Assembly, Decoder (1A3) (No parts authorized)		
010601 CCA, Fast AGC Amplifier (1A3A1A3) (No parts authorized)		
010602 CCA, AGC Sampling Amplifier (1A3A1A5) (No parts authorized)		
010603 CCA, 135 Cycle Filter (1A3A1A7) (No parts authorized)		
010604 CCA, 15 Cycle Filter (1A3A1A9) (No parts authorized)		
010605 CCA, Pulse Height Detector (1A3A1A11) (No parts authorized)		
010606 CCA, Slow AGC Amplifier (1A3A1A13) (No parts authorized)		
010607 CCA, Pulse Space Decoder No. 3 (1A3A1A14) (No parts authorized)		
010608 CCA, Data Rate Limiter (1A3A1A12) (No parts authorized)		

*This manual, together with TM 11-5826-243-34P, 31 July 1980, supersedes TM 11-5826-243-24P, 28 March 1974.

Group	Illus Page	Figure
010609		CCA, ID Tone-Driver (1A3A1A10) (No parts authorized)
010610		CCA, Pulse Spacer Decoder No. 1 (1A3A1A8) (No parts authorized)
010611		CCA, Pulse Space Decoder No. 4 (1A3A1A6) (No parts authorized)
010612		CCA, Pulse Space Decoder No. 2 (1A3A1A4) (No parts authorized)
010613		CCA, Pulse Space Counter No. 2 (1A3A1A2) (No parts authorized)
010614		Decoder Connector Board (1A3A1A1) (No parts authorized)
0107		Module Assembly, Internal Control (1A4) (No parts authorized)
010701		CCA, Control Logic No. 1 (1A4A1A3) (No parts authorized)
010702		CCA, Register Storage No. 1 (1A4A1A5) (No parts authorized)
010703		CCA, Register Storage No. 2 (1A4A1A7) (No parts authorized)
010704		CCA, Input, Clock Generator and 6.3V Reference (1A4A1A9) (No parts authorized)
010705		CCA, D/A Converter No. 1 (1A4A1A11) (No parts authorized)
010706		CCA, D/A Converter No. 2 (1A4A1A13) (No parts authorized)
010707		CCA, Resistor Network (1A4A1A14) (No parts authorized)
010708		CCA, Antenna Switching (1A4A1A12) (No parts authorized)
010709		CCA, D/A Converter Output (1A4A1A10) (No parts authorized)
010710		CCA, Data Rate Decision (1A4A1A8) (No parts authorized)
010711		CCA, Threshold Detector (1A4A1A6) (No parts authorized)
010712		CCA, Register Storage No. 3 (1A4A1A4) (No parts authorized)
010713		CCA, Control Logic No. 2 (1A4A1A2) (No parts authorized)
010714		Internal Control Connector Board (1A4A1A1) (No parts authorized)
0108		Module Assembly, Bearing Computer (1A5) (No parts authorized)
010801		CCA, 1440 Counter Output Register No. 1 (1A5A1A3) (No parts authorized)
010802		CCA, 540 Cycle VCO (1A5A1A5 and 1A5A1A11) (No parts authorized)
010803		CCA, 15 Cycle Loop No. 2 (1A5A1A7) (No parts authorized)
010804		CCA, 15 Cycle Lock Detector (1A5A1A9) (No parts authorized)
010805		CCA, 15 Cycle Loop No. 1 (1A5A1A13) (No parts authorized)
010806		CCA, Shift Driver (1A5A1A15) (No parts authorized)
010807		CCA, Reference Loop Lock Detector (1A5A1A14) (No parts authorized)
010808		CCA, 135 Cycle Loop No. 1 (1A5A1A12) (No parts authorized)
010809		CCA, 135 Hz Lock Detector (1A5A1A10) (No parts authorized)
010810		CCA, 135 Cycle Loop No. 2 (1A5A1A8) (No parts authorized)
010811		CCA, 21.6K Cycle VCO (1A5A1A6) (No parts authorized)
010812		CCA, Reference Burst Loop (1A5A1A4) (No parts authorized)
010813		CCA, 1440 Counter Output Register No. 1 (1A5A1A2) (No parts authorized)
010814		Bearing Computer Connector Board (1A5A1A1) (No parts authorized)
0109		Module Assembly, Range Computer (1A6) (No parts authorized)
010901		CCA, Range Counter No. 1 (1A6A1A3) (No parts authorized)
010902		CCA, Range Counter No. 2 (1A6A1A5) (No parts authorized)
010903		CCA, Delay Counter (1A6A1A7) (No parts authorized)
010904		CCA, Preset Logic (1A6A1A9) (No parts authorized)
010905		CCA, PRF Generator (1A6A1A11) (No parts authorized)
010906		CCA, HFC Zero Logic (1A6A1A13) (No parts authorized)
010907		CCA, Control Counter (1A6A1A15) (No parts authorized)
010908		CCA, Track Integrator (1A6A1A14) (No parts authorized)
010909		CCA, VCO (1A6A1A12) (No parts authorized)
010910		CCA, Track Loop No. 2 (1A6A1A10) (No parts authorized)
010911		CCA, Track Loop No. 1 (1A6A1A8) (No parts authorized)
010912		CCA, Majority Decision (1A6A1A6) (No parts authorized)
010913		CCA, Range Limiter Shift Memory (1A6A1A4) (No parts authorized)
010914		CCA, Range Delay (1A6A1A2) (No parts authorized)
010915		Range Computer Connector Board (1A6A1A1) (No parts authorized)
0110		Frequency Synthesizer Assembly (1A2) (No parts authorized)
011001		Power AmplifierX3 Multiplier Assembly (1A2A7) (No parts authorized)
01100101		CCA, Power Amplifier/X3 Multiplier (1A2A7A1) (No parts authorized)
01100102		CCA, Power Amplifier (1A2A7A2) (No parts authorized)
011002		CCA, Frequency Generator Control Divider (1A2A2) (No parts authorized)
011003		CCA, Loop Control (1A2A3) (No parts authorized)
011004		CCA, Power Supply Self Test (1A2A4) (No parts authorized)
011005		CCA, Oscillator Converter (1A2A5) (No parts authorized)
011006		Oscillator Buffer Amplifier Assembly (1A2A6) (No parts authorized)
01100601		CCA, Buffer Amplifier (1A2A6A1) (No parts authorized)
01100602		CCA, VCO High Frequency (1A2A6A3) (No parts authorized)

