TM 11-6625-2414-15

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT,

AND GENERAL SUPPORT MAINTENANCE MANUAL

TEST FACILITIES KIT

MK-1191/AR

This copy is a reprint which includes current pages from changes 1 through 4.

HEADQUARTERS, DEPARTMENT OF THE ARMY

OCTOBER 1969

WARNING

Test Facilities Kit MK-1191/AR weighs 120 pounds. Be CAREFUL! Two persons required for three foot or *lower* lift. Four people are required when the MK-1191/AR must be carried more than five steps.

5 SAFETY STEPS TO FOLLOW IF SOMEONE IS THE VICTIM OF ELECTRICAL SHOCK

1 DO NOT TRY TO PULL OR GRAB THE INDIVIDUAL

2 IF POSSIBLE, TURN OFF THE ELECTRICAL POWER

3 IF YOU CANNOT TURN OFF THE ELECTRICAL POWER, PULL, PUSH, OR LIFT THE PERSON TO SAFETY USING A WOODEN POLE OR A ROPE OR SOME OTHER INSULATING MATERIAL

4 SEND FOR HELP AS SOON AS POSSIBLE

5 AFTER THE INJURED PERSON IS FREE OF CONTACT WITH THE SOURCE OF ELECTRICAL SHOCK, MOVE THE PERSON A SHORT DISTANCE AWAY AND IMMEDIATELY START ARTIFICIAL RESUSCITATION

CHANGE
No. 4

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, *27 January 1983*

OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL TEST FACILITIES KIT MK-1191/AR (NSN 6625-00-179-2528)

TM 11-6625-2414-15, 17 October 1969, is changed as follows:
1. Title of the manual is changed as shown above.
2. New or changed material is indicated by a vertical bar in the margin of the page.
3. Remove and insert pages as indicated below:

Remove pages	*Insert pages*
None	A and B
i through iii	i through iii
1-1 and 1-2	1-1 and 1-2
2-1 and 2-2	2-1 and 2-2
3-1 and 3-2	3-1 and 3-2
A-1	A-1 through A-3
C-1through C-5	C-1through C-6

4. File this change sheet in front of the publication for reference purpose.

By Order of the Secretary of the Army:

E. C. MEYER
General, United States Army
Chief of Staff

Official:

ROBERT M. JOYCE
Major General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-36A, Organizational Maintenance requirements for MK-1191/AR.

TECHNICAL MANUAL
No. 11-6625-2414-15

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 17 October 1969

Operator's, Organizational, Direct Support, and General Support Maintenance Manual
TEST FACILITIES KIT MK-1191/AR
(NSN 6625-00-179-2528)

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 or DA Form 2028 (Recommended Changes to Publications and Blank Forms), direct to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: DRSEL-ME-MP, Fort Monmouth, NJ 07703.

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

LIST OF ILLUSTRATIONS

LIST OF ILLUSTRATIONS—Continued

CHAPTER 1
INTRODUCTION

Section 1. GENERAL

1-1. Scope

a. This manual describes Test Facilities Kit MK-1191/AR (fig. 1-1, 1-2) and provides instructions for installation, operation and maintenance. Included are instructions for use under usual conditions, cleaning and inspection of the equipment, and replacement of parts available to the operator and organizational repairmen.

b. Three appendices are included in this manual

(1) Appendix A, References.

(2) Appendix B, Basic issue items list.

(3) Appendix C, Maintenance allocation chart.

1-2. Consolidated Index of Army Publications and Blank Forms

Refer to the latest issue of DA Pam 310-1 to determine whether there are new editions, changes or additional publications pertaining to the equipment.

1-3. Maintenance Forms, Records, and Reports

a. Report of Maintenance and Unsatisfactory Equipment. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by TM 38-750, the Army Maintenance Management System (TAMMS).

b. Report of Packaging and Handling Deficiencies. Fill out and forward SF 364 (Report of Discrepancy (ROD)) as prescribed in AR 735-11-2/DLAR 4140.55/ NAVMATINST 4355.73/AFR400.54/MCO4430.E.

c. Discrepancy in Shipment Report (DISREP) (SF 361). Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38/ NAVSUPINST 4610.33 B/AFR 75-18/MCO P4610.19C/DLAR4500.15.

1-3.1. Reporting Equipment Improvement Recommendations (EIR)

If your MK-1191/AR needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Put it on an SF 368 (Quality Deficiency Report). Mail it to Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: DRSEL-ME-MP, Fort Monmouth, NJ 07703. We'll send you a reply.

1-3.2. Hand Receipt (-HR) Manuals

This manual has a companion document with a TM number followed by "-HI" (which stands for Hand Receipt). The TM 11-6625 -2414-10-HR consists of preprinted hand receipts (DA Form 2062) that list end item related equipment (i.e., COEI, BII, and AAL) you must account for. As an aid to property accountability, additional -HR manuals maybe requisitioned from The US Army Adjutant General Publications Center in Baltimore, MD, in accordance with the procedures in Chapter 3, AR 310-2, and DA Pam 310-10-2.

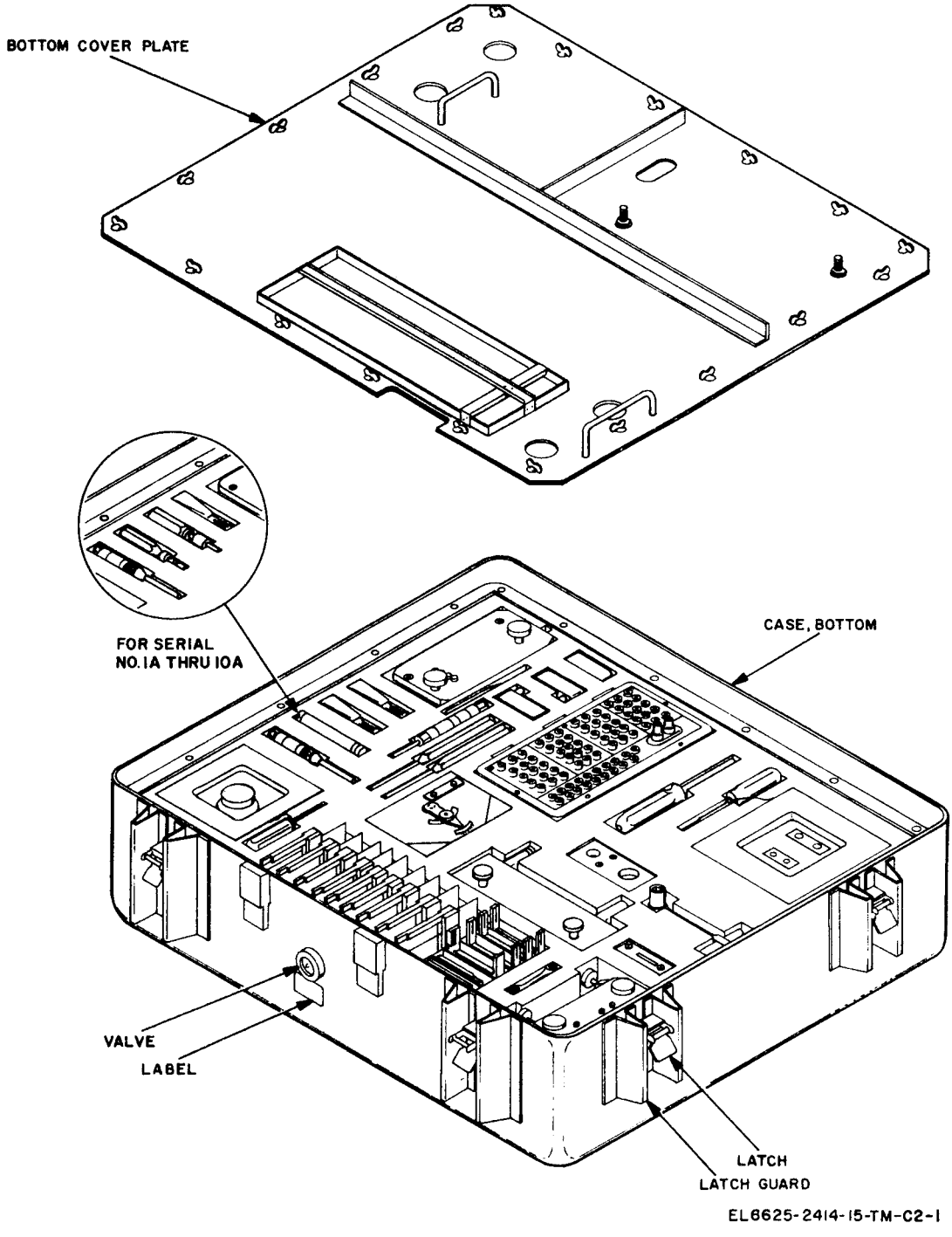


Figure 1-1. Test Facilities Kit MK-1191/AR, bottom.

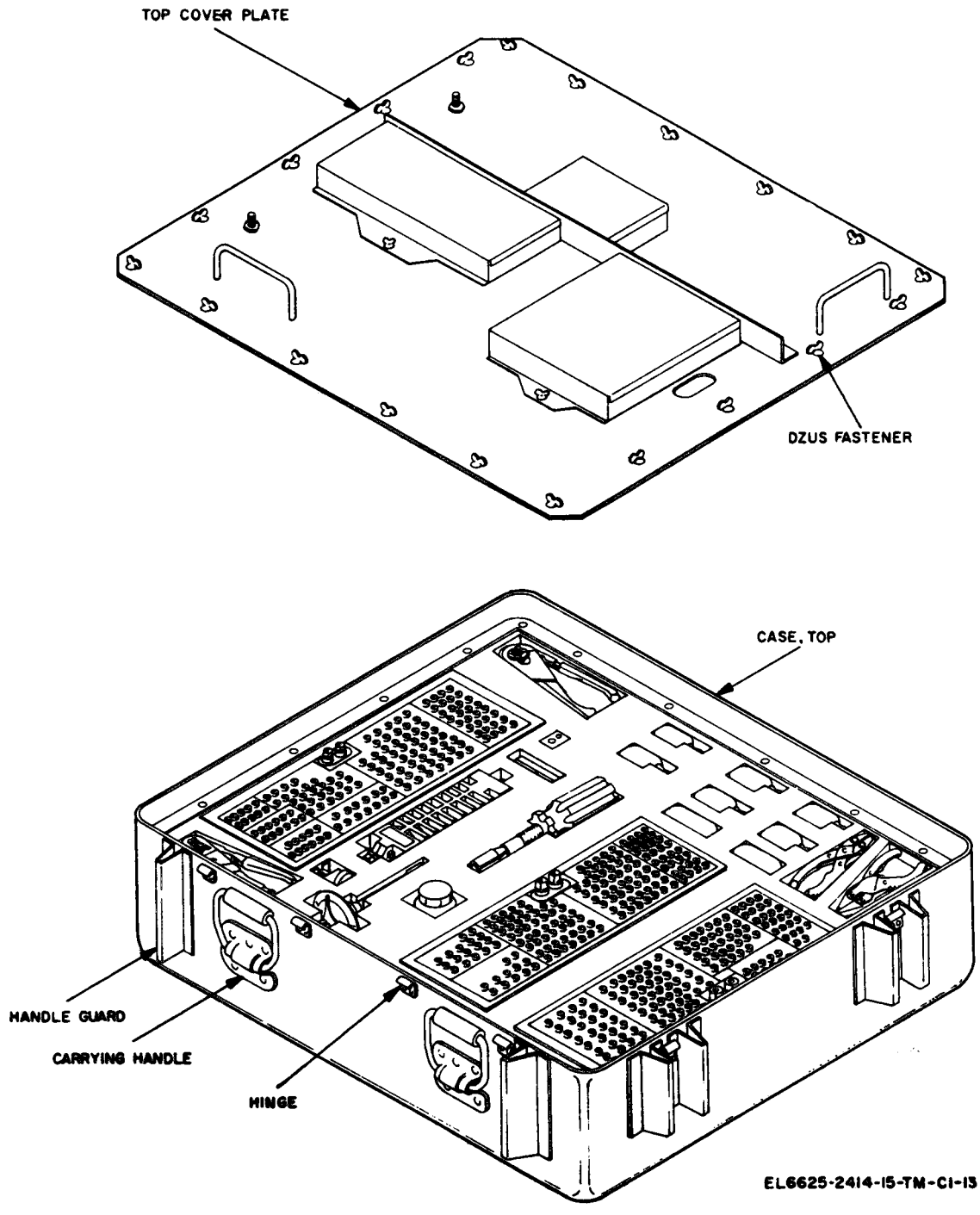


Figure 1-2. Test Facilities Kit MK-1191 / AR, top.

Section II. DESCRIPTION AND DATA

1-4. Purpose and Use

a. Purpose. The Test Facilities Kit MK-1191 / AR (maintenance accessories kit) is a test accessories kit which provides card extenders, extender cables, breakout boxes, adapters, and special tools to be used as needed when testing and / or repairing Standard Lightweight Avionics Equipment (SLAE): Radio Sets AN/ARC-114, AN / ARC-115, and AN / ARC-116; Direction Finder Set AN / ARN-89; and Test Facilities Kit MK-994/AR and MK-1191/AR.

b. Use. The maintenance accessories kit is used in conjunction with the Test Facilities Kit

MK-994/AR at the general support area in the testing and repair of SLAE. With maintenance accessories kit, the MK-994/AR and standard test equipment, a complete test facility is available for troubleshooting, and isolating faults to a replaceable assembly, subassembly or printed circuit card. This test facility is also used for calibration, alignment, repair and operational checkout.

1–5. Technical Characteristics

The maintenance accessory kit is a completely passive device that makes connections and affords points for otherwise inaccessible circuits in the SLAE. All power supplied to the maintenance accessories kit is external. A bench area is necessary when using the maintenance accessories kit.

1-6. List of Components (fig. 1-3 through 1-8)

The accessories listed below are stored in a 0,090 inch thick, 5052—0 aluminum case, The case consists of two parts, a top and a bottom, with overall measurements of 13 inches high by 25 inches deep by 32 inches wide and provides a capacity of 6.0 cubic feet. The finish is light gray enamel per MIL-F-14072. The total weight is approximately 120 pounds. Four handles are attached to the top for carrying. The lock is an automatic relief valve with two-way vacuum pressure. In the lists below the following use code is used:

A = Radio Set AN/ARC-114
B = Radio Set AN/ARC-115
C = Radio Set AN/ARC-116
D = Direction Finder Set AN/ARN-89
E = Test Facilities Kit MK–994/AR
F = Test Facilities Kit MK-1191/AR

a. Adapters, *Test* (extender cards). (fig. 1-3).

Nomenclature	Generic name	Part No.	Height/ length in.	Depth in.	Width in.	used on	Fig. No.
Adapter, Test MX-8503/ AR (3 supplied)	Card extender	SM-B-625754	0.8	4.9	2.8	A, B, & C	1-3
Adapter, Test MX-8504/ AR	Cord extender	SM-B-625758	0.9	6.1	5.4	A	1-3
Adapter, Test MX-8505/ AR	Card extender	SM-B-625762	0.9	6.1	5.4	B	1-3
Adapter, Test MX-8506/ AR (2 supplied)	Card extender	SM-B-625764	0.9	6.1	5.4	A&B	1-3
Adapter, Test MX-8507/ AR (3 supplied)	Card extender	SM-B-625766	0.9	6.1	5.4	A,B, & C	1-3
Adapter, Test MX-8511/ AR	Card extender	SM-B-625768	0.9	6.1	5.4	C	1-3
Adopter, Test MX-8508/ AR	Card extender	SM-B-625770	0.9	6.1	5.4	C	1-3
Adapter, Test MX-8509/ AR	Card extender	SM-B-625772	0.6	3.8	2.9	C	1-3
Adapter, Test MX-8510/ AR	Card extender	SM-B-625774		6.1	2.6	C	1-3
Adapter, Test MX-8527/ AR	Card extender	SM-B-625891	1.0	4.9	2.8	A, B, & C	1-3

Assemblies

b. Cable Special Purpose, Electrical (extender cables) (fig. 1–4).

Nomenclature	Ref Des	Part No.	Height/ length ft	Depth in.	Width in.	used on	Fig. No.
Cable Assembly, Special Purpose, Electrical CX-12182/U (1 FT)	W102	SM-B-625721	1	- -	- -	A	1-4(1)
Cable Assembly, Special Purpose, Electrical CX-12183/U (1FT)	W103	SM-B-625724	1	- -	- -	A	1-4 (2)
Cable Assembly, Special Purpose, Electrical CX-12184/U (1+FT) (2 Supplied)	W104	SM–B–625727	1	- -	- -	A	1-4(l)
Cable Assembly, Special Purpose, Electrical CX-12185/U (1FT)	W105	SM–B–625730	1	- -	- -	A	1-4(l)
Cable Assembly, Special Purpose, Electrical CX-12186/U (1FT) (2supplied)	W106	SM–B–625733	1	--	- -	A	1-4(l)
Cable Assembly, Special Purpose, Electrical CG-3475/U (6FT)	W1	SM-B-625562	6	--	- -	A	1-4(2)
Cable Assembly, Special Purpose, Electrical CX-12187/U (1FT)	W107	SM–B–625736	1	--	- -	B	1-4(2)

Nomen	Ref	Part No.	Height length ft.	Dept in.	Width in.	Used on	Fig. No.
Cable Assembly, Special Purpose, Electrical CX-12188/U (1 ~~ft~~ FT) FT)	W108	SM-B-625739	1	-	--	B	1-4 (1)
Cable Assembly, Special Purpose, Electrical CX-12189/U (1 ~~ft~~ FT)	W109	SM-	1	--	--	B	1-4 (2)
Cable Assembly, Special Purpose, Electrical CX-12190/U (1 FT) (3 supplied)	W110	SM-B-625745	1	--	--	B&C	1-4 (1)
Cable Assembl Special Purpose, Electrical CX-12191/U (1 FT)	W111	SM-B-625748	1	--	--	C	1-4
Cable Assembly, Special Purpose, Electrical CX-10894/	W26	SM-B-625644	1	--	--	D	1-4 (2)
Cable Assembly, Special Purpose, Electrical CX-12192/U (1 ~~ft~~ FT)	W112	SM-B-625751	1	--		C	1-4 (2)

c. *Breakout boxes* (fig 1-5).

Generic name	Part No.	Height/ length in.	Dept in.	Width in.	Used on	Fig. No.
Breakout box	~~No. 2~~	SM-B-625706	3.5	14.8	6.3	A	1-5
Breakout box	~~No. 2~~	SM-B-625706	3.5	14.8	6.3	B	1-5
Breakout box	-----	-----	3.5	14.8	6.3	C	1
Breakout box ~~No. 4~~	SM-B-625716	3.5	9.3	6.3	D	1-5

d. Adapters (fig. 1-6).