Group	01100605	CCA, Divide by 2 VCO Buffer (1A2A6A5) (No parts authorized)	
	011007	Frequency Synthesizer Connector Board (1A2A1) (No parts authorized)	
	01100603	CCA, Isolation Amplifier (1A2A6A2) (No parts authorized)	
	01100604	CCA, Divide by 4 VCO Buffer (1A2A6A4) (No parts authorized)	
	0111	Module Assembly, Self Test (1A7) (No parts authorized)	
	011101	CCA, Frequency Divider (1A7A1) (No parts authorized)	
	011102	CCA, Modulator (1A7A2) (No parts authorized)	
	011103	CCA, Signal Processor (1A7A3) (No parts authorized)	
	011104	CCA, Range and Bearing Zero Check (1A7A4) (No parts authorized)	
	011105	CCA, Display Driver (1A7A5) (No parts authorized)	
	011106	CCA, Go, No Go Logic (1A7A6) (No parts authorized)	
	011107	CCA, Routine Control (1A7A7) (No parts authorized)	
	011108	CCA, Pattern Decoder (1A7A8) (No parts authorized)	
	011109	CCA, Ring Counter (1A7A9) (No parts authorized)	
	011110	Self Test Interconnect Board (1A7A10) (No parts authorized)	
	011111	Oscillator Assembly 63 MHz (1A7Y1) (No parts authorized)	
	0112	Cable Assemblies (1W1 thru 1W9) (No parts authorized)	
	0113	Circulator Four Part, Coaxial (LHY1) (No parts authorized)	
	0114	Coupler, Dual-Low Pass Filter (1FL1) (No parts authorized)	
02	Converter, Signal Data CV-29241ARN-103(V)	(No parts authorized)	
	0201	Chassis Assembly, Converter (4A2) (No parts authorized)	
	020101	Electronic Component Assembly, Converter (4A2A2) (No parts authorized)	
	0202	Range Coupler Assembly Module (4DC2) (No parts authorized)	
	020201	CCA, Driver (4DC2A2) (No parts authorized)	
	020202	CCA, D/A Converter SVO Amplifier (4DC2A1) (No parts authorized)	
	020203	Mechanical Assembly, Range Coupler (4DC2A4) (No parts authorized)	
	0203	Bearing Coupler (4DC1) (No parts authorized)	
	020301	CCA, Driver Phase Detector (4DC1A2) (No parts authorized)	
	020302	CCA, D/A Converter SVO Amplifier (4DCiA1) (No parts authorized)	
	020303	Mechanical Assembly, Bearing Coupler (4DC1A4) (No parts authorized)	
	0204	Interface Assembly, Module (4A3) (No parts authorized)	
	020401	CCA, Request Decoder and Data Input (4A3A1A2) (No parts authorized)	
	020402	CCA, Control Logic (4A3A1A3) (No parts authorized)	
	020403	CCA, Decoder and Transfer Logic (4A3A1A5) (No parts authorized)	
	020404	CCA, Data Multiplexer (4A3A1A6) (No parts authorized)	
	020405	CCA, Control Word Storage (4A3A1A7) (No parts authorized)	
	020406	CCA, Data Transfer to Storage (4A3A1A8) (No parts authorized)	
	020407	CCA, Level Converter (4A3A1A4) (No parts authorized)	
	020408	Digital Interface Connector Board (4A3A1A3) (No parts authorized)	
	0205	Buffer Module Assembly (4A1) (No parts authorized)	
	020501	CCA, Buffer (4A1A1) (No parts authorized)	
	0206	Signal Adapter U[W CV-2924/ARN-103(V) (4A3) (No parts authorized)	
03	Control, Navigational Set C-8968/ARN-103(V)	(Unit 3) (No parts authorized)	
	0301	Serial Data Generator (3A1) (No parts authorized)	
	0302	5 VDC Driver Electronic Component Assembly (3A2) (No parts authorized)	
04	Mount MT-4411/ARN-103(V)	(Unit 2) (No parts authorized)	
	0401	Adapter Assembly P/O MT-4411/ARN-103(V) (2A1) (No parts authorized)	
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**SECTION I
INTRODUCTION**

1. Scope

This manual lists spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE), and other special support equipment required for performance of organizational maintenance of the AN/ARN-103(V)1 and AN/ARN-103(V)2. It authorizes the requisitioning and issue of spares and repair parts as indicated by the source and maintenance codes.

2. General

This Repair Parts and Special Tools List is divided into the following sections:

a. Section II. Repair Parts List. A list of spares and repair parts authorized for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in numeric sequence, with the parts in each group listed in figure and item number sequence.

b. Section III. Special Tools List. Not applicable.

c. Section IV. National Stock Number) and Part Number Index. A list, in National item identification number (NIIN) sequence, of all National stock numbers (NSN) appearing in the listings, followed by a list, in alphameric sequence, of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance.

3. Explanation of Columns

a. Illustration. This column is divided as follows:

(1) Figure number. Indicates the figure number of the illustration on which the item is shown.

(2) Item number. The number used to identify item called out in the illustration.

b. Source, Maintenance, and Recoverability (SMIR) Codes.

(1) Source code. Source codes indicate the manner of acquiring support items for maintenance, repair, or overhaul of end items. Source codes are entered in the first and second positions of the Uniform SMR Code format as follows:

<i>Code</i>	<i>Definition</i>
PA -	Item procured and stocked for anticipated or known usage.
PD -	Support item, excluding support equipment, procured for initial issue or outfitting and stocked only for subsequent or additional initial issues or outfittings. Not subject to automatic replenishment.

NOTE

Cannibalization or salvage may be used as a source of supply for any items source coded above except those coded XA and aircraft support items as restricted by AR 700-42.

(2) *Maintenance code.* Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the Uniform SMR Code format as follows:

(a) The maintenance code entered in the third position will indicate the lowest maintenance level authorized to remove, replace, and use the support item. The maintenance code entered in the third position will indicate one of the following levels of maintenance:

<i>Code</i>	<i>Application/Explanation</i>
O -	Support item is removed, replaced, used at the organizational level.