Generic name	Part No.	Height/ length in.	Dept in.	Width in.	Used on	Fig. No.
Adapter, Conhex tee UG-1893/U (3 supplied)	SM-A-595804-7	--	--	--	A, B, & C	1-6(1
Adapter, bnc to bnc UG-914/U (3 supplied)	MS35184-914	--	--	--	A, B, & C	1-6(1
Adapter, tps to bnc UG-1894/U (5 supplied)	SM-A-595805-3	--	--	--	A, B, C&D	1-6(1
Conhex, jack to jack UG-1895/U (3 supplied)	SM-A-595804-8	--	--	--	A, B, &C	1-6(1)
Double banana plug, both ends (3 supplied)	SM-A-625787-136	36.0	--	--	A, B, & C	1-6(1)
Double banana plug to bnc male (4 supplied)	SM-A-625787-236	36.0	--	--	A, B, C&D	1-6(1)
Microphone termination (3 supplied)	SM-B-625789	2.0	2.0	1.0	A, B, & C	1-6(2)
Headset termination (3 supplied)	SM-B-625790	2.0	2.0	1.0	A, B, & C	1-6(2)
Headset adapter (3 supplied)	SM-B-625791	36.0	--	--	A, B, & C	1-6(1)
Power supply termination (AN/ARC-114)	SM-B-625792	3.0	3.0	1.0	A	1-6(2)
Power supply termination (AN/ARC-115)	SM-B-625877	3.0	3.0	1.0	B	1-6(2)
Power supply termination (AN/ARC-116)	SM-B-625879	3.0	3.0	1.0	C	1-6(2)
Shield (for 59.9-MHz IF.)	SM-B-625795	3.1	0.5	2.9	C	1-6(1)
Attenuator, 30 db	SM-A-625793	8.0	2.5	2.3	A, B, C&D	1-6(2)

e. Tools (fig. 1-7).

Generic name	Part No.	Used on	Fig. No.	Generic name	Part No.	Used on	Fig. No.
Tool, Crimp, 612118	SM-A-625812	A, B, & C	1	[a] Tool, Insertion, 294-123	SM-A-625815-2	A, B, & C	1-7
Tool, Crimp, MS3191-1	MS3191-1	D	1-7	[a] Tool, Extractor, 294-205	SM-A-625815-3	A, B, & C	1-7
Adapter, Crimp, 612516	SM-B-625813-2	A, B, & C	1-7	[b] Tool Assembly Insert/Ex	SM-B-625892	A, B, & C	1-7
Adapter, Crimp, 612517	SM-B-625813-	A, B, & C	1-7	Tool, Insertion, CIT 16	SM-A-625817-3	E	1-7
				Tool, Insertion, CIT 20	SM-A-6258	E	1-7

Generic name	Part No.	Used on	Fig. No.	Generic name	Part No.	Used on	Fig No
Tool, Extractor, CET 16	SM–A–625817–1	E	1–7	Tool, Extractor/ Insertion, CIET–20IIDB	SM-A–694392	F	1–7
Tool, Extractor, CET 20	SM–A–625817–2	E	1–7	Tool, Positioner, P–20-3191–37	SM–B–694391	F	1–7

[a] Present in Serial No. 1A through 10A.
[b] Replaces Tool, Insertion, 294–123 and Tool, Extractor, 294–205 in Serial No 11A and on

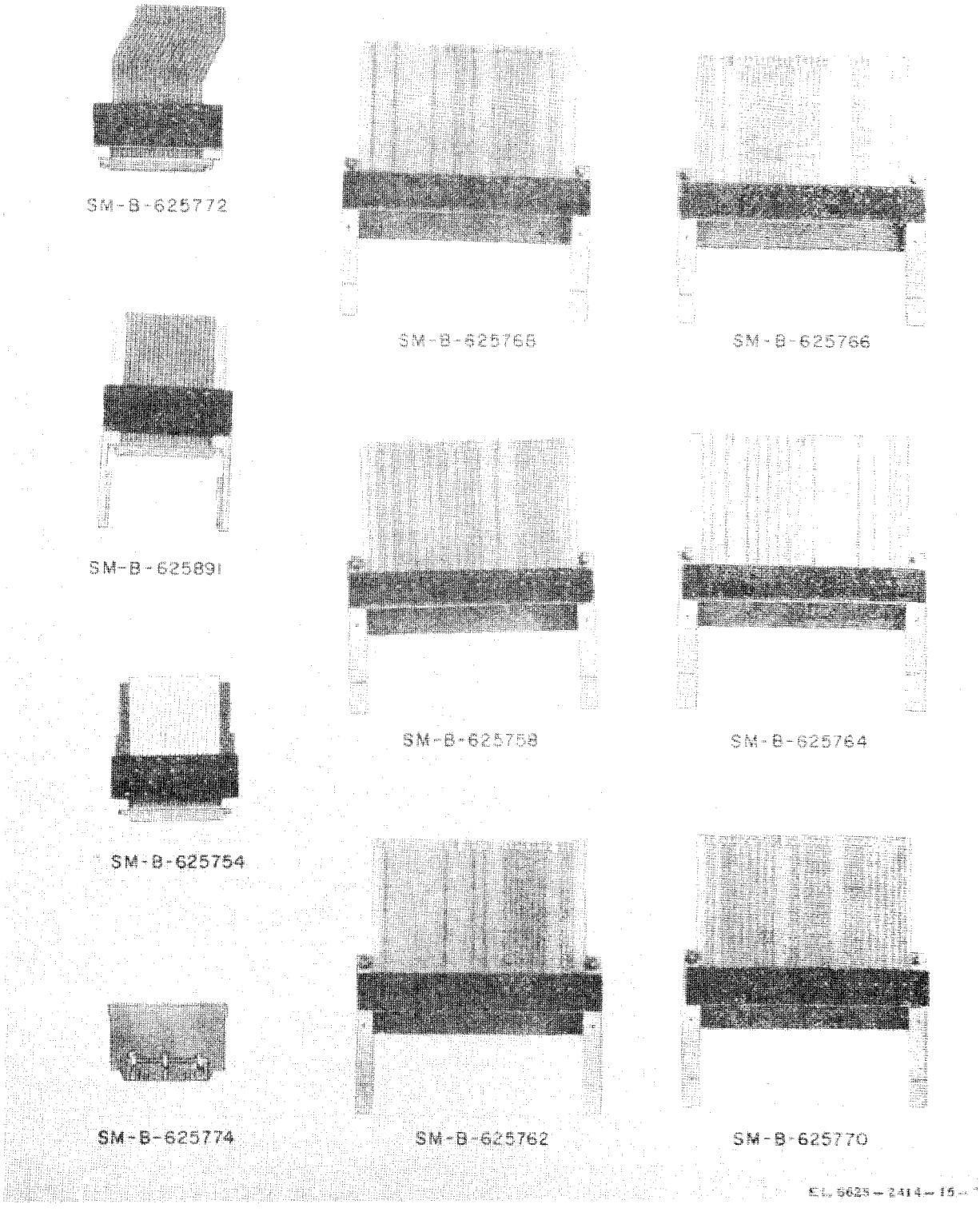


Figure 1-3. Test *Facilities Kit MK-1191/AR, extender cards.*

f. Special tools and fixtures (fig. 1-8).

Generic name	Part No.	Used on	Fig. No.
Wrench (5/16), open end	SM-C-625796	A&B	1-8(4)
Support and drill fixture (AN/ARC-114)	SM-B-625806	A	1-8(1)
Drill, twist, 1/16	SM-A-625863	A&B	1-8(4)
Drill, twist, 3/64	SM-A-625799	A	1-8(4)
Driver, thinwall	SM-C-625800	C	1-8(2)
Wrench, knurled socket, 36 KB515	SM-A-625801	B&C	1-8(2)
Fixture, actuator positioning	SM-B-625802	A	1-8(2)
Feeler gage 0.003	SM-B-625803	A	1-8(4)
Feeler gage 0.020	SM-C-625804	A	1-8(4)
Support and drill fixture (AN/ARC-115)	SM-B-625797	B	1-8(1)
Wrench, torque	SM-B-625807	A, B, & C	1-8(2)
Wrench, torque, 12 oz in.	SM-B-625808	A	1-8(2)
Pliers, retaining ring	SM-A-625810	A, B, & C	1-8(2)
Screw, set, 2-56 x 3/32 (6 supplied)	SM-B-625821-2	A, B, & C	1-8(4)
Screw, set, 4-40 x 1/8 (6 supplied)	MS51963-9	C	1-8(4)
Screw, set	70A8300203-210	A&B	1-8(4)
Installation tool, crescent ring 0120	SM-B-625811-12	A, B, & C	1-8(2)
Installation tool, crescent ring 0180	SM-B-694326	A, B, & C	1-8(3)
Removal tool, crescent ring 0120	SM-D-625870-1	A, B, & C	1-8(4)
Removal tool, crescent ring 0180	SM-D-625870-2	A, B, & C	1-8(4)
Puller, gear	SM-B-625850	A	1-8(4)
Insertion tool, pin, 0.046	SM-D-625851-4	A&B	1-8(3)
Installation tool, pin, 0.046	SM-D-625851-1	A&B	1-8(3)
Installation tool, sprocket pin, 0.046	SM-D-625851-2	A&B	1-8(3)
Removal tool, pin, 0.046	SM-D-625851-3	A&B	1-8(3)
Fixture, number alignment (AN/ARC-114)	SM-B-625853	A	1-8(2)
Fixture, number alignment (AN/ARC-115)	SM-B-625860	B	1-8(2)
Fixture, number alignment (AN/ARC-116)	SM-B-625897	C	1-8(5)
Installation tool, sprocket	SM-B-625855	A	1-8(2)
Drift pin, gear aligning	SM-C-625856	A	1-8(4)
Fixture, electrical equipment (AN/ARC-114)	SM-B-625857	A	1-8(1)
Fixture, electrical equipment (AN/ARC-115)	SM-B-625861	B	1-8(1)
Fixture, support and drill (AN/ARC-116)	SM-B-625898	C	1-8(5)
Fixture, backlash	SM-B-625899	C	1-8(5)
Wrench, open-end box, 7/16 -3/8 modified	SM-B-625862	A	1-8(4)
Insertion tool, pin, 0.062	SM-D-625869-3	A	1-8(3)
Installation tool, pin, 0.062	SM-D-625869-1	A	1-8(3)
Removal tool, pin, 0.062	SM-D-625869-2	A	1-8(3)
Installation tool, drive pin	SM-D-625854	A	1-8(2)
Removal tool, drive pin	SM-B-625873	A	1-8(2)
Bottle assembly, screw cap	SM-B-694438	F	1-8(3)
Bottle assembly, screw cap	SM-B-694439	F	1-8(3)
Accessory case assembly (2 supplied)	SM-B-625829	F	1-8(3)

1-7. Description of Equipment (fig. 1-1, 1-2)

The maintenance accessories kit contains card extenders, extender cables, breakout boxes, adapters and special tools housed in a lightweight transit case (fig. 1-1, 1-2). This kit supplies the accessories necessary to fault isolate and/or repair Radio Sets AN/ARC-I 14, AN/ARC-I 15 and AN/ARC-I 16, Direction Finder Set AN/AR N-89, and Test Faci lities Kit M K-994/AR. The transit case contains suitable compartments or holding features to protect the contents from damage.

1-8. Description of Transit Case and Minor Components

The maintenance accessories kit components are housed in a lightweight aluminum transit case with four handles, two on each side. There are 12 latches which, when unfastened, allow the case to be separated into two parts. Components are stored safely in each of the halves. The minor components of the maintenance accessories kit are shown in figures 1-3 through 1-8.

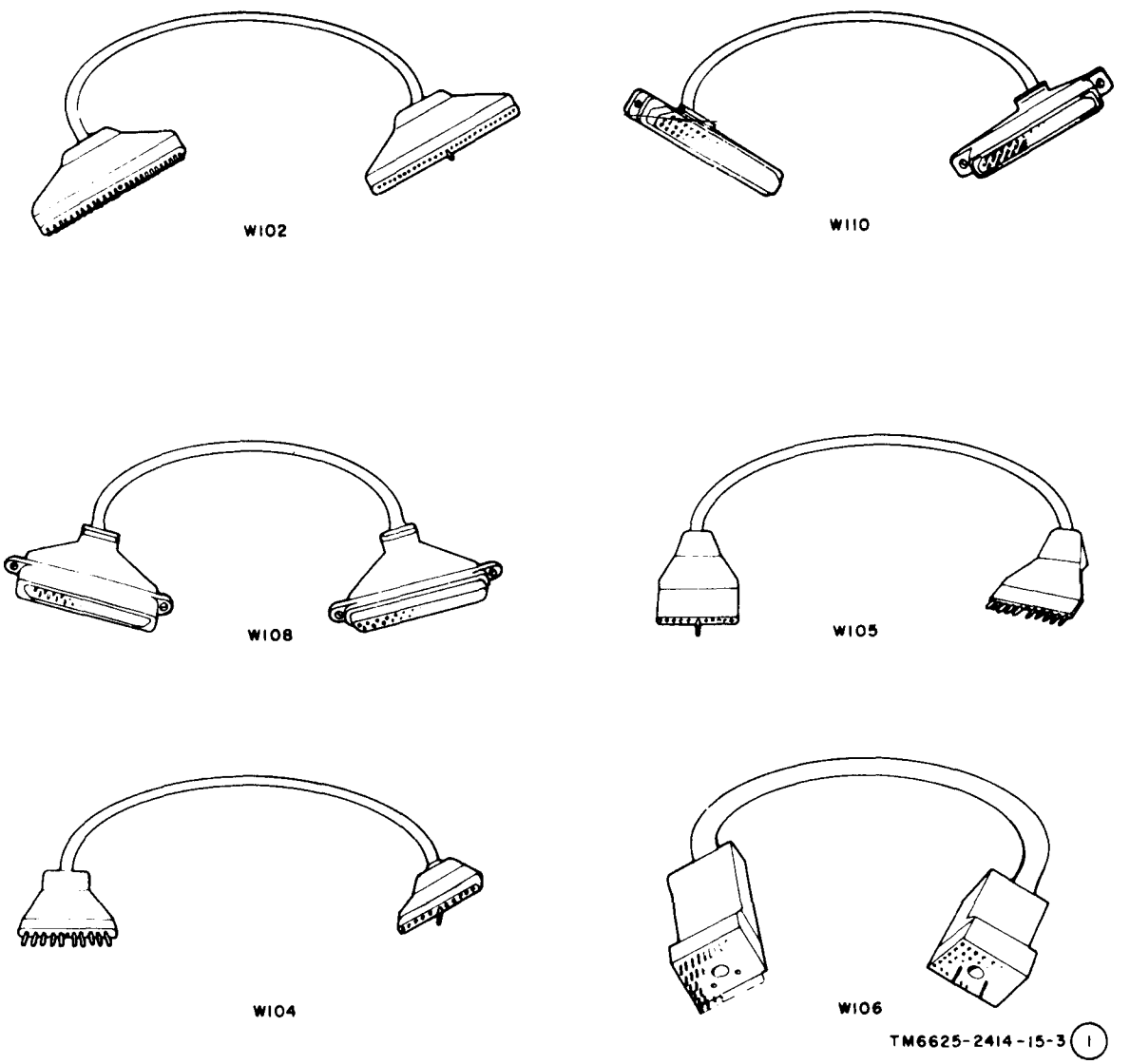


Figure 1–4(1). Test Facilities Kit MK–1191/AR, extender cables (part 1 of 2).

a. Card Extenders. The card extenders are of heavy duty construction and supports for radio set cards are provided where required. Extender card monitoring points are numbered.

b. Extender Cables. All extender cables except WI and W26 are rubber-insulated cables with multi pin potted amphenol connectors. The potting provides protection yet does not hinder use. Extender cables W1 and W26 are identical to those in Test Foci lities Kit MK-994/AR.

c. Breakout Boxes. The four breakout bmes consist of aluminum boxes painted light gray per Ml L-F-14072. The tap contains a set of test points, one for each male/female connector on the radio sets and direction finder set. A set of connectors is mounted on the rear of each bcw and serves as the ma le/fema'le interface from radio sets and direction fi rider set to the test field on the box. Each set of test points is color coded.

d. Tools. The common usage tools consist of two crimping tools, two crimp adaptem, three insertion tools, three removal tcels, one positioner and one insertion/extractor tool. All are commercially purchased parts to mili - tory specifications.

e. Special Tools and Fixtures. Special purpose tools and fixtures are also provided which are finished in accordance with Ml L-F-14072 for Serial No. 11A and on. For Serial No. 1A through 10A, tools or components made of tool steel are black axidized per Ml L-C-13924, class 1, and aluminum tools or components are anodized per Ml L-A-B625, class A; colored black.

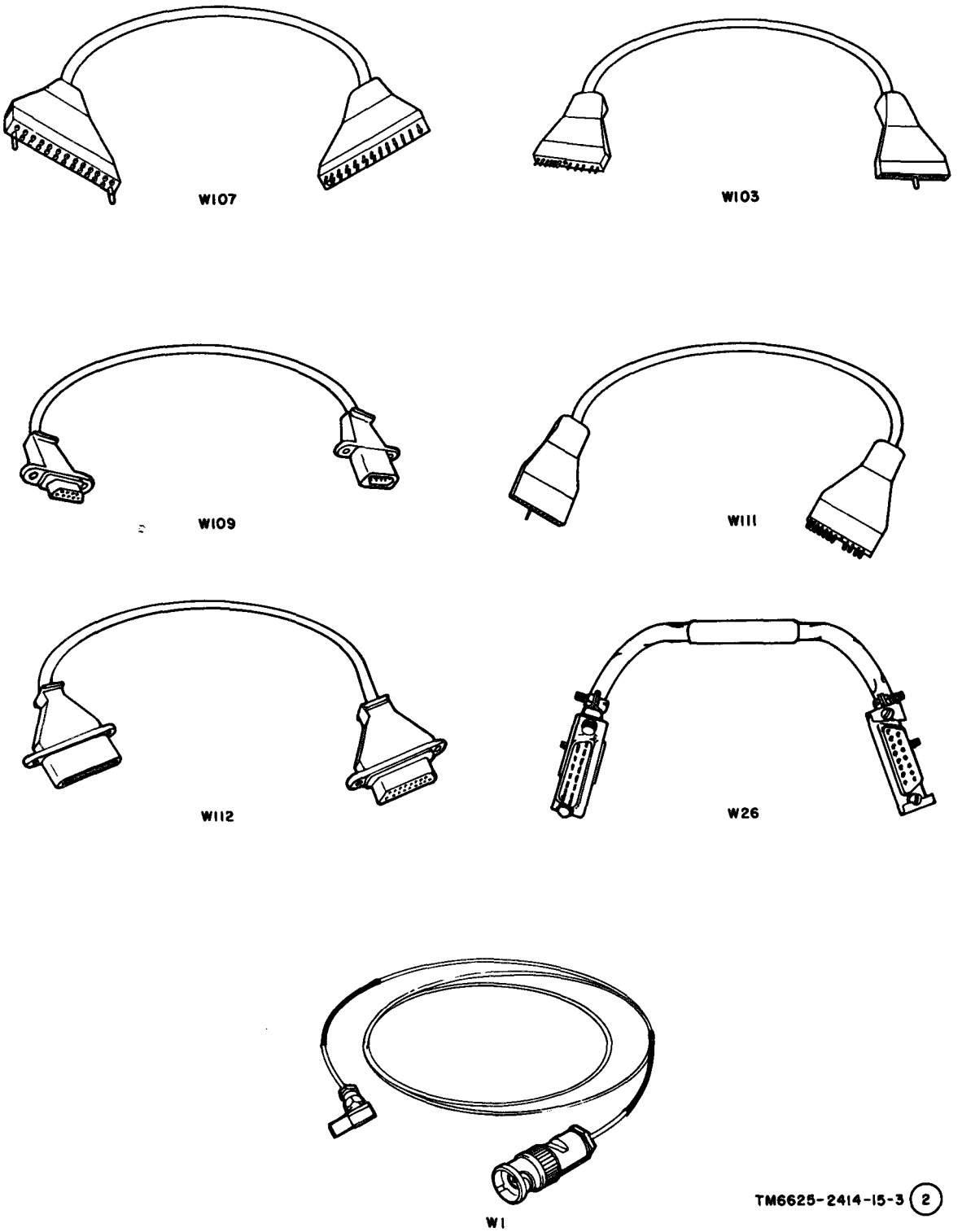


Figure 1–4(2). Test Facilities Kit MK–1191/AR, extender cables (part 2 of 2).

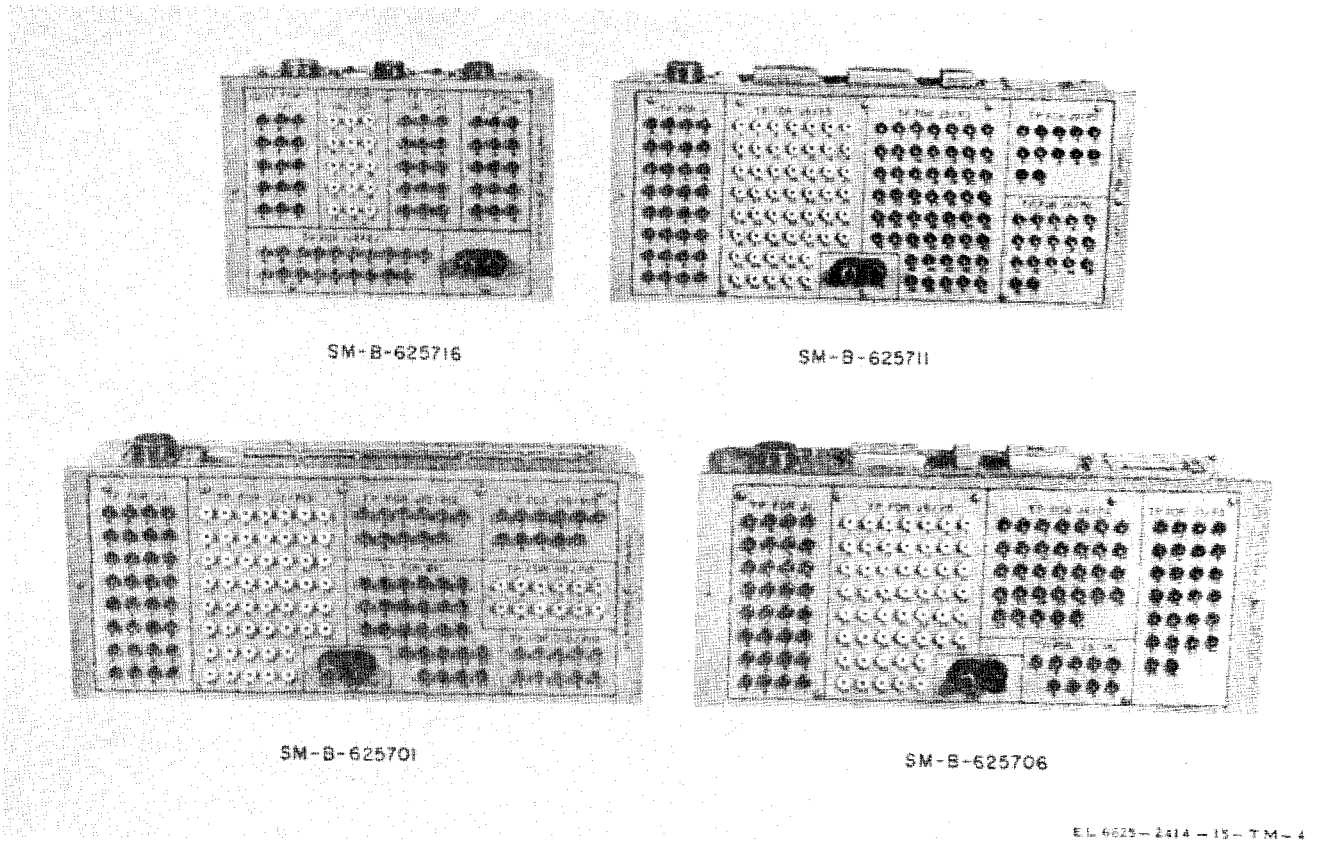


Figure 1–5. Test Facilities Kit MK–1191/AR, breakout boxes.

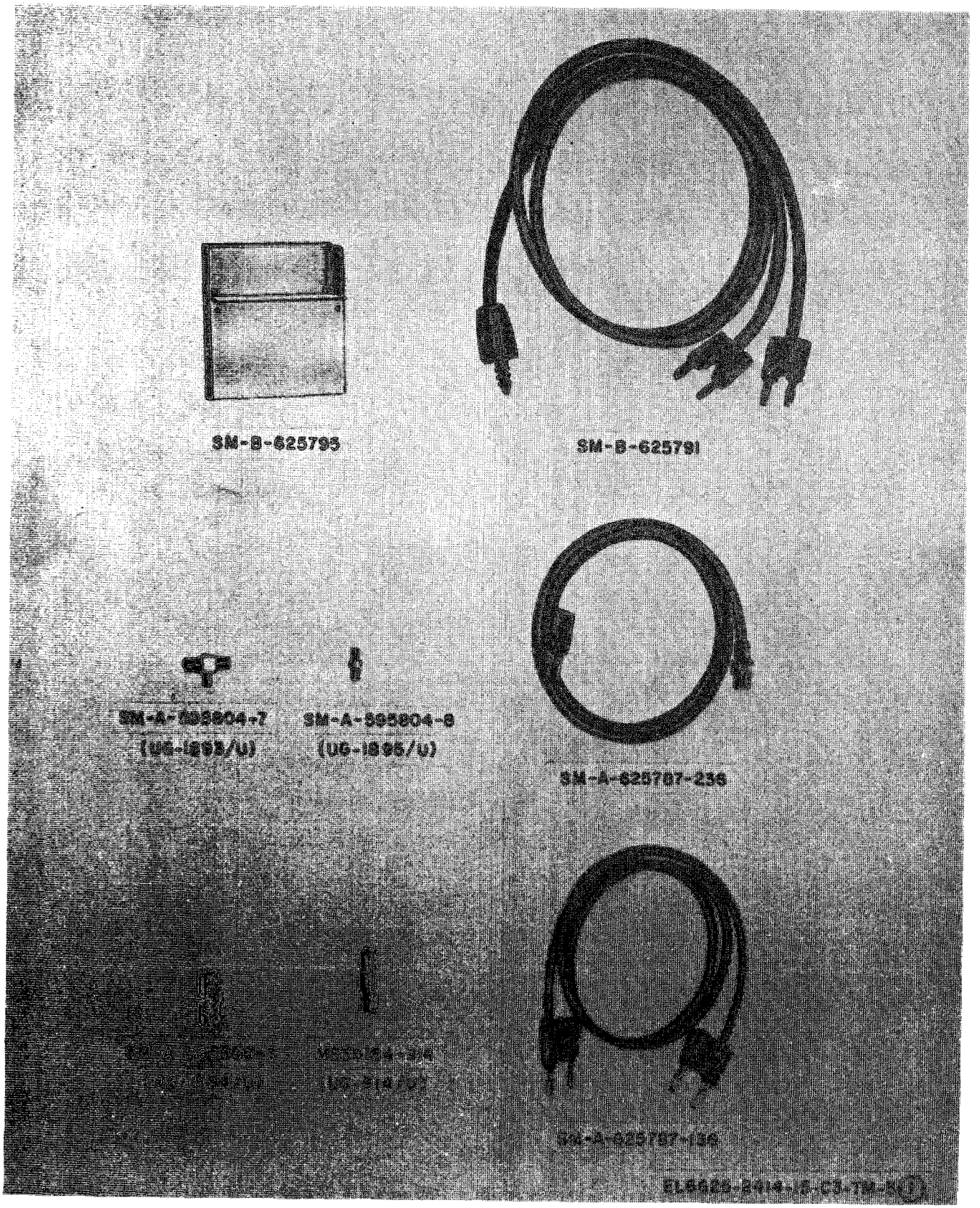


Figure 1-6(1). Test Facilities Kit MK-1191/AR, adapters (part 1 of 2).

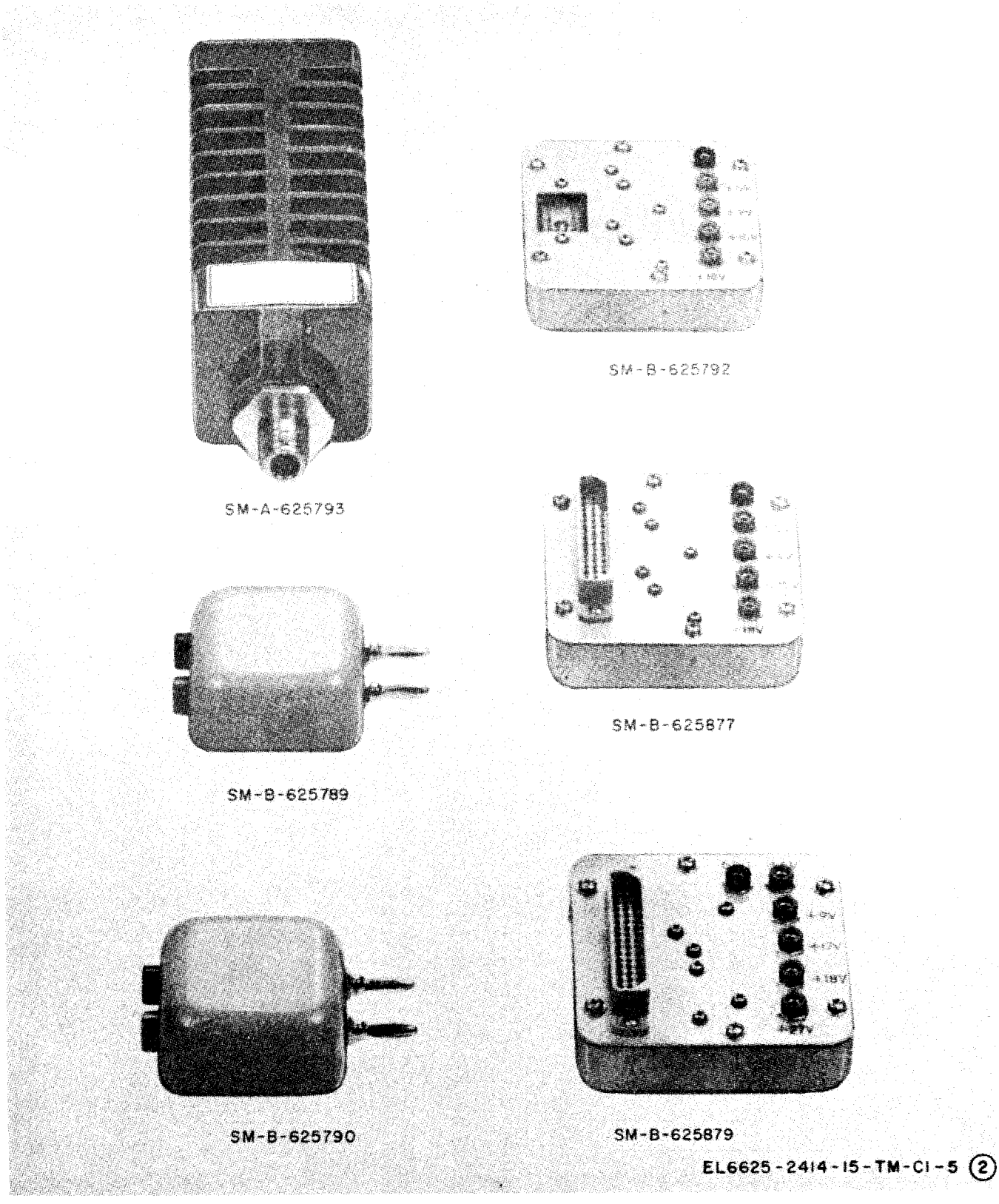


Figure 1–6(2). Test Facilities Kit MK–1191/AR, adapters (part 2 of 2).

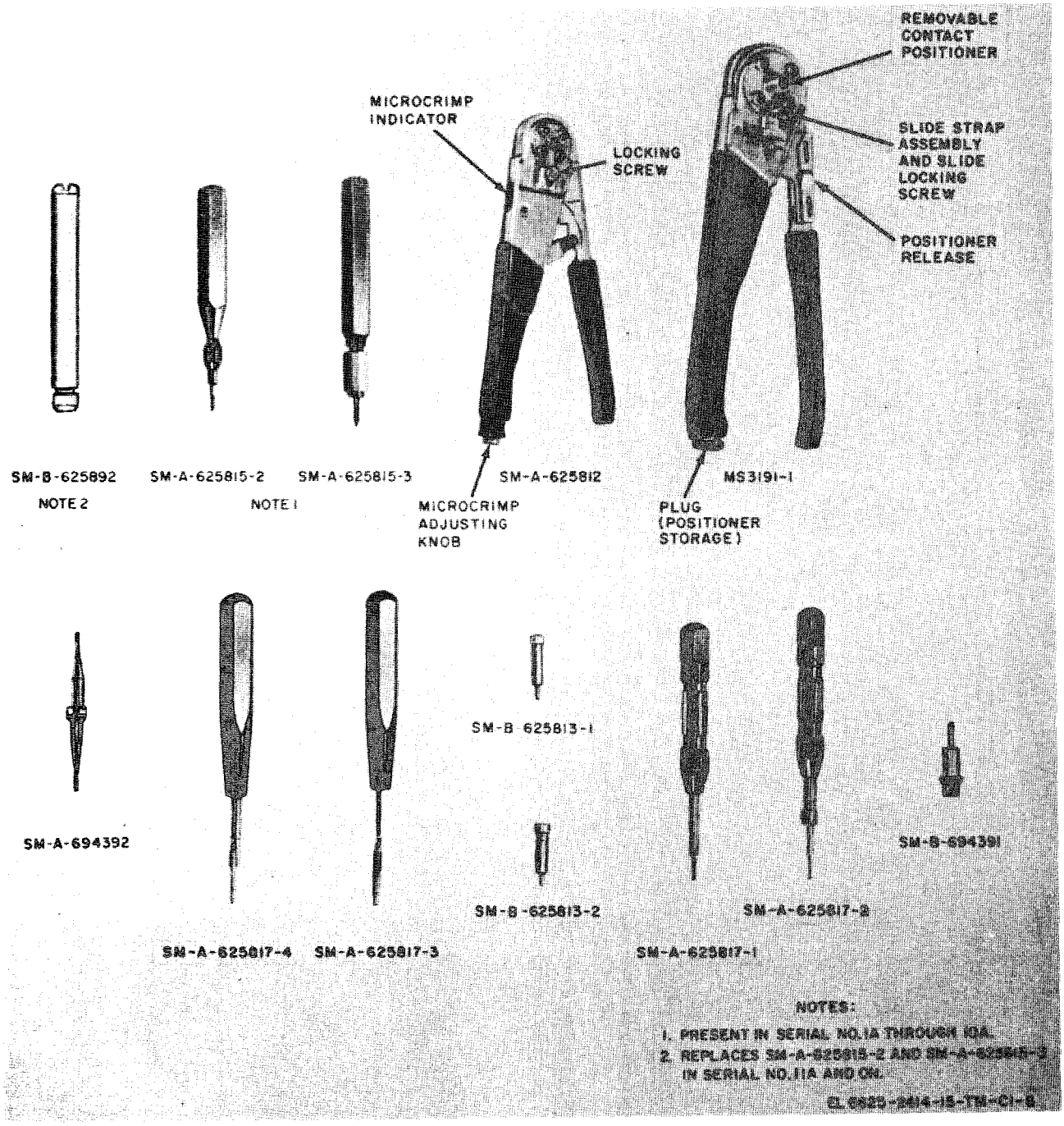


Figure 1-7. Test Facilities Kit MK-1191/AR, tools.

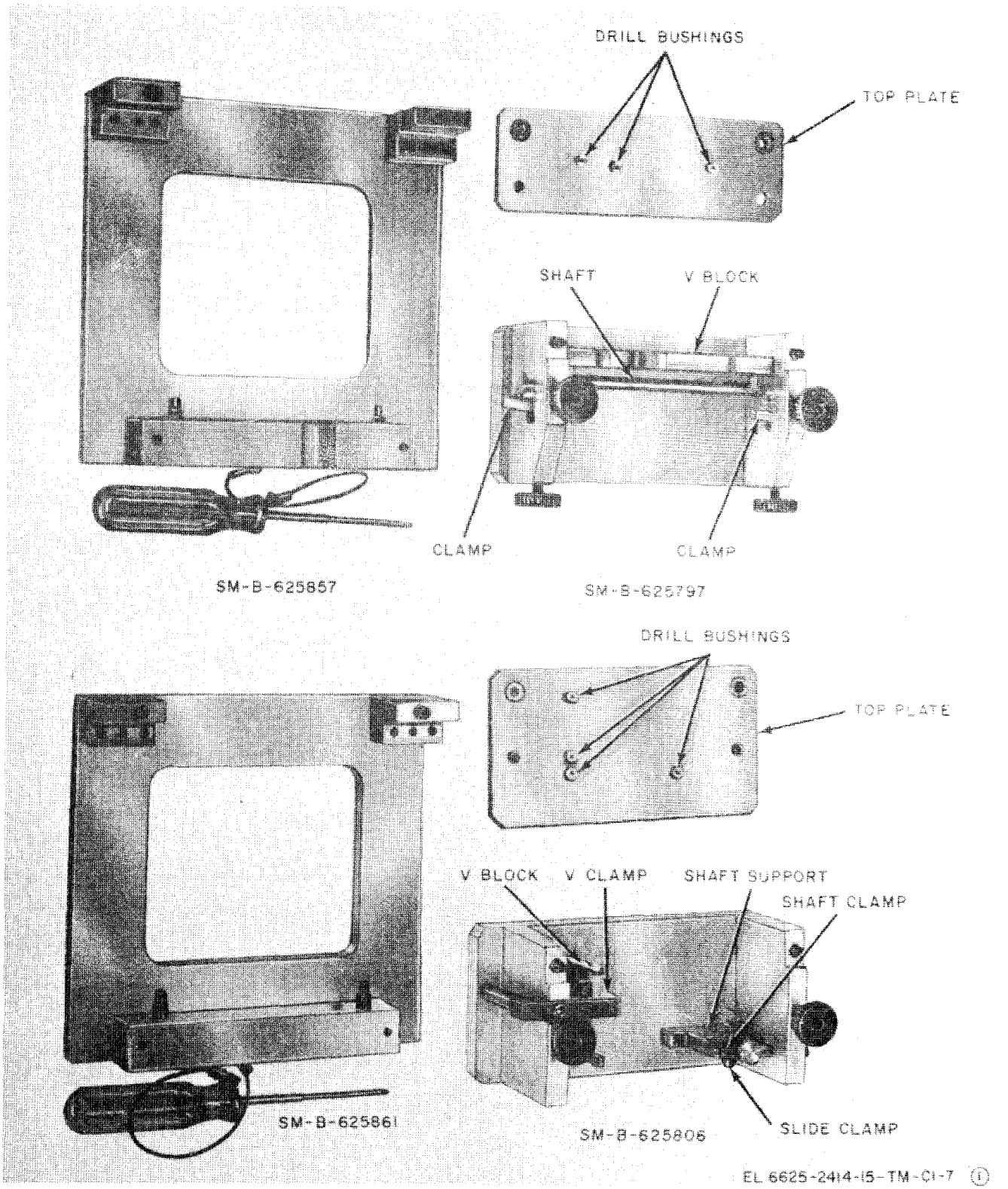


Figure 1-8(1). Test Facilities Kit MK-1191 / AR, special tools and fixtures (part 1 of 4).