(b) The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i.e., all authorized maintenance functions). This position will contain one of the following maintenance codes:

<i>Code</i>	<i>Application/Explanation</i>
H -	The lowest maintenance level capable of complete repair of the support item is the general support level.
D -	The lowest maintenance level capable of complete repair of the support item is the depot level.
Z -	Nonreparable. No repair is authorized.

(3) *Recoverability code.* Recoverability codes are assigned to support items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the Uniform SMR Code format as follows:

<i>Recoverability codes</i>	<i>Definition</i>
Z -	Nonreparable item. When unserviceable, condemn and dispose at the level indicated in position 3.
D -	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal not authorized below depot level.
L -	Reparable item. Repair, condemnation, and disposal not authorized below depot/specialized repair activity level.

c. National Stock Number. Indicates the National stock number assigned to the item and will be used for requisitioning purposes.

d. Part Number. Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

NOTE

When a stock numbered item is requisitioned, the repair part received may have a different part number than the part being replaced.

e. Federal Supply Code for Manufacturer (FSCM). The FSCM is a 5-digit numeric code listed in SB 708-42 which is used to identify the manufacturer, distributor, or Government agency, etc.

f. Description. Indicates the Federal item name and, if required, a minimum description to identify the item.

g. Unit of Measure (U/M). Indicates the standard of the basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr, etc). When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

h. Quantity Incorporated. Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly.

4. Special Information

a. The following publication pertains to the AN/ARN-103(V)1 and AN/ARN-103(V)2 and their components: TM 11-5826-243-20, Navigational Set, TACAN AN/ARN-103(V)

b. The illustrations in this manual are identical to those published in TM 11-5826-243-34P. Only those parts assigned the third position SMR maintenance code "C" or "O" are listed in the tabular listing; therefore, there may be a break in the item number sequence. Only illustrations containing organizational authorized items appear in this manual.

5. How to Locate Repair Parts

a. When National stock number or part number is unknown.

(1) First. Using the table of contents, determine the functional group within which the item belongs. This is necessary since illustrations are prepared for functional groups and listings are divided into the same groups.

(2) Second. Find the illustration covering the functional group to which the item belongs.

(3) Third. Identify the item on the illustration and note the illustration figure and item number of the item.

(4) Fourth. Using the Repair Parts Listing, find the figure and item number noted on the illustration.

b. When National stock number or part number is known.