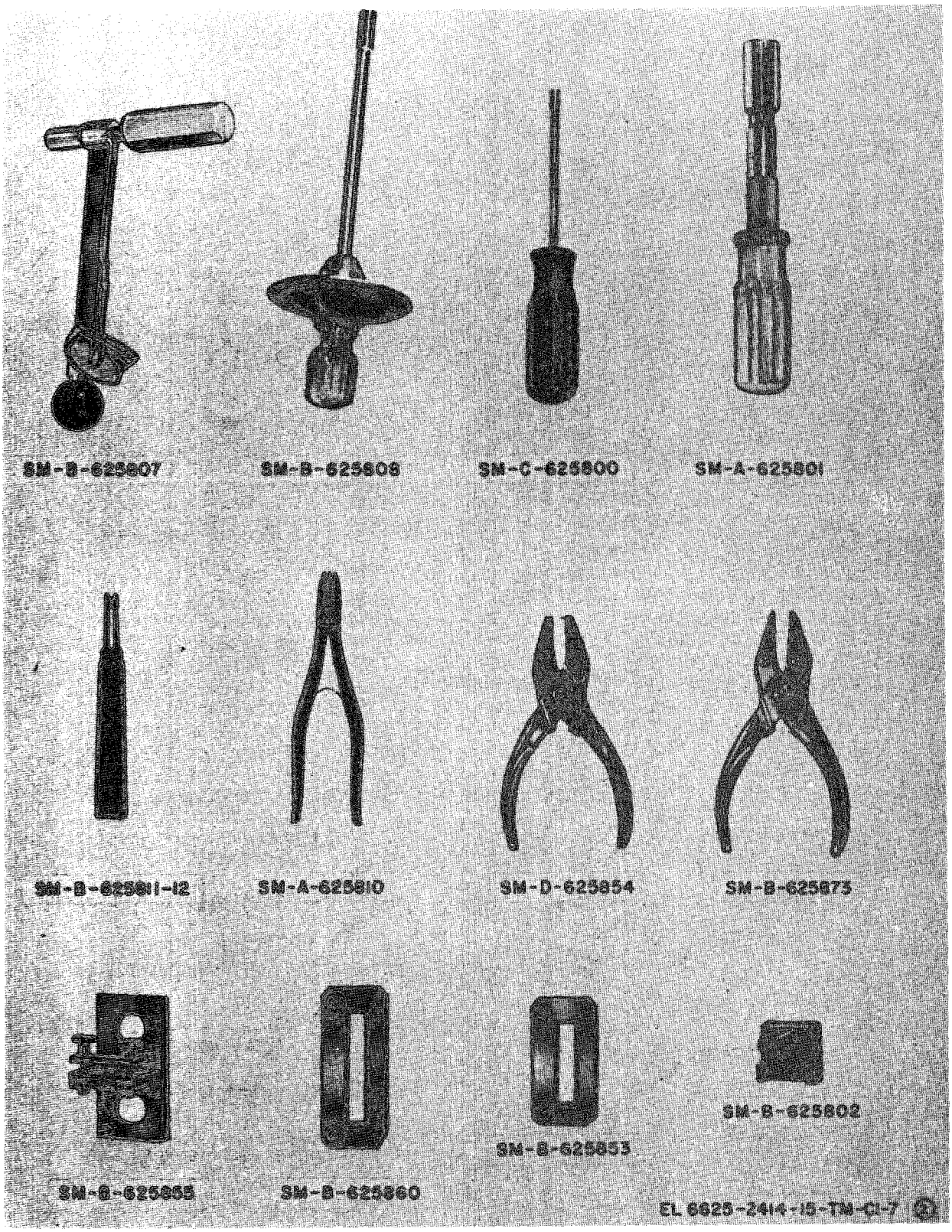


Figure 1–8(2). Test Facilities Kit MK–1191/AR, special tools and fixtures (part 2 of 5).

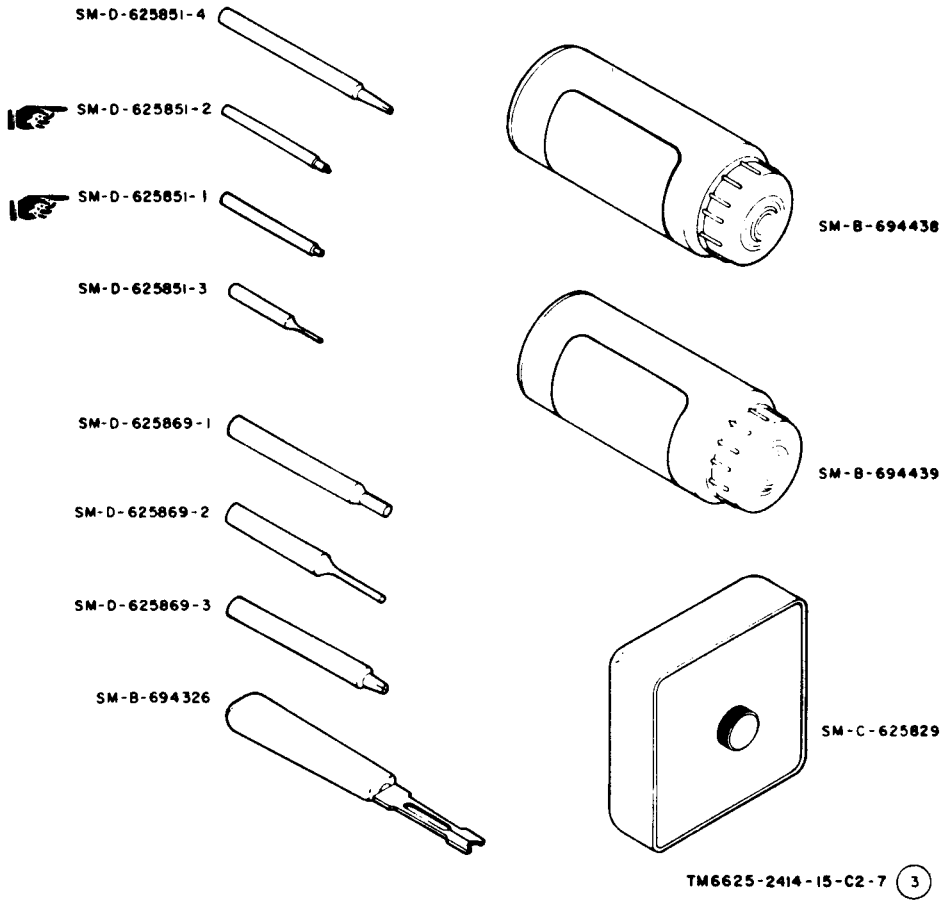


Figure 1–8③. Test Facilities Kit MK–1191/AR, special tools and fixtures (part 3 of 5).

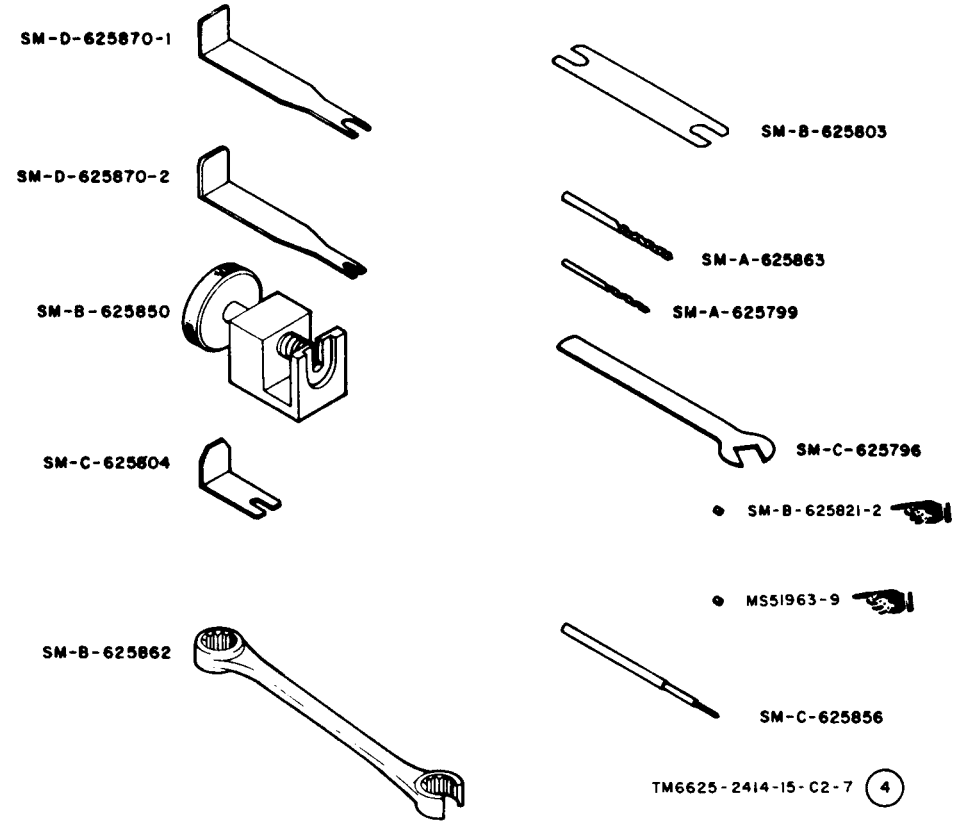


Figure 1–8④. Test Facilities Kit MK–1191/AR, special tools and fixtures (part 4 of 5).

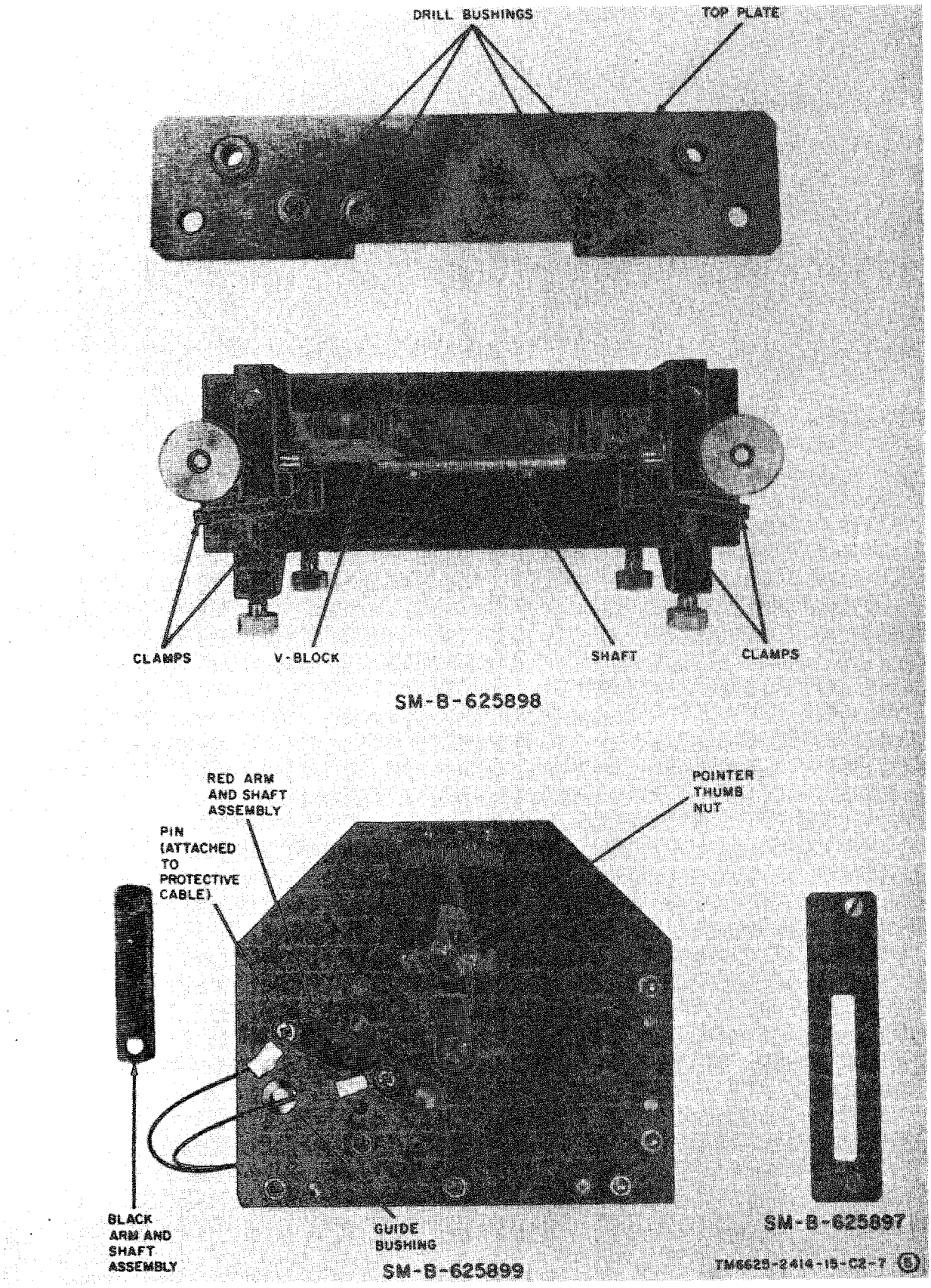


Figure 1-8©. Test Facilities Kit MK-1191/AR, special tools and fixtures (part 5 of 5).

CHAPTER 2
INSTALLATION AND OPERATING INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF EQUIPMENT

2-1. Unpacking

a. Packaging Data. When packed for shipment, the maintenance accessories kit is placed in a corrugated shipping carton. A typical shipping carton and its contents are shown in figure 2-1. The shipping carton is approximately 34 inches by 27 inches by 20 inches, and provides a total capacity of 8.9 cubic feet. The shipping carton weighs approximately 5-1 /2 pounds.

b. Removing Contents.

(1) Cut the paper tape along the top of the corrugated shipping carton (fig. 2-1) and fold back the flaps.

(2) Deleted.

(3) Deleted.

(4) Carefully lift out the corrugated inner carton.

(5) Cut the paper tape along the top of the corrugated inner carton and fold back the flaps.

(6) Remove the box containing the manuals and the equipment, or the film bag containing the manuals and the equipment (see Note, fig. 2-1).

WARNING

Test Facilities Kit MK-1 191/AR weighs 120 pounds. Be CAREFUL! Two persons required for three foot or lower lift. Four people are required when the MK-1 191/AR must be carried more than five steps.

2-2. Checking Unpacked Equipment

a. Inspect the maintenance accessories kit for damage incurred during shipment. If the maintenance accessories kit has been damaged, report the damage on SF Form 364.

b. See that the maintenance accessories kit is complete as listed on the packing slip. If a packing slip is not included, check the kit against the basic issue items list (app B). Report all discrepancies in accordance with TM 38-750. Shortage of a minor assembly or part that does not affect proper functioning should not prevent use of the maintenance accessories kit.

2-3. Installation

Maintenance accessories kit components require no special packing or preparation prior to shipment. The accessories are ready for immediate use upon arrival at general support. Separate slots or locations are provided for each component allowing easy removal or replacement. Wing nuts lock in the two removable plates in each section of the case. The work bench to be used should be of suitable size to accommodate a Test Facilities Kit MK-994/AR, the radio set to be checked, applicable components of the Test Facilities Kit MK-1191 /AR (para 1-6) and other common test equipment such as multimeter, signal generator etc, used for testing the SLAE. A convenient source of 18 volts dc is required for the MK-994/AR.

2-4. Component Utilization

NOTE

For Serial No. 11A and on, certain similar assemblies and parts of the maintenance accessories kit have been identified with functional usage decals or markings to prevent inadvertent use of the wrong assembly or part during testing or repair of SLAE. For Serial No. 1A through 10A, the repairman should use caution when using such similar assemblies or parts to prevent wrong usage.

The following charts indicate utilization of components of the maintenance accessories kit. Step—by-step procedures depicting utilization of the components are provided in the associated technical manuals (appendix A). The charts also indicate equivalent direct support maintenance accessory items that are part of the MK-1192/ARM.

A—Radio Set AN/ARC-l 14
B—Radio Set AN/ARC-l 15
C—Radio Set AN/ARC-l 16
D—Direction Finder Set AN/ARN-89
E—Test Facilities Kit MK-994/AR
F—Test Facilities Kit MK-1191/AR

a. Card Extenders.

Generic name	Nomenclature		Used on	Connects main chassis to
	MK-1191/AR	MK-1		
Card extender	Adapter, Test MX-8527/AR	MP-9874	A	A1A5A7 & A1A5A15
			B	A1A2A5 & A1A2A11
			C	A1A9 & A1A15
Card extender	Adapter, Test MX-8503/AR	MP-9875	A	A1 thru A1A5A13
			B	A1A2A4 & A1A2A6 thru A1A2A10
			C	A1A8, A1A10 thru A1A14 & A1A16
Card extender	Adapter, Test MX-8504/AR	MP-9866	A	A1A5A16
Card extender	Adapter, Test MX-8505/AR	MP-9870	B	A1A2A3
Card extender	Adapter, Test MX-8506/AR	MP-9869 &	A	A1A5A18
		MP-9868	B	A1A2A1
Card extender	Adapter, Test MX-8507/AR	MP-9876, MP-9872 &	A	A1A5A17
		MP-9867	B	A1A2A2
			C	A1A6
Card extender	Adapter, Test MX-8508/AR	MP-9871	C	A1A5
Card extender	Adapter, Test MX-8509/AR		C	A2A5
Card extender	Adapter, Test MX-85		C	A1 bypass
Card extender	Adapter, Test MX-8511/AR	MP-9873	C	A1A7
Card extender	Adapter, Test MX-8527/AR	MP-9874	A	A1A5A7 & A1
			B	A1A2A5 & A1A2A11
			C	A1A9 & A1A15 & A1A15

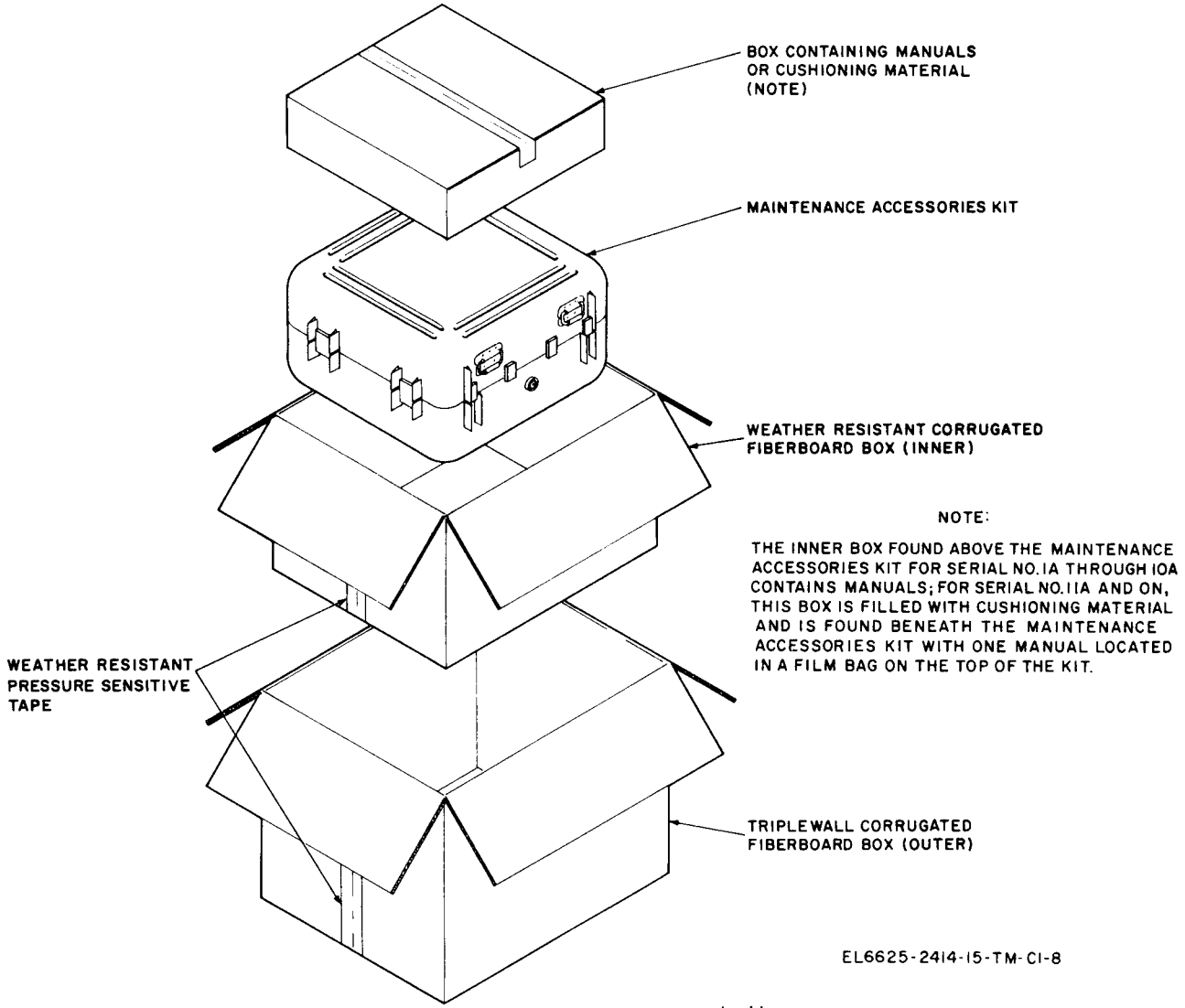


Figure 2-1. Packaging of maintenance accessories kit.

b. Extender Cables.

Ref des	Nomenclature MK-1191 / AR	MK-1192 / ARM	Used on	Connects From	To
W 102	Cable Assembly, Special Purpose, Electrical CX-12182 / U (1 FT).		A	Audio (J17)	Main Chassis (P17)
				Audio (J17)	Breakout Box
				Main Chassis (P17)	Breakout Box
W 103	Cable Assembly, Special Purpose, Electrical CX-12183 / U (1 FT).		A	Tuning Control (J15)	Main Chassis (P15)
				Tuning Control (J15)	Breakout Box
				Main Chassis (P15)	Breakout Box
W 104	Cable Assembly, Special Purpose, Electrical CX-12184 / U (1 FT)		A	Tuning Control (P19)	Main Chassis (J19)
				Tuning Control (P19)	Breakout Box
				Main Chassis (J19)	Breakout Box
				Tuning Control (P12)	Main Chassis (J12)
				Tuning Control (P12)	Breakout Box
				Main Chassis (J12)	Breakout Box
W 105	Cable Assembly, Special Purpose, Electrical CX-12185 / U (1 FT)		A	Main Guard Rcvr (J10)	Main Chassis (P10)
				Main Guard Rcvr (J10)	Breakout Box
				Main Chassis (P10)	Breakout Box
W 106	Cable Assembly, Special Purpose, Electrical CX-12186 / U (1 FT)	Cable Assembly, Special Purpose, Electrical CX-12172 / ARM	A	Radio Front (P13)	Radio Rear (J13)
				Radio Front (P13)	Breakout Box
				Radio Rear (J13)	Breakout Box
W1	Cable Assembly, Special Purpose, Electrical CG-3475 / U (6 FT)		A	Bnc Plug	Conhex Plug
W107	Cable Assembly, Special Purpose, Electrical CX-12187 / U (1 FT)		B	Tuner Control (P3)	Main Chassis (J3)
				Tuner Control (P3)	Breakout Box
				Main Chassis (J3)	Breakout Box
W108	Cable Assembly, Special Purpose, Electrical CX-12188 / U (1 FT)		B	Tuner Control (P4)	Main Chassis (J4)
				Tuner Control (P4)	Breakout Box
				Main Chassis (J4)	Breakout Box
W109	Cable Assembly, Special Purpose, Electrical CX-12189 / U (1 FT)		B	RF Ampl and Mixer (J6)	Main Chassis (P6)
				RF Ampl and Mixer (J6)	Breakout Box
				Main Chassis (P6)	Breakout Box
W 110	Cable Assembly, Special Purpose, Electrical CX-12190 / U (1 FT)	Cable Assembly, Special Purpose, Electrical CX-12173 / ARM & Cable Assembly, Special Purpose, Electrical CX-12174 / ARM	B	Xmtr / Reg Rear Section (P5)	Main Chassis (J5)
				Xmtr / Reg Rear Section (P5)	Breakout Box
				Main Chassis (J5)	Breakout Box
			C	Tuning Control (P5)	Main Chassis (J5)
				Tuning Control (P5)	Breakout Box
				Main Chassis (J5)	Breakout Box
				Tuning Control (J9)	Main Chassis (P9)
				Tuning Control (J9)	Breakout Box
				Main Chassis (P9)	Breakout Box
W111	Cable Assembly, Special Purpose, Electrical CX-12191 / U (1 FT)		C	Rf Tuner Assy (P6)	Main Chassis (J6)
				Rf Tuner Assy (P6)	Breakout Box
				Main Chassis (J6)	Breakout Box
W112	Cable Assembly, Special Purpose, Electrical CX-12192 / U (1 FT)		C	Xmtr / Reg (J3)	Main Chassis (P3)
				Xmtr / Reg (J3)	Breakout Box
				Main Chassis (P3)	Breakout Box
W26	Cable Assembly, Special Purpose, Electrical CX-10894 / AR		D	R-1496 / ARN-89 chassis wiring.	Breakout Box
				R-1496 / ARN-89 modules.	Breakout Box

c. Breakout boxes.

Generic name	Function	Connects to—
Breakout Box (SM-B-625701)	Continuity tests, dc voltage measurements	AN / ARC-114 subassembly connectors
Breakout Box (SM-B-625706)	Continuity tests, dc voltage measurements	AN / ARC-115 subassembly connectors
Breakout Box (SM-B-625711)	Continuity tests, dc voltage measurements	AN / ARC-116 subassembly connectors
Breakout Box (SM-B-625716)	Continuity tests, dc voltage measurements	AN / ARC-89 subassembly connectors

d. Adapters.

Generic name	MK-1191 / AR	MK-1192 / ARM	Used on
Adapter, Conhex tee UG-1893 / U		Tee, Conhex UG-1893 / U	A, B, and C
Jack, bnc to bnc, UG-914 / U		Jack, adapter, bnc, UG-914 / U	A, B, and C
Adapter, tps to bnc UG-1894 / U		Adapter, tps to bnc UG-1894 / U	A, B, and C
Conhex, jack to jack UG-1895 / U		Conhex, jack to jack UG-1895 / U	A, B, and C
Double banana plug, both ends		Double banana plug — both ends	A, B, and C
Double banana plug to bnc male		Double banana plug to bnc male	A, B, C, and D
Termination, microphone			A, B, and C
Termination, headset			A, B, and C
Adapter, headset			A, B, and C
Termination, power supply, (AN / ARC-114)			A
Termination, power supply, (AN / ARC-115)			B
Termination, power supply, (AN / ARC-116)			C
Shield (for 59.9 MHz IF.)			C
Attenuator, 30 db			A, B, and C

e. Tools.

Generic name	Used on	Function
Tool, crimp, 612118	A, B, C	Repair Amphenol connectors
Tool, crimp, MS3191-1	D	Repair Bendix and Cannon connectors
Adapter, crimp, 612516	A, B, C	Repair Amphenol connector sockets
Adapter, crimp, 612517	A, B, C	Repair Amphenol connector pins
Tool, insertion, 294-123	A, B, C	Insert Am phenol connector pins and sockets (Serial No. 1A-10A)
Tool, extractor, 294-205	A, B, C	Extract Am phenol connector pins and sockets (Serial No. 1A-10A)
Tool assembly, insert / extract	A, B, C	Insert / extract Am phenol connector pins and sockets (Serial No. 11A and on)
Tool, insertion, CIT 16	E	Repair Bendix connectors
Tool, insertion, CIT 20	E	Repair Bendix connectors
Tool, extractor, CET 16	E	Repair Bendix connectors
Tool, extractor, CET 20	E	Repair Bendix connectors
Tool, positioner, P-20-3191-37	F	Repair Cannon connectors
Tool, extractor / insertion, CIET-20HDB	F	Repair Cannon connectors

f. Special Tools and Fixtures.

Generic name	Used on	Function
Wrench (5 / 16), open end	A, B,	Tuning control assembly repair
Support and drill fixture (AN / ARC-1 14)	A	Tuning control assembly repair
Drill, twist, 1 / 16	A, B,	Tuning control assembly repair
Drill. twist. 3 / 64	A	Tuning control assembly repair
Driver, thinwall	C	Aids removal of A2C1
Wrench, knurled socket, 36 KB515	B, C	Remove fuse holder
Fixture, actuator positioning	A	Tuning control assembly repair, position actuator
Feeler gage 0.003	A	Tuning control assembly repair
Feeler gage 0.020	A	Tuning control assembly repair
Support and drill fixture (AN / ARC-1 15)	B	Tuning control assembly repair
Wrench, torque	A, B, C	Torque transistors
Wrench, torque, 12 oz in.	A	Torque transformer and gear assembly
Pliers, retaining ring	A, B, C	Remove retaining rings

Generic name	Used on	Function
Screw, set, 2-56 x 3/32	A,B,C	Tuning control assembly repair
Screw, set, 4-40 x 1/8	C	Tuning control assembly repair
Installationtion tool, crescent ring 0120	A, B, C	Insall crescent rings
Installation tool, crescent ring 0180	A, B, C	Install crescent rings
Removal tool, crescent ring 0120	A, B, C	Remove crescent rings
Removal tool, crescent ring 0180	A, B, C	Remove crescent rings
Puller, gear	A	Tuning control assembly repair, gear removal
Insertion tool, pin, 0.046; installation tool, pin, 0.046; installation tool; sprocket pin 0.046; and removal tool, pin, 0.046	A, B	Tuning control assembly repair, pin remval/ insertion
Fixture, number alignment (AN/ARC-114)	A	Counter dial alignment
Fixture, number alignment (AN/ARC-115)	B	Counter dial alignment
Fixture, number alignment (A/ARC-116)	C	Counter dial alignment
Fixture, backlash	C	Tuning control assembly gear alignment
Installation tool, sprocket	A	Install sprocket on shaft
Drift pin, gear aligning	A	Tuning/channel alignment
Fixture, electrical equipment (AN/ARC-l 14)	A	Dzus/guide pin alignment
Fixture, electrical equipment (AN/ARC-l 15)	B	Dzus/guide pin alignment
Wrench, open end, box, 7/16-3/8 modified	A	Filter nut removal
Insertion tool, pin, 0.062; installation tool, pin, 0.062; removal tool, pin, 0.062; installation tool, drive pin; removal tool, drive pin	A	Tuning control assembly repair
Installation tool, drive pin	A	Install transformer and gear assembly drive pin
Removal tool, drive pin	A	Remove transformer and-gear assembly drive pin
Accessory case assembly	F	Holds small adapters of maintenance accessories kit
Bottle assembly, screw cap (SM-B-694438)	F	Holds small tools of maintenance accessories kit
Support and drill fixture	C	Holds small tools of maintenance accessories kit
		Tuning control assembly repair

Section II. OPERATING INSRUCTIONS

2-5. Operation-Crimping Tool, MS3191-1 (fig. 1-7)

CAUTION

There are no adjustments to be made on crimping tool. Never attempt to disassemble tool or loosen or tighten elastic stop nuts on back of tool.

a. Place tool in open position (close handles to trip ratchet, then release pressure).

b. Loosen slide locking screw then pull slide to open position.

c. Pull positioner release all the way down against spring pressure, and insert desired positioner.

NOTE

Use proper positioner for each contact size in tool. Positioners are color coded and stamped for proper contact size identification. Store positioners in handle when not in use by removing spring loaded plug.

d. Mate flat on flange of positioner with flat in handle.

e. Push slide to closed position and tighten slide locking screw.

f. Insert prepared contact and wire through the indenter opening into poitioner.

g. Squeeze handles together until the positive stop is reached. Tool will release and return to open position.

h. Remove crimped contract and wire. (fig. 1-7)

2-6. Operation—Crimping Tool-612118 (fig. 1-7)

CAUTION

Never attempt to disassemble tool or loosen or tighten elastic stop nuts on back of tool.

a. Loosen latch locking screw then pull latch to open position.

b. Select desired locator (locators are stamped with part numbers) and place in position.

c. Slide latch to closed position then tighten locking screw.

d. Observe microcrimp indicator. Reset indenter setting if necessary by pulling on microcrimp adjusting knob and rotating until desired setting is obtained. Release knob in detent.

e. Open tool then insert prepared contact and wire through the indenter opening into position.

f. Squeeze handles together until the positive stop is reached. Tool will then release and return to open position.

g. Remove crimped contact and wire.

2-7. Operation—Support and Drill Fixture

(fig. 1–8⑤, 2-2, and 2-3)

NOTE

The following procedures are written around support and drill fixture SM–13--625W3, applicable to Radio Set AN/ARC–l 16 tuning control assembly repair and replacement. These procedures supplement those found in TM 11-5821-261-35 to aid the repairman in properly setting up the tuning control assembly within the fixture. Support and drill fixtures SM–B–625797 and SM-B--625806, applicable to the tuning control assemblies of Radio Set AN/ARC-l 15 and Radio Set AN/ARC–l 14, respectively, are not covered by the following procedures. The procedures for using these fixtures are similar to those below with minor variations in clamping and positioning of gears and sprockets within the **V** -blocks. Refer to TM 11-5821-260-35 and TM 11-5821-259-35 for the general procedures in using these fixtures.

a Refer to TM 11-5821-261-35 and disassemble the tuning control assembly as required to remove the rear section of the chassis and plate assembly with gears, sprockets, and switches attached.

b. Remove the top plate from the support and drill fixture by unscrewing the two knurled knobs and by lifting the top plate straight up off studs and dowels (fig. 2-2 and 2-3).

CAUTION

Do not position the gear or sprocket lock pins in the vertical position by turning with pliers. Damage to the gear, sprocket, or shaft may result. Turn the gears or sprocket by hand with a heavy lint-free cloth.

c. Position the lock pin to be removed so that it is vertical to the bottom of the fixture when installed, then position the chassis and plate assembly in the fixture with bores for the counter shaft resting against pins and shaft in the fixture and switch shafts seated in grooves in the V -block with the gears and sprocket tight against the V-block (fig. 2-2).

NOTE

Only gear MP45, sprocket MP55, and gear MP65 will seat tight against the V -block.

d. Tighten the four thumbscrews to secure the chassis and plate assembly to the fixture by means of the clamps (fig. 1-8 @ and 2-3).

c. Insert the proper pin removal tool in a drill press chuck and press out the applicable lock pin.

f. Remove the chassis and plate assembly from he fixture by loosening the four thumbscrews and respective clamps.

g. Replace appropriate gear, sprocket, and/or switch assembly following the procedures in TM 11-5821-261-35.

NOTE

If a gear or sprocket was replaced, but not its corresponding switch assembly, temporarily secure the gear or sprocket to the switch shaft with the appropriate setscrew and rotate the switch shaft approximately 90 degrees while observing the caution of *c* above.

h. Secure the chassis and plate assembly in the fixture following procedures of *c* and *d* above. as applicable.

i. Position the gear or sprocket to be replaced tight against the **V** -block in the fixture. Orient the gear or sprocket so that the existing drill hole, if present, is approximately 45 degrees from where the new hole will be drilled. Secure the gear or sprocket to the switch shaft with an appropriate setscrew.

NOTE

For gear MP67 and shaft MP68, position MP67 on MP68. Use a .003 feeler gage, so that *a* .003-inch end play remains between MP67 and the chassis plate.

j. Replace the top plate on the support and drill fixture anti tighten the two knurled knobs.

k. Insert the proper drill in a drill press chuck and drill a hole through the proper gear or sprocket huh and shaft. Guide the drill through the appropriate drill bushing.

NOTE

If a hole is to be drilled through gear MPH67 anti shaft MP68, secure MP68 to the **V** -block by tightening the socket head setscrew down onto MP68 and securing the setscrew in place with a socket-head setscrew nut (fig. 2-3).

l. Remove the top plate *(b* above).

m. Insert the appropriate pin insertion tool in the drill press chuck and insert the appropriate lock pin in the hole drilled in *k* above.

n. If required, insert the appropriate pin installation tool in the drill press chuck and position the lock pin as called for in TM 11-5821-261-35.

o. Remove the chassis and plate assembly from the fixture *(f* above) and remove the setscrew from the gear or sprocket.

p. Refer to TM 11-5821-261-35 anti reassemble the tuning control assembly as required.

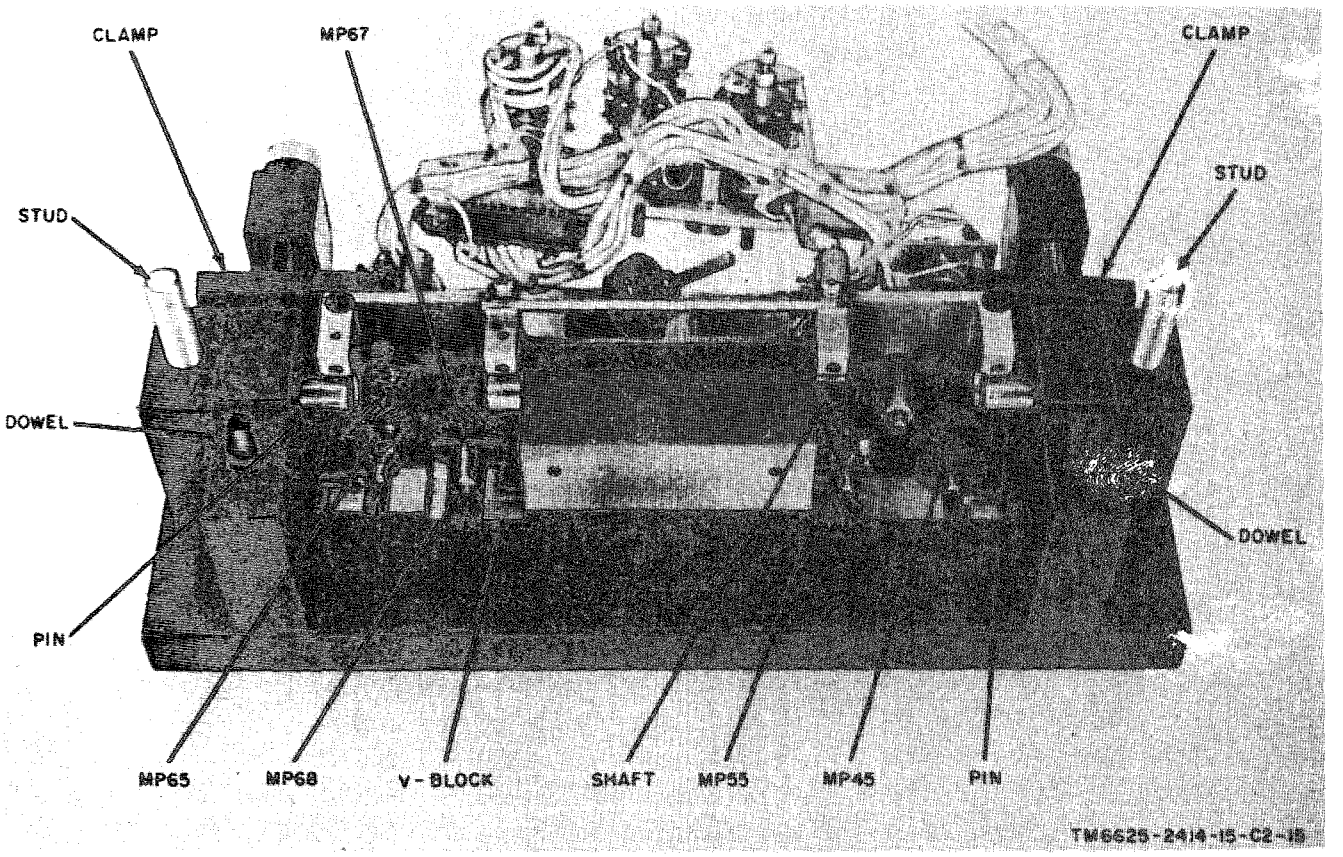


Figure 2–2. AN/ARC–116 tuning control assembly mounted in support and drill fixture with top plate removed.