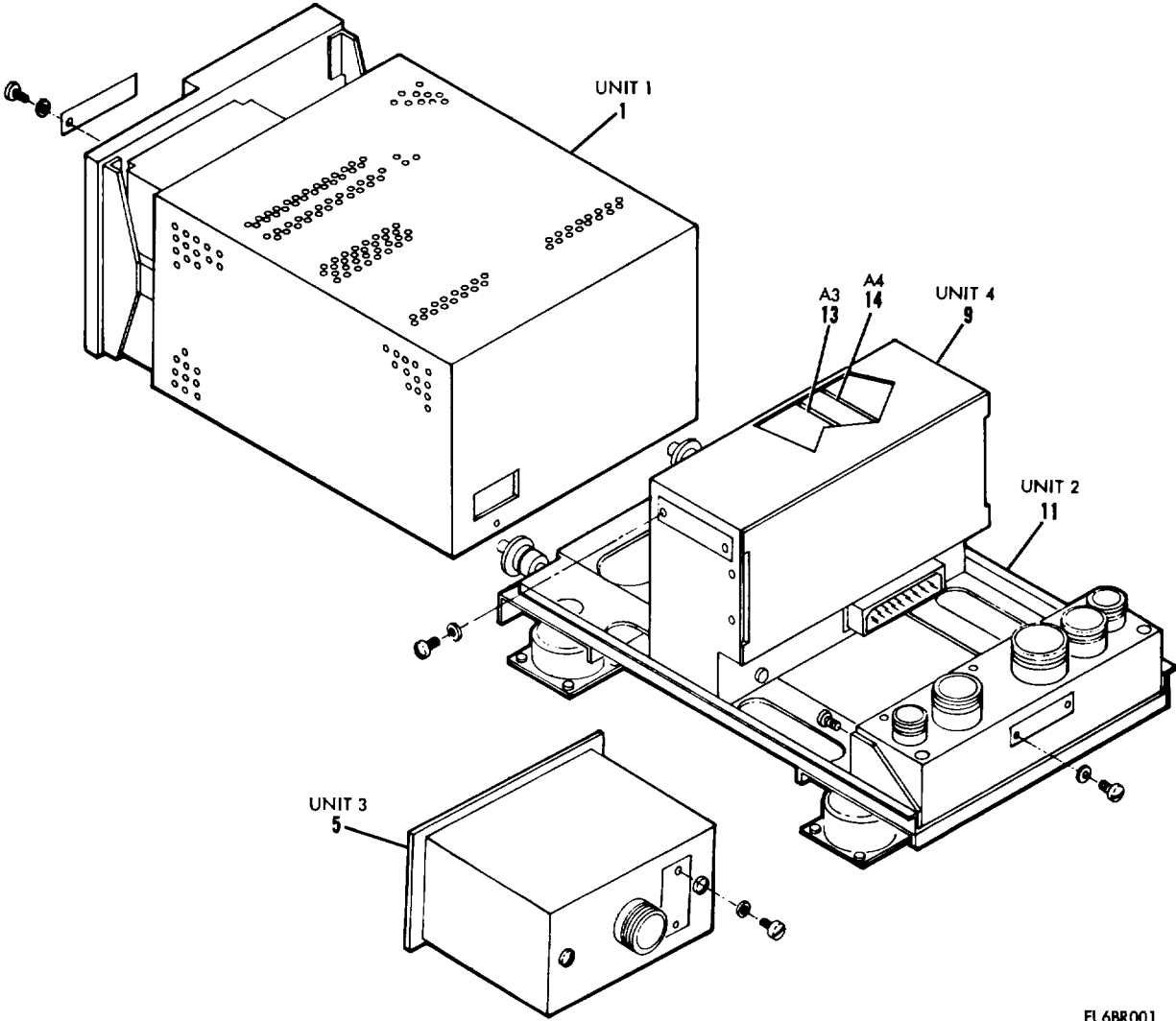
(1) First. Using the Index of National Stock Numbers and Part Numbers, find the pertinent National stock number or part number. This index is in NIIN sequence followed by a list of part number in alphameric sequence, cross-referenced to the illustration figure number and item number.

(2) Second. After finding the figure and item number, locate the figure and item number in the repair parts list.

6. Abbreviations

Not applicable.

(Next printed page is 4)