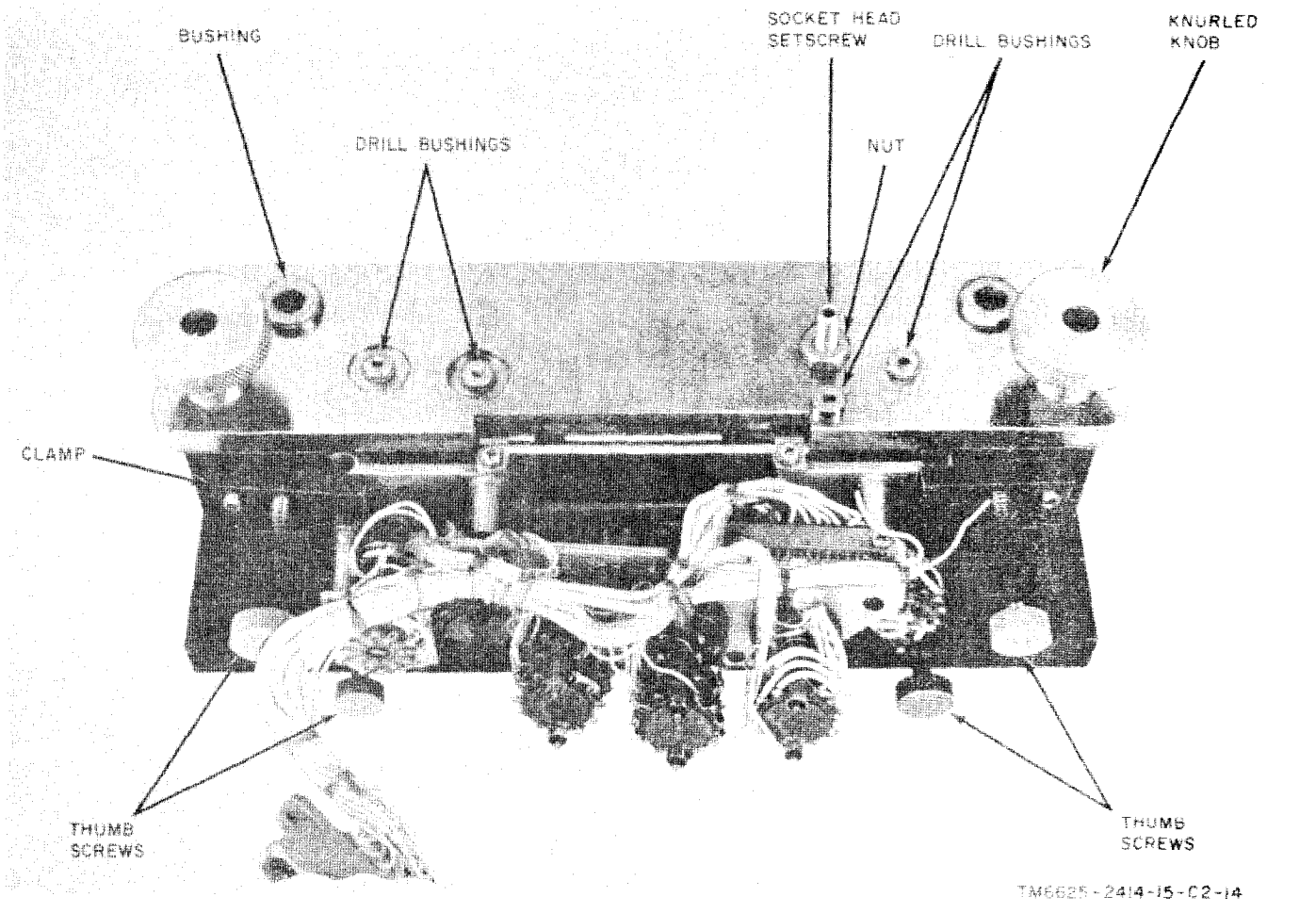


Figure 2-3. AN/ARC-116 tuning control assembly mounted in support and drill fixture with top plate attached.

2-8. Operation—Backlash Fixture

(fig. 1-8 @, 2-4, and 2-5)

NOTE

The following procedure must be performed to properly position MP59 on the shaft of S5 whenever switch S5 and/or gear MP59 is replaced in Radio Set AN/ARC–116.

a. Refer to paragraph 4–10 *j*, TM 11-5821-261-35 and disassemble the tuning control assembly, as required, to separate the A plate (A1A1MP21M1) assembly, with attached switches and gears, from the chassis and plate assembly; then remove defective gear MP59 and/or switch S5.

b. If required, assemble a new S5 assembly to the A plate, then preset either the new or existing S5 wiper towards terminal 9 of the switch decks, and observe the color of the switch rotor inside the rear plate of the switch assembly.

c. Position gear MP59 over the shaft of S5. Do not tighten the gear to the shaft with setscrews. Secure the A plate to the fixture with the two clamps and thumbscrews after positioning the hole in the A plate over the diamond pin of the fixture and the shaft of shaft assembly MP57 into the split clamp of the fixture (fig. 2-4 and 2-5).

d. Select the arm and shaft assembly of the fixture that corresponds to the switch rotor color (“red” or “black”), and insert the flatted shaft into the guide bushing near the pointer. Rotate the arm and shaft assembly counterclockwise until the hole in the arm is directly over the guide bushing on the left side of the fixture’s face plate (fig. 1-8 @ and 2-4). The tip of the shaft should then slip into the switch rotor.

e. Insert a pin through the hole in the arm and guide bushing (fig. 1-8 @).

f. Position the pointer in the approximate center of the scale and tighten the pointer thumb nut.

g. Tighten the split clamp to shaft MP59 (fig. 2-4). Loosen the pointer thumb nut and gently rotate the pointer clockwise until increased resistance is met (fig. 1-8 @). Observe the pointer indication.

h. Gently rotate the pointer counterclockwise until increased resistance is again met. Observe the pointer indication.

i. Determine the total number of marks that the pointer has passed, divide this number by two, and rotate the pointer back clockwise to the determined midway point.

j. Lock the pointer at this midway point with the pointer thumb nut, and mark the point with a grease pencil or piece of tape.

k. Secure MP59 to the S5 shaft with the gear set screw.

NOTE

Apply sealer to the screw threads.

l. Loosen the pointer thumb nut, and rotate the pointer both clockwise and counterclockwise to verify that the actual midpoint of travel has been determined. If not, repeat the procedure from g above to effect a true midpoint.

m. Loosen the split clamp from MP59 (fig. 2-4), remove the pin and the arm and shaft assembly from the front of the fixture (fig. 1-8 @). Remove the A plate from the fixture by loosening the clamps and thumbscrews (fig. 2-4 and 2–5).

n. Refer to TM 11-5821-261-35 and reassemble the A plate to the tuning control assembly.

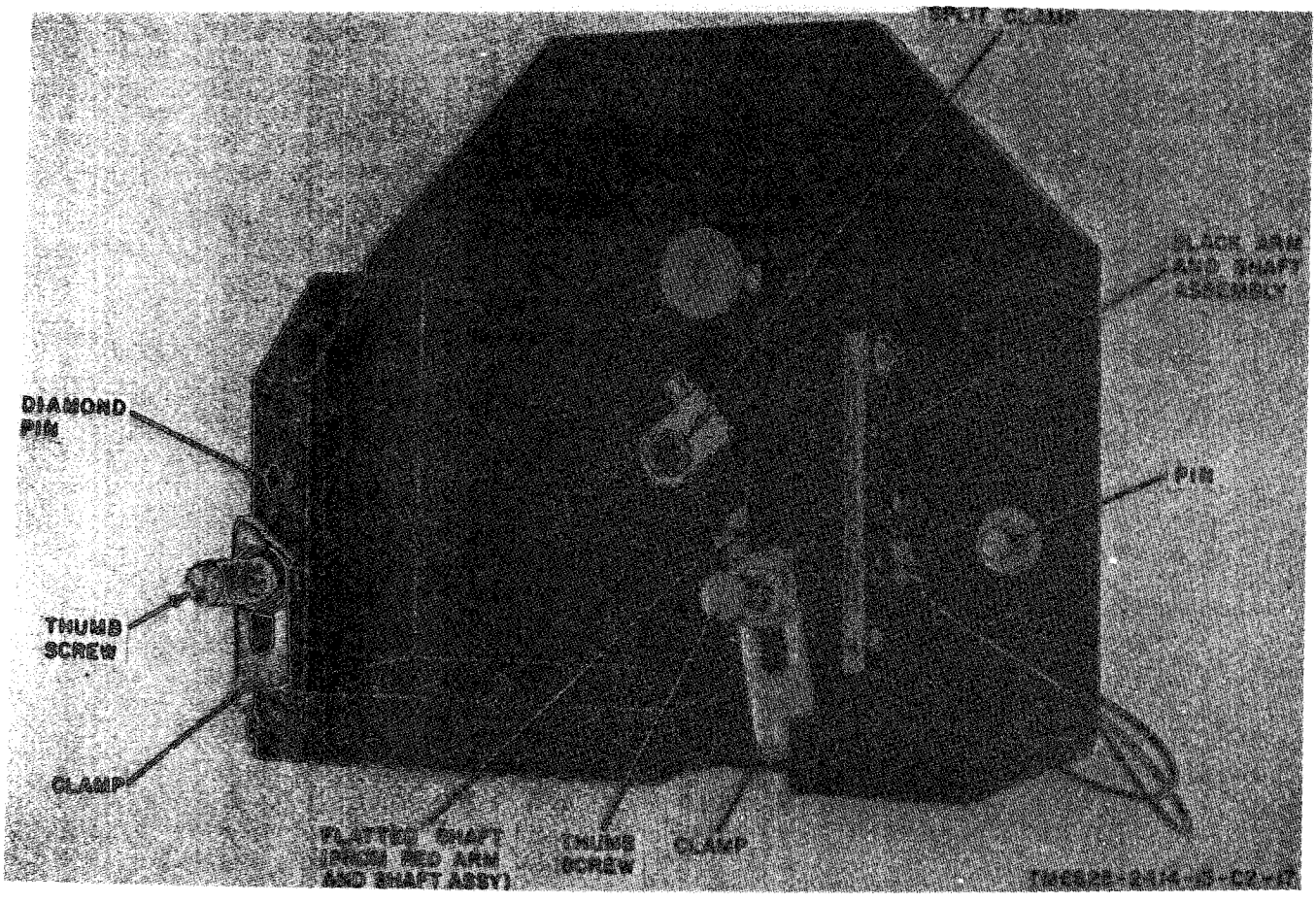


Figure 2–4. Backlash fixture, rear oblique view.

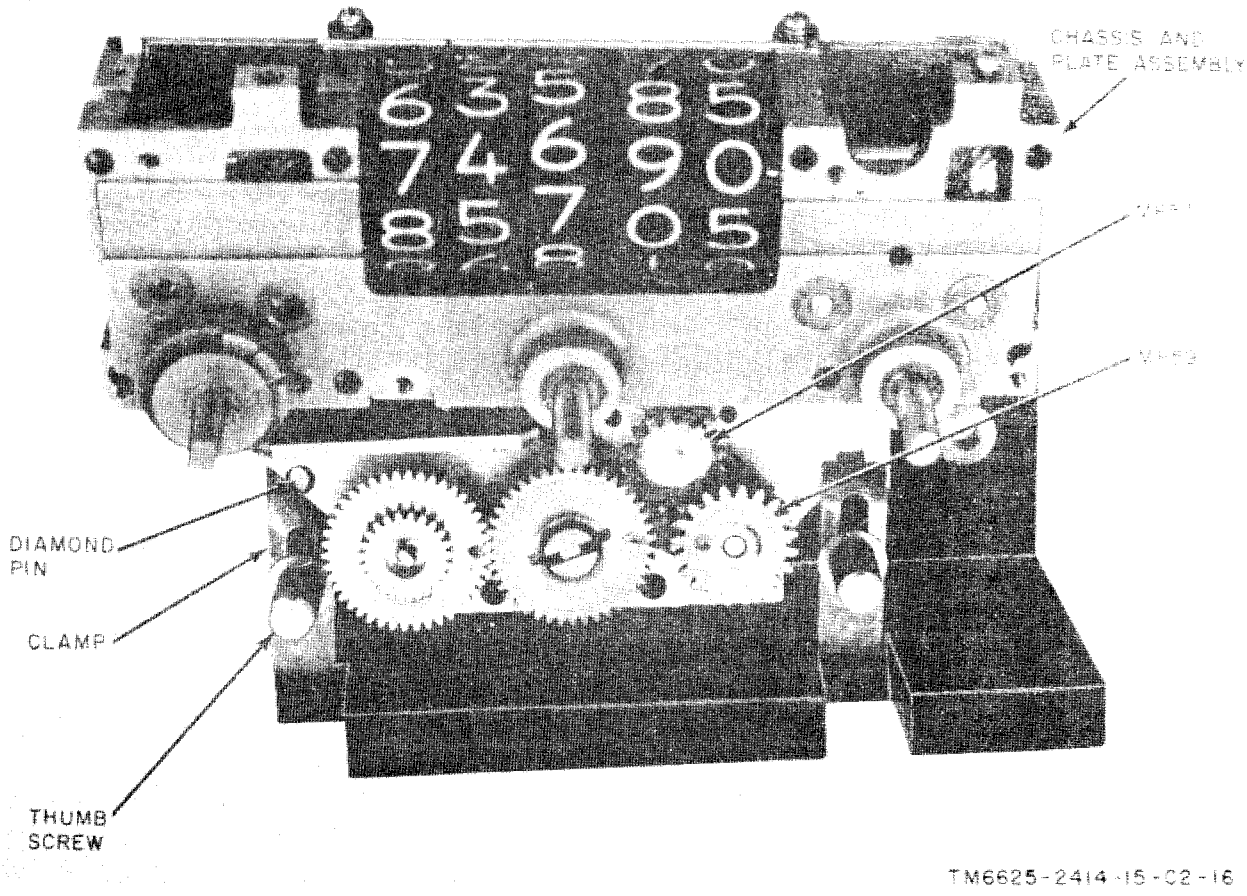


Figure 2-5. AN/ARC-116 tuning control assembly mounted in backlash fixture.

CHAPTER 3
MAINTENANCE

Section I. GENERAL

3-1. Scope of Maintenance

The maintenance duties assigned to the operator and organizational repairman of the equipment are listed below, together with a reference to the paragraphs covering the specific maintenance functions.

a. Daily preventive maintenance checks and services (para 3-4).

b. Monthly preventive maintenance checks and services (para 3-6).

c. Cleaning (para 3-6).

cf. Touchup painting (para 3-7).

3-2. Tools and Materials Required

Tools required for organizational maintenance are contained in Tool Kit, Electronic Equipment TK-101 /G. Materials needed are:

a. Lint free cloth.

b. Trichlorotrifluoroethane, NSN 6850-00-105-3084.

c. Brush, Mil-G-7241.

3-3. Preventive Maintenance

Preventive maintenance is the systematic care, servicing, and inspection of the equipment to prevent the occurrence of trouble, to reduce downtime, and to assure that the equipment is serviceable.

a. Systematic Care. The procedures given in paragraphs 3-4 through 3-8 cover routine systematic care and cleaning essential to proper upkeep and operation of the equipment.

b. Preventive Maintenance Checks and Services. The preventive maintenance checks and services charts (para 3-4 and 3-5) outline functions to be performed at specific intervals. These checks and services are to maintain Army electronic equipment in a combat serviceable condition; that is, in good general (physical) condition and in good operating condition. To assist operators in maintaining combat serviceability, the charts indicate what to check, how to check, and what the normal conditions are: the ***references*** column lists the illustrations, paragraphs, or manuals that contain detailed repair or replacement procedures. If the defect cannot be remedied by performing the corrective actions listed, higher category maintenance or repair is required. Records and reports of these checks and services must be made in accordance with the requirements set forth in TM 38-750.

Section II. MAINTENANCE PROCEDURES

3-4. Daily Preventive Maintenance Checks and Services Chart

Sequence No.	*Item to be inspected.*	*Procedure*	*References*
1	Completeness	See that the equipment is complete.	Para 1-6
2	Exterior surfaces	Clean the exterior surfaces.	Para 3-6
3	Connectors	Cheek the tightness of all connectors.	None
4	cables	Remove any grease, oil, or dirt from cables and connectors.	Para 1-6

3-5. Monthly Preventive Maintenance Checks and Services Chart

Sequence No.	*Item to be inspected*	*Procedure*	*References*
1	Cables	Inspect cables and wires forchafed, cracked, or frayed insulation. Replace connectors that are broken, arced, stripped, or worn excessively.	None
2	Handles and latches	Inspect handles, latches, and hinges for looseness. Replace or tighten as necessary.	None
3	Metal surfaces	Inspect exposed metal surfaces for rust and corrosion. Touch up paint and lubricate as required.	Para 3-7, 3-8
4	Gaskets	Inspect gaskets for cracks. and excessive wear.	None
5	Interior	Clean interior of chassis and cabinet.	None
6	Publications	See that all publications are complete, serviceable, and current.	DA Pam 310-1
7	Modifications	Check DA Pam 310-1 to determine whether new applicable MWO'S have been published. All URGENT MWO'S must be applied immediately. All NORMAL MWO'S must be scheduled.	DA Pam 310-1

3-6. Cleaning

Inspect the exterior of the equipment. The exterior surfaces should be clean, and free of dust, dirt, grease, and fungus.

a. Remove dust and loose dirt with a clean, soft cloth.

WARNING

Adequate ventilation should be provided while using TRICHLOROTRIFLUOROETHANE. Prolonged breathing of vapor should be avoided. The solvent should not be used near heat or open flame; the products of decomposition are toxic and irritating. Since TRICHLOROTRIFLUOROETHANE dissolves natural oils, prolonged contact with skin should be avoided. When necessary, use gloves which the solvent cannot penetrate. If the solvent is taken internally, consult a physician immediately.

b. Remove grease, fungus, and ground-in dirt from the case; use a cloth dampened (not wet) with Cleaning Compound, trichlorotrifluoroethane.

c. Remove dust and dirt from plugs and jacks with a brush.

d. Clean the front panels and potted cable connectors; use a soft clean cloth. If dirt is difficult to remove, dampen the cloth with water; mild soap may be used for more effective cleaning.

3-7. Touchup Painting Instructions

a. When the finish on the exterior of the equipment has been scarred or damaged, corrosion may be prevented by touching up the surfaces. Touch up the surface as outlined in (1), (2), and (3) below.

(1) Use No. 000 sandpaper to clean the surface down to the bare metal; obtain a bright smooth finish.

(2) Sand the area back to solid paint and feather the paint edge that leads to the exposed metal.

(3) Wipe the area clan and apply one coat of zinc chromate metal primer NSN 8010-00-835-2114, and two thin finish coats of enamel to metal surfaces.

b. When a touchup paint job is necessary apply paint with a small brush. For the proper care of the brushes and painting equipment refer to TM 9-213 and TB 746-10.

3-8. Lubrication

Apply a light film of oil (Pioneer No. 10, Eclipse-Pioneer, Teterboro, N.J. MIL-L-6085) to unpainted surfaces of all tools and fixtures. Also apply lubricant (Beacon No. 325, Humble Oil and Refining Co., Chestnut Hills, Mass, MIL-G-3278A) to all moving tool parts and to critical areas of fixtures, such as drill bushings and guide pins.

Section III. DS AND GS DEPOT MAINTENANCE

3-9. General

The DS and GS maintenance procedures supplement the procedures described in section H. The maintenance operations performed are the same at all categories. The only test equipment required for electrical troubleshooting is Multimeter TS-352B/U.

3-10. Troubleshooting

a. Visual inspection and continuity checking are the only techniques required for troubleshooting the maintenance accessories kit. Most circuits are straight through (zero ohms) and the test jacks are labeled with the same designations as the connector pins.

b. The exceptions are adapter terminations for the power supply, headset, microphone, and breakout box SM-B-625701 (J29-17 to J26-17), breakout box SM-B-625706 (J8-39, 40 to J12-39, 40), and breakout box SM-B-625711 (J19-1 to J20-1). In the case of the adapters, refer to figures 3-1 through 3-6 for resistance values.

c. When troubleshoot the the breakout boxes, insert a jumper into the red and black posts, and using Multimeter TS-352 B/U, continuity should be measured at the aforementioned terminals. Removing the jumper should indicate an open circuit on the multi meter.

3-11. Repairs

a. General. Repair of breakout boxes, terminations, and cables consists of replacing any defective components or wiring. The components are jacks, connectors, and resistors. Given below are cable descriptions, and procedures for repair of wiring, and component replacement.

b. Repair of Cables. Cables W102 through W112 are repaired by replacing Amphenol connectors. The defective connector and potting material is removed by cutting them off at the end of the cable. A new connector is installed by inserting cable leads into pins or sockets and crimping, then installing into connector holes and repotting. Epoxy No. 2651, black, and Catalyst No. 9 (Emerson and Cuming, Inc., Canton, Mass.), or equivalent, should be used as the potting material which should be coated, after it is cured either one hour at 170°F in an oven, or at room temperature for a minimum of 12 hours, with a thin layer of DC 630 protective coating (Dow Corning Corp., Midland, Mich.), or equivalent. This coating should be air dried for a minimum of two hours before the connector is used. Crimping tool SM-A-625812, adapters SM-B-62581 3-1 (pins), SM-B-625813-2 (sockets), insertion tool SM-A-625815-2 and extractor tool SM-A-62581 5-3 (or insertion/extractor tool SM-B-625892) are all used to perform this function. Pins are SM-A-61 7935-5 and sockets SM-A-61 7935-4. Cable W26 is repaired by replacing Cannon connectors. The defective connector is removed and a new connector installed using crimping tool MS3191-1, red adapter MS3191-20A, extractor tool SM-A-625817-2 and insertion tool SM-A-625817-4.

(1) ***Cable W1.*** Cable W1 consists of 6 feet of RG-188A/U. The coaxial cable is terminated with right-angle female plug P1 and male BNC plug P2. For instructions on the replacement of connectors refer to figures 3-7 and 3-8.

(2) *Cable W102.* Cable W102 is a 26-wire (each wire is 26 awg and 11 inches long), rubber insulated cable with multipin plugs P1 and P2. Pin number 15 is the guide pin.

(3) *Cable W103.* Cable W103 is a 11-wire (each wire is 26 awg and 11 inches long), rubbar insulated cable with multipin plugs P1 and P2. Guide pin is number 7.

(4) *Cable W104.* Cable W104 is a 10-wire (each wire is 26 awg and 11 inches long), rubber insulated with multipin plugs P1 and P2. Guide pin is number 6.

(5) *Cable W105.* Cable W105 is a 9-wire (each wire is 26 awg and 11 inches long), rubber insulated cable with multipin plugs P1 and P2. Guide pin is number 6.

(6) *Cable W106.* Cable W106 is a 50-wire (each wire is 26 awg and 11 inches long), rubber insulated cable with multipin plugs P1 and P2. Guide pins are numbers 36 and 39.

(7) *Cable W107.* Cable W107 is a 24-wire (each wire is 26 awg and 11 inches long), rubber insulated cable with multipin plugs P1 and P2. Guide pin is number 26.

(8) *Cable W108.* Cable W108 is a 33-wire (each wire is 26 awg and 11 inches long), rubber insulated cable with multipin plugs P1 and P2.

(9) *Cable W109.* Cable W109 is a 9-wire (each wire is 26 awg and 11 inches long), rubber insulated cable with multipin plugs P1 and P2.

(10) *Cable W110.* Cable W110 is a 52-wire (each wire is 26 awg and 11 inches long except for the wire connected to connector P1, pin 14 which is a RG-178B/U wire and is also 11 inches long), rubber insulated cable with multipin plugs P1 and P2. P1–14 shield connects to P1-42 with No. 26 awg wire.

(11) *Cable W111.* Cable Will is a 9-wire (each wire is 26 awg and 11 inches long), rubber insulated cable with multipin plugs P1 and P2. Pins 1 and 2, and 11 and 12 are shielded' pairs. P1-3 Connects to shields of Pi-l and P1-2 with No. 26 awg wire. P1-10 Connects to shields of P1–11 and P1-12 with No. 26 awg wire.

(12) *Cable 112.* Cable W112 is a 17-wire (each wire is 26 awg and 11 inches long), rubber insulated cable with multipin connector plugs P1 and P2.

(13) *Cable W26.* Cable W26 is a 14-wire, rubber insulated cable with multipin plugs P1 and P2. Each wire is 22 awg and 12 inches long, except pins 1, 5, 8, and 9 which is 20 awg shielded and 12 inches long. P1–2 connects in series to shields at P1–1, 5, 8, and 9 with No. 22 awg

wire. P2–2 connects to shield at P2–1 with No. 22 awg wire.

3-12. Repair of Breakout Boxes/ Terminations

a. General. Repair of breakout boxes and terminations consist of replacing any defective components or wiring. The components are jacks, connectors, and resistors. Procedures for repairing wiring and replacing components sire given below.

b. Repair of Internal Wiring. Breakout boxes are wired with 24 awg wire except for breakout box SM-B-625716 current. monitoring circuitry which is 20 awg. Power supply terminations have 24 awg wire. Microphone and headset terminations use 26 awg wire. Standard tools are used to replace defective wiring of all boxes.

c. *Repair/Replacement of Jacks.* Jacks are replaced by unsoldering any wiring, removing jack, replacing it with a new one, and then resoldering connection.

d. Repair/Replacement of Connectors. Three types of connectors are repaired: Amphenol, Bendix, and Cannon. Amphenol connectors are repaired/replaced using crimping tool SM-A–625812, adapters SM-B-625813-1 (pins), SM-B-625813-2 (sockets), insertion tool SM-A-**625815-2 and extractor tool SM-A-625815-3 (or insertion/extractor tool SM-B-625892). Bendix connectors are repaired using crimping tool MS3191-1, contact positioner MS3191-20A, extractor tool SM-A-625817-2 and insertion tool SM-A-625817-4.**

NOTE

Extractor teal SM-A-625817-2 has a reversible head.

Cannon connectors are repaired using crimping tool MS3191–1, positioner P–20-3191-37 (contact size No. 20) and extractor/insertion tool CIET–20HDB.

e. Replace Resistors. Resistance values of terminations are given in the schematics, figures 3-1 through 3-5. Defective resistors are replaced by standard procedures.

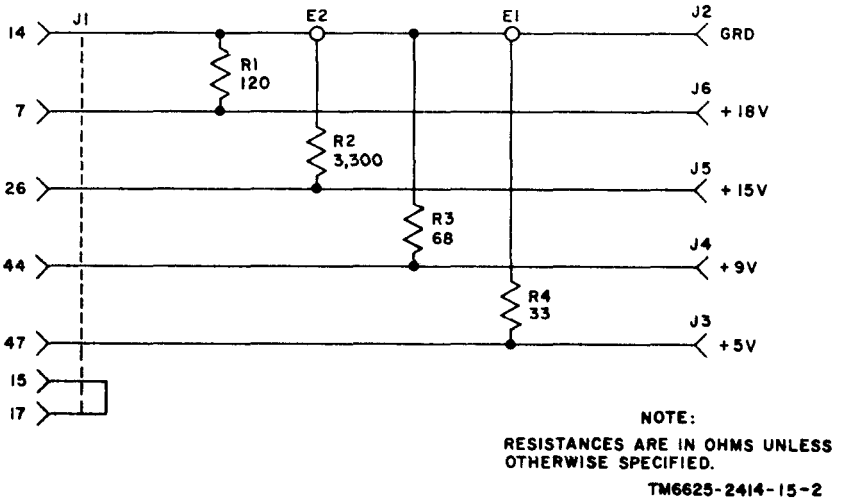


Figure 3–1. Power Supply Termination (AN/ARC–114), schematic diagram.

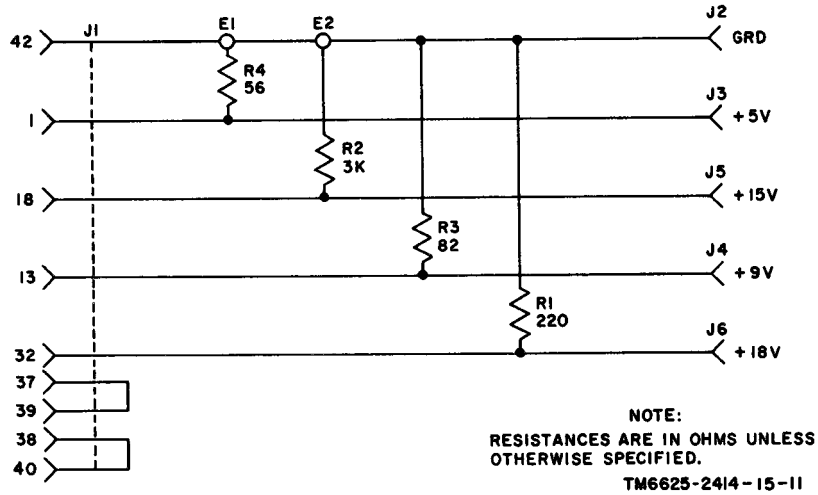


Figure 3-2. Power Supply Termination (AN/ARC-115), schematic diagram.

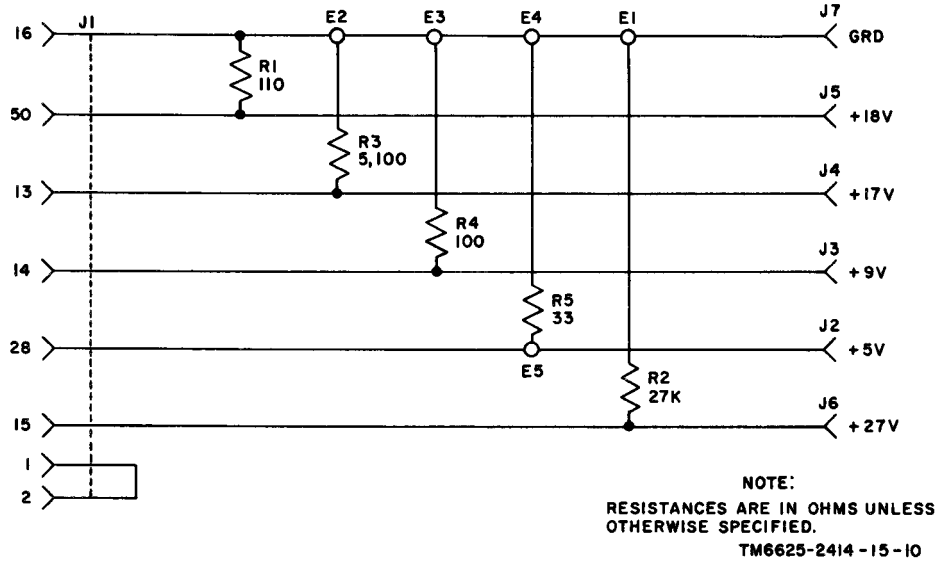


Figure 3-3. Power Supply Termination (AN/ARC-116), schematic diagram.

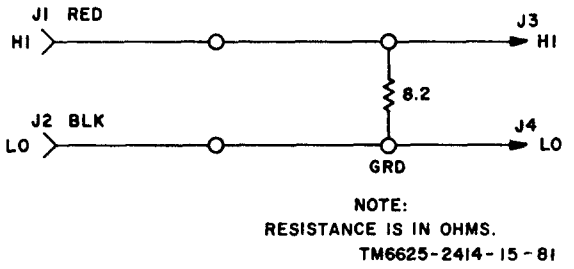


Figure 3–4. Headset termination, schematic diagram.

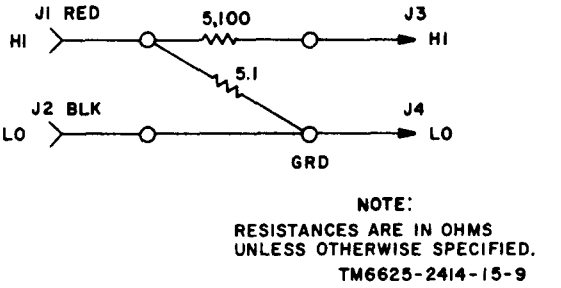


Figure 3–5. Microphone termination, schematic diagram.

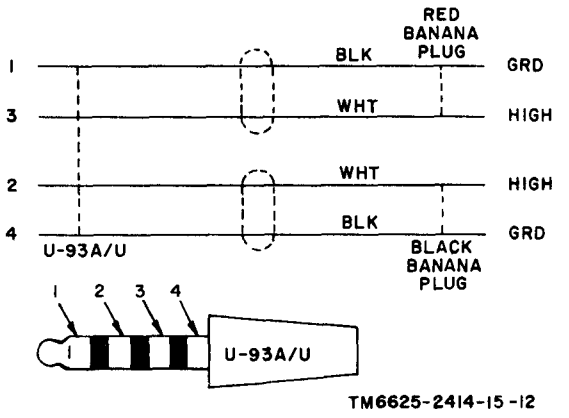
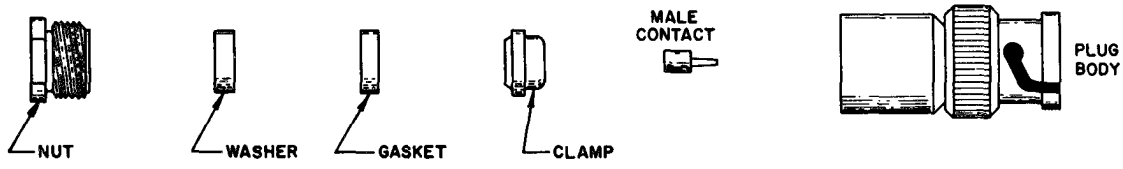
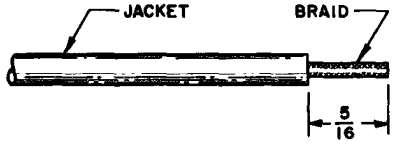
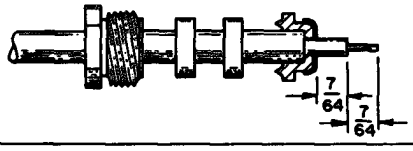
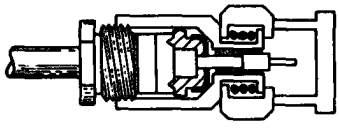


Figure 3–6. Headset adapter cable, schematic diagram.

ASSEMBLY OF TYPE BNC RADIO FREQUENCY CABLE PLUGS UG-88E/U AND UG-260D/U

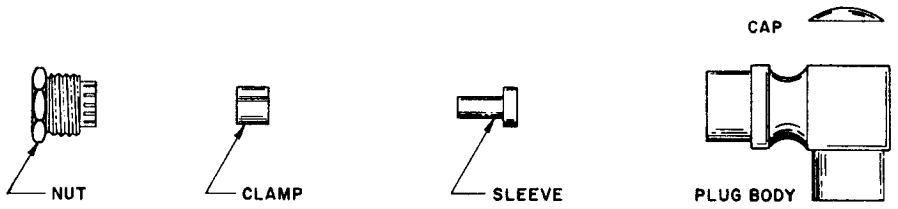


STEP 1		CUT OFF END OF CABLE SQUARE AND REMOVE JACKET 5/16" FROM END. DO NOT NICK BRAID.
STEP 2		COMB OUT BRAID.
STEP 3		TAPER BRAID, SLIDE NUT, WASHER, GASKET AND CLAMP OVER TAPERED BRAID, MAKING SURE INNER SHOULDER OF CLAMP IS POSITIONED TIGHTLY AGAINST END OF JACKET.
STEP 4		FLARE BACK BRAID, TRIM IF NECESSARY, TRIM DIELECTRIC TO DIMENSION SHOWN. DO NOT NICK INNER CONDUCTOR. CUT OFF INNER CONDUCTOR 7/64" FROM DIELECTRIC.
STEP 5		SOLDER CONTACT ON INNER CONDUCTOR. REMOVE EXCESS SOLDER. DO NOT OVER HEAT DIELECTRIC AS IT WILL BECOME SWOLLEN AND WILL NOT ENTER BODY AND INSULATOR PROPERLY.
STEP 6		INSERT CABLE AND HARDWARE INTO PLUG BODY. MAKE SURE GASKET IS PROPERLY SEATED ON SHARP EDGE OF CLAMP AFTER NUT IS STARTED, TIGHTEN WITH WRENCH. NOTE: SHARP EDGE OF CLAMP MUST SPLIT GASKET.

TM6625-2414-15-61

Figure 3–7. Assembly instructions for type BNC RF cable connectors.

ASSEMBLY OF RIGHT ANGLE CABLE PLUG SM-A-595802-4



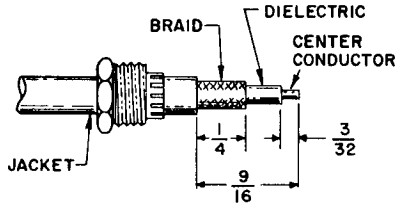
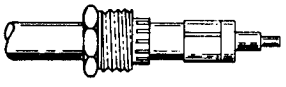
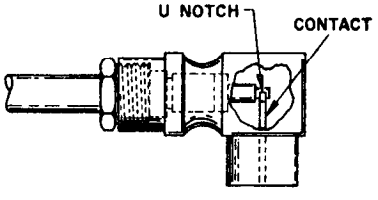
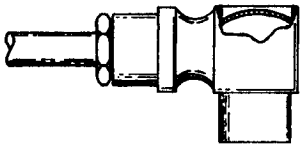
STEP 1		CUT CABLE OFF SQUARE ON END. DO NOT DEFORM. SLIDE CABLE NUT OVER CABLE. CUT JACKET, BRAID, AND DIELECTRIC TO DIMENSION SHOWN.
TEP 2		SLIDE SLEEVE OVER DIELECTRIC, UNDER BRAID. PLACE CLAMP OVER BRAID, FLUSH UP AGAINST JACKET.
STEP 3		INSERT CABLE AND ASSEMBLY INTO PLUG BODY SO THAT CENTER CONDUCTOR RESTS IN CONTACT U NOTCH. SOLDER CENTER CONDUCTOR TO CONTACT U NOTCH.
STEP 4		TIGHTEN NUT. PLACE CAP IN PLUG BODY RECESS AND SOLDER IN PLACE.