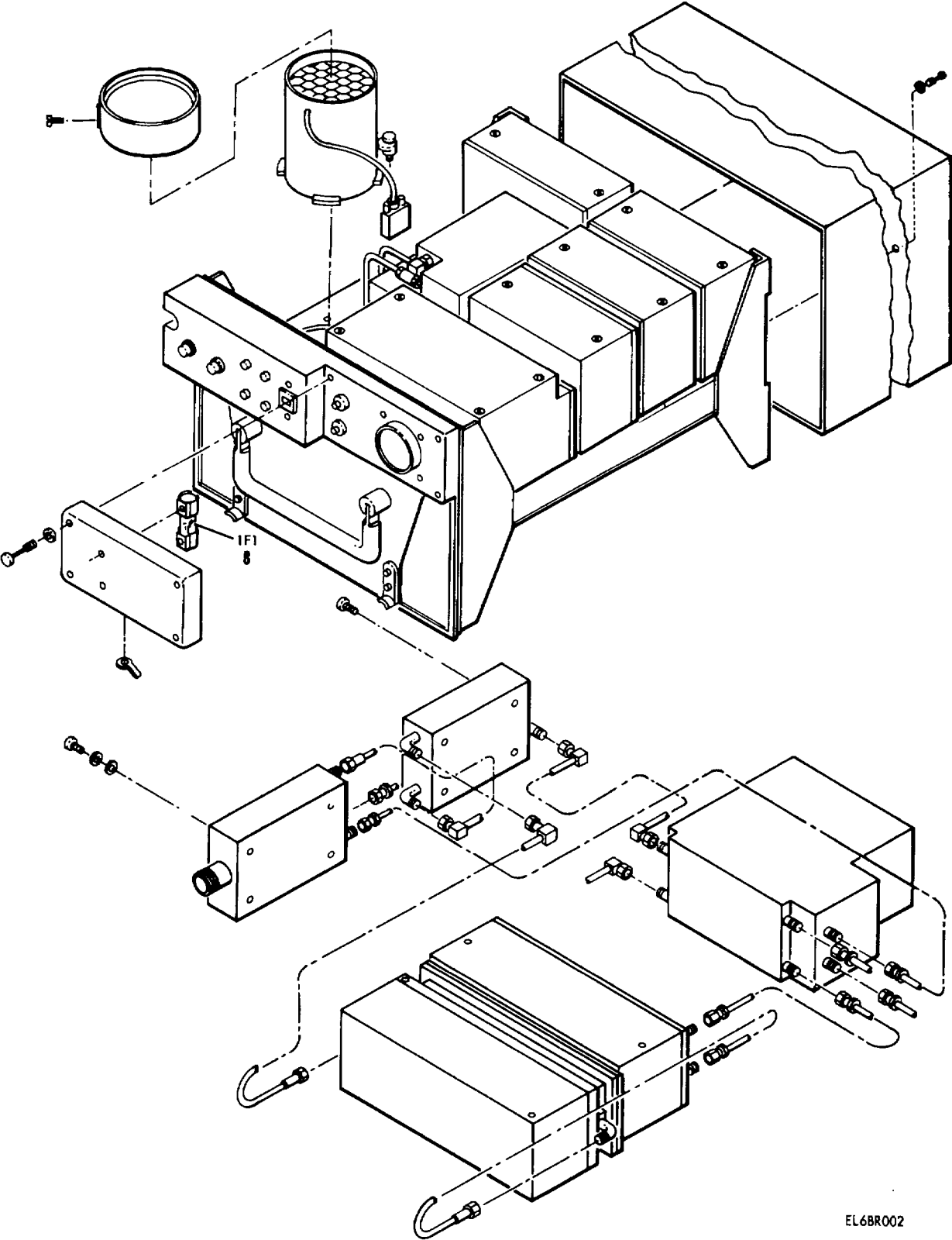
EL6BR001

Figure 1. Navigational Set, TACAN AN/ARN-103(V)1, (V)2.

SECTION II

TM 11-5826-243-20P

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	QTY INC IN UNIT
1	1	PDODD	5826-00-626-8731	RT-10ST/ARN-103(V)	80058	GROUP 00 NAVIGATIONAL SET TACAN AN/AR-103 V1, VZ RECEIVER-TRANSMITTER TACAN RT-1057/ARN-103(V 41)	EA	1
1	5	PDODL	5826-00-586-6177	C-896B/ARN-103(V)	80058	CONTROL, NAVIGATIONAL SET.C-8968/ARN-103(J 31)	EA	1
1	9	PDODD	5826-00-565-0226	CV-2924(P)ARN-103(V)	80058	CONVERTER, SIGNAL DATA CV-2924(P/ARN-103(V) 4)	EA	1
1	11	PAOHD	5826-0-626-8730	MT-4411/ARN-103(V)	80058	MOUNT, T-4411/ARN-103(V) (2)	EA	1
					5			



EL68R002

Figure 2. Receiver-Transmitter, TACAN RT-1057/AREN-10.3(V).

SECTION II

TM 11-5826-243-20P

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION USABLE ON CODE	U/M	QTY INC IN UNIT
2	8	PAOZZ	5920-01-006-2768	F02B125V4A	81349	GROUP 01 RECEIVED TRANSMITTER TACAN RT-1057/ARN-103 V1, V2 FUSE, CARTRIDGE	EA	1
					7			

SECTION IV

TM 11-5826-243-20P

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

STOCK NUMBER	FIGURE NO.	ITEM NO.	STOCK NUMBER	FIGURE. NO.	ITEM NO.
5826-00-565-0226	1	9	5826-00-626-8731	1	1
5826-00-586-6177	1	5	5920-01-006-2768	2	8
5826-00-626-8730	1	11			

PART NUMBER	FSCM	FIG. NO.	ITEM NO.	PART NUMBER	FSCM	FIG. NO.	ITEM NO.
C-8968/ARN-103(V)	80058	1	5	NT4411/ARN-103(V)	80058	1	11
CV-292(P)ARN-103(V	80058	1	9	RT-1057/ARTN-103V)	80058	1	1
F02B125V4A	81349	2	8				

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