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Figure 3–8. Assembly instructions for RF cable connector.

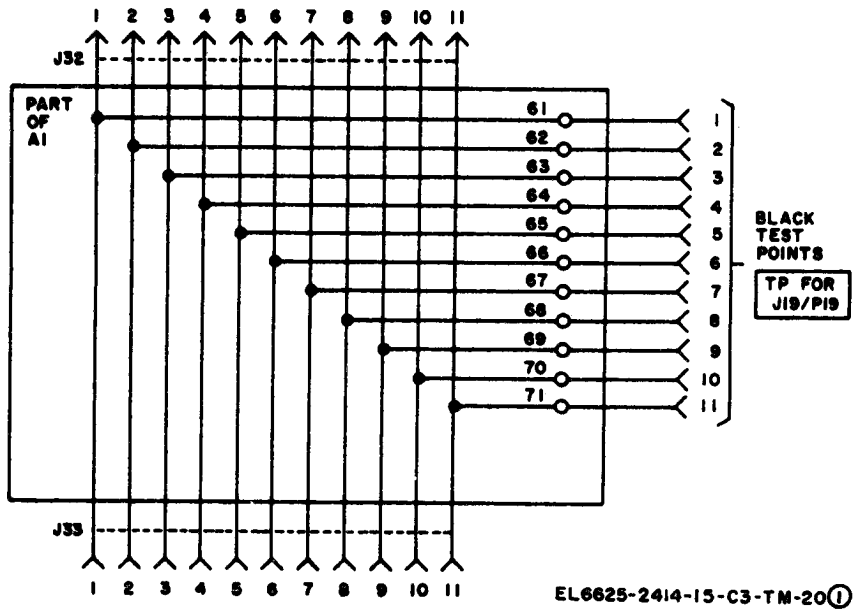

Figure 3–9①. Breakout Box (AN/ARC–114), schematic diagram (part 1 of 8).

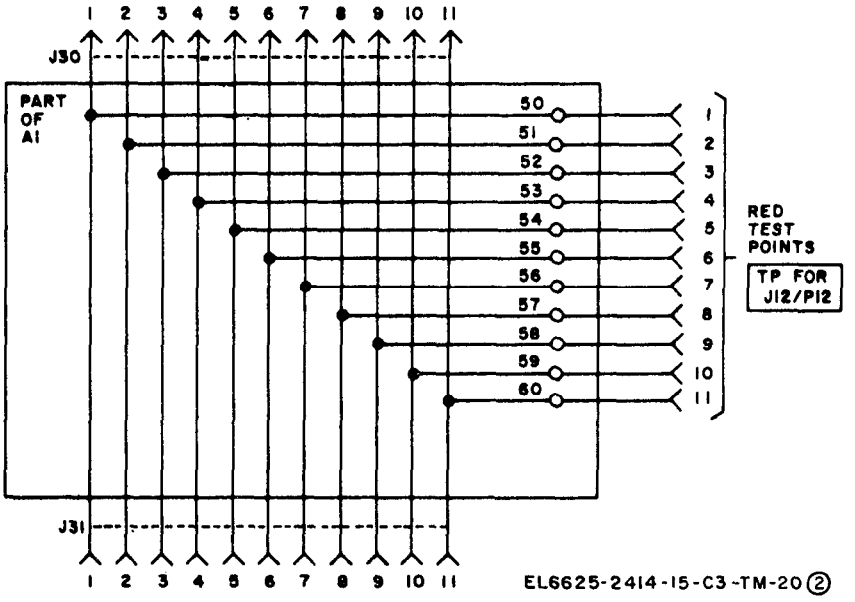

Figure 3-9②. Breakout Box (AN/ARC-114), schematic diagram (part 2 of 8).

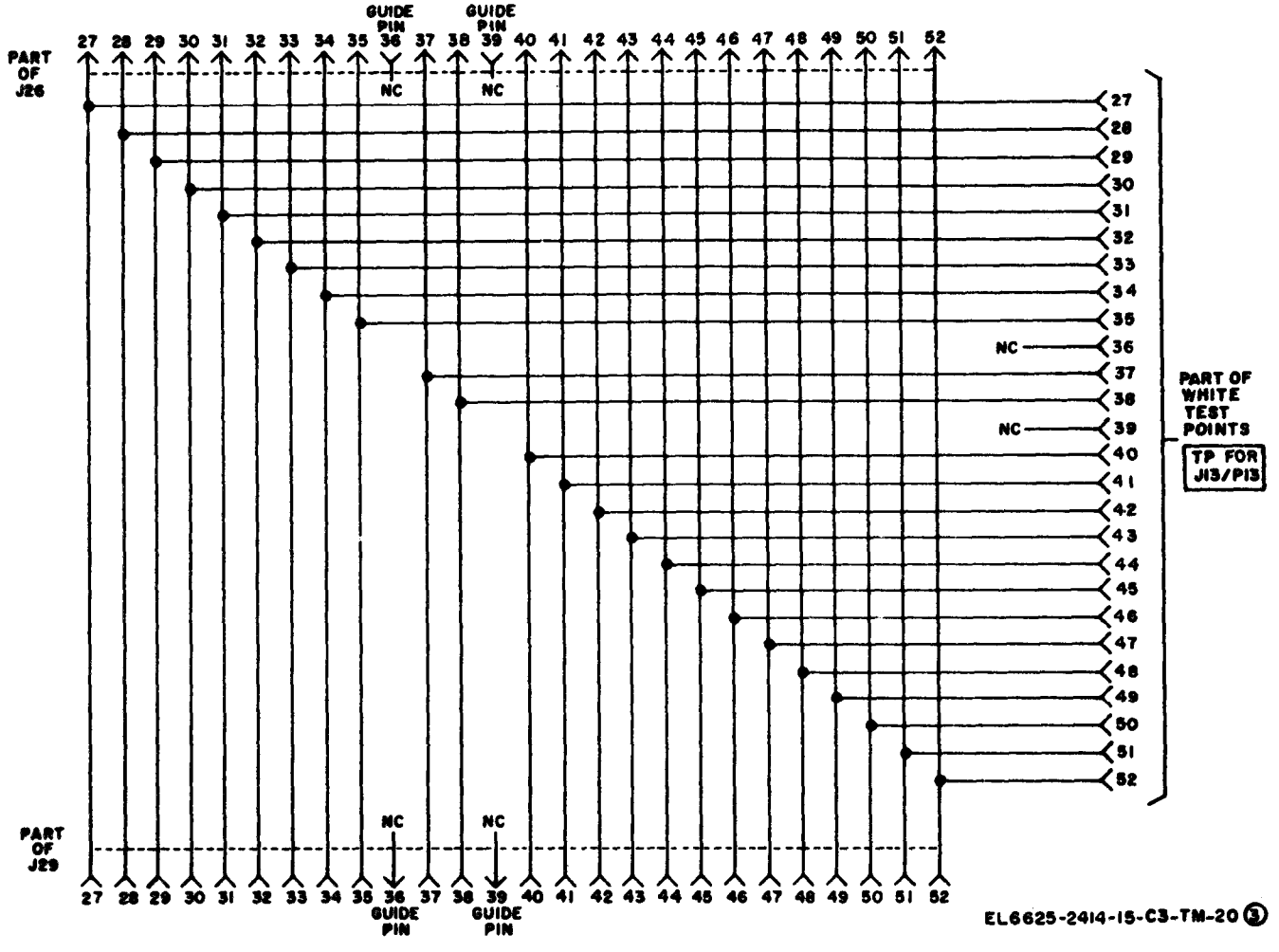

Figure 3-9③. Breakout Box (AN/ARC-114), schematic diagram (part 3 of 8).

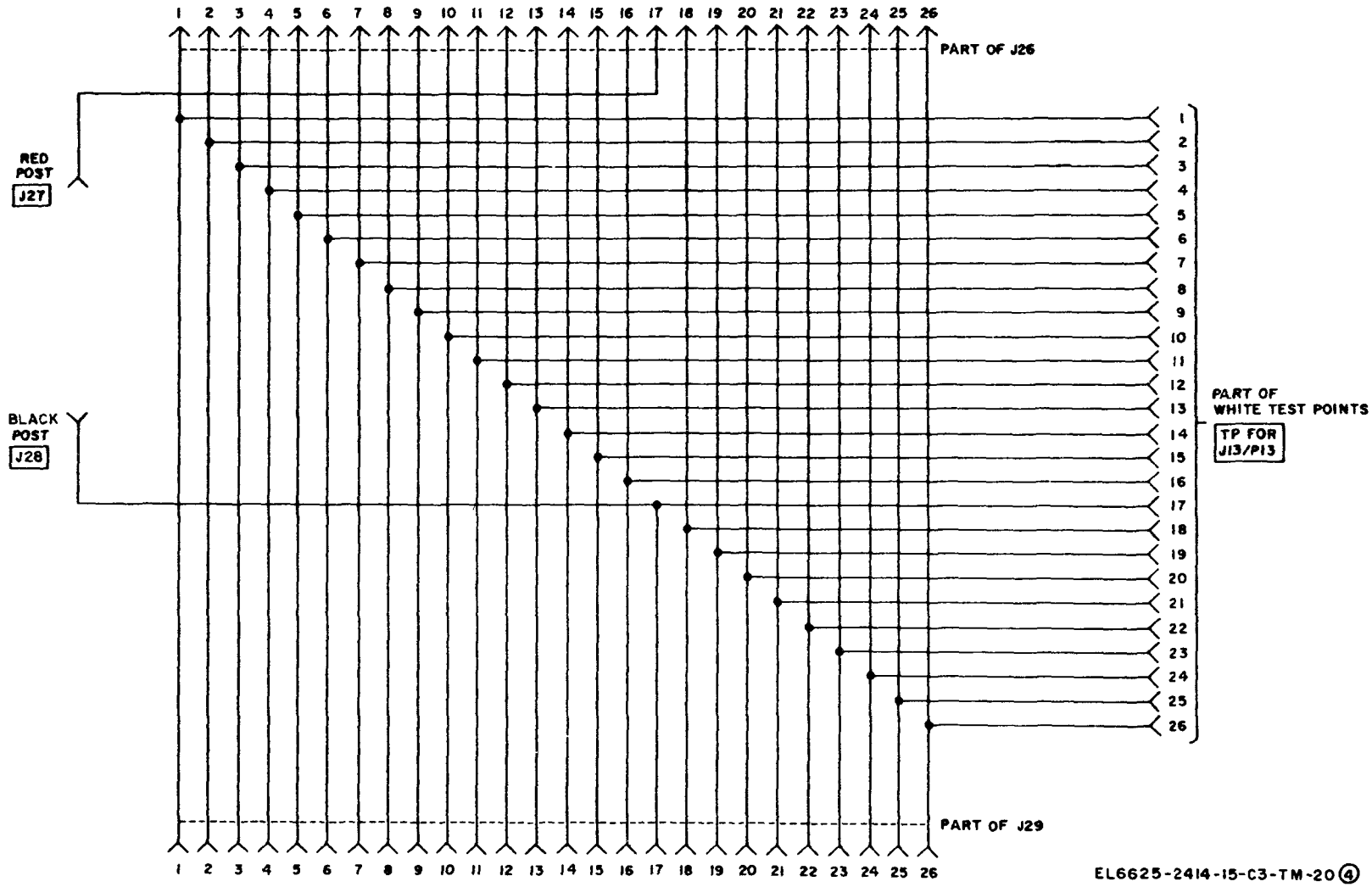

Figure 3-9④. Breakout Box (AN/ARC-114), schematic diagram (part 4 of 8).

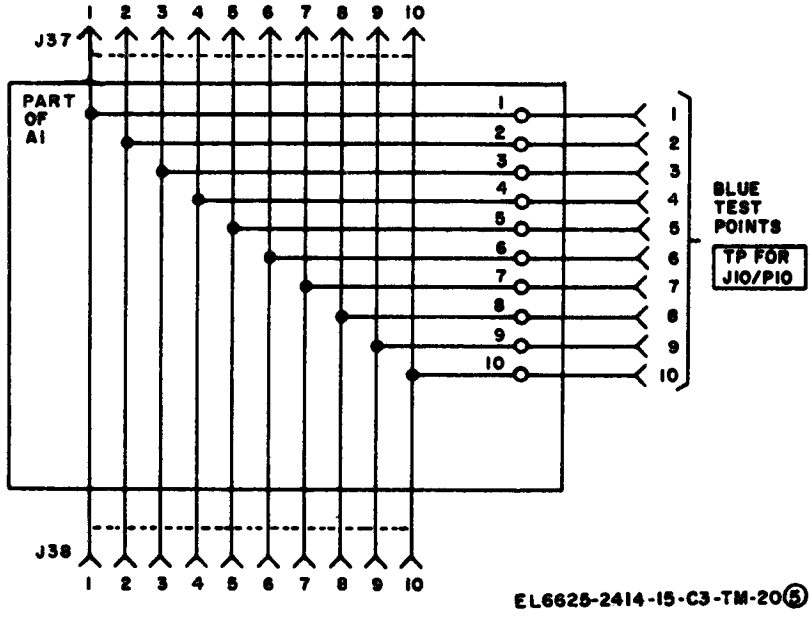

Figure 3–9⑤. Breakout Box (AN/ARC–114), schematic diagram (part 5 of 8).

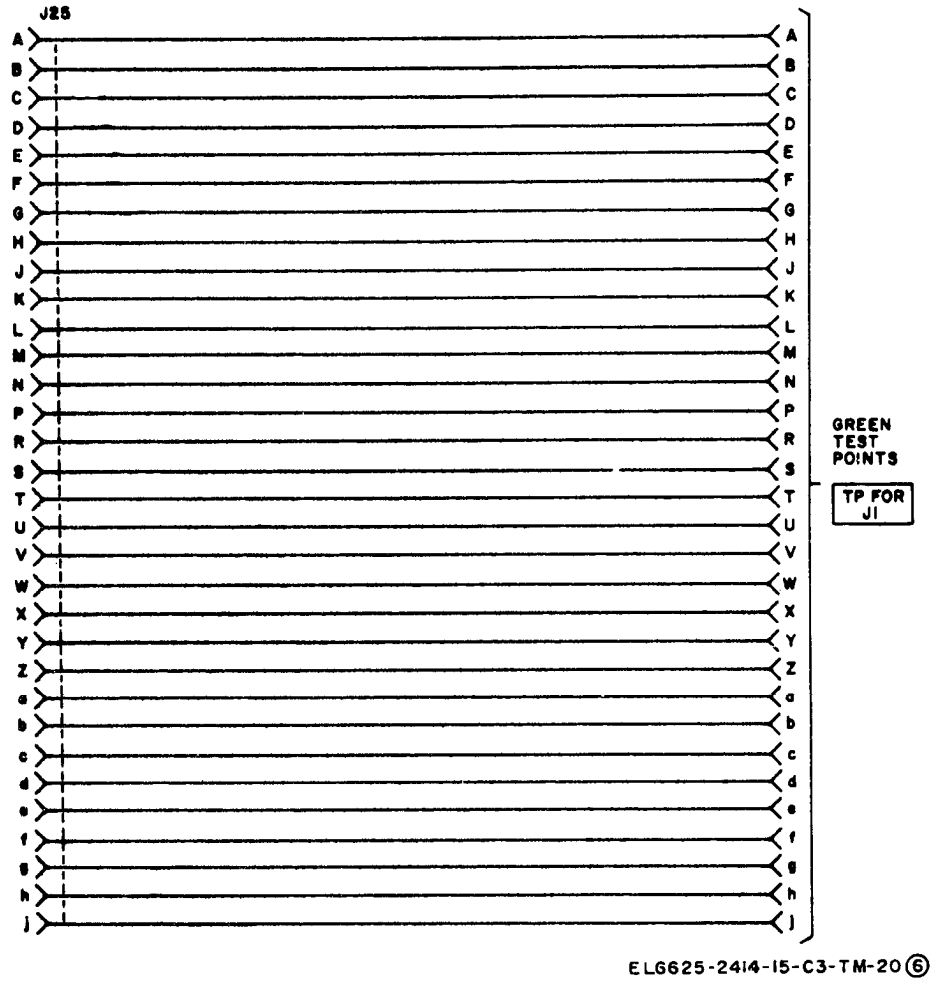

Figure 3-9⑥. Breakout Box (AN/ARC-114), schematic diagram (part 6 of 8).

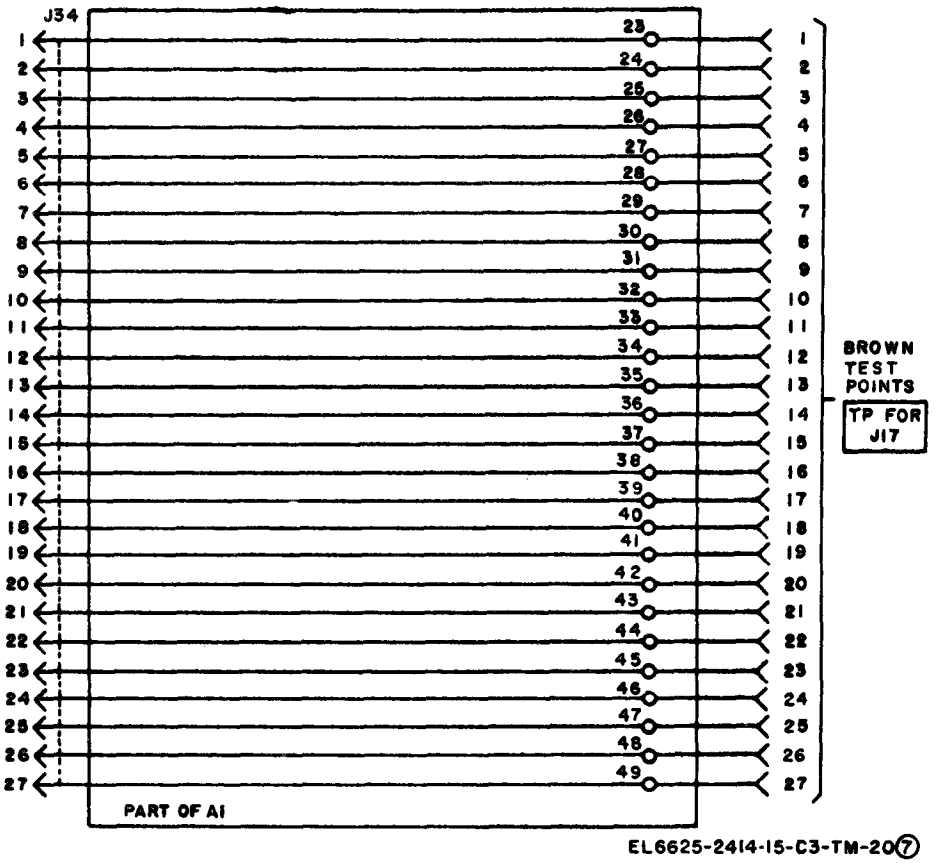

Figure 3-9⑦. Breakout Box (AN/ARC-114), schematic diagram (part 7 of 8).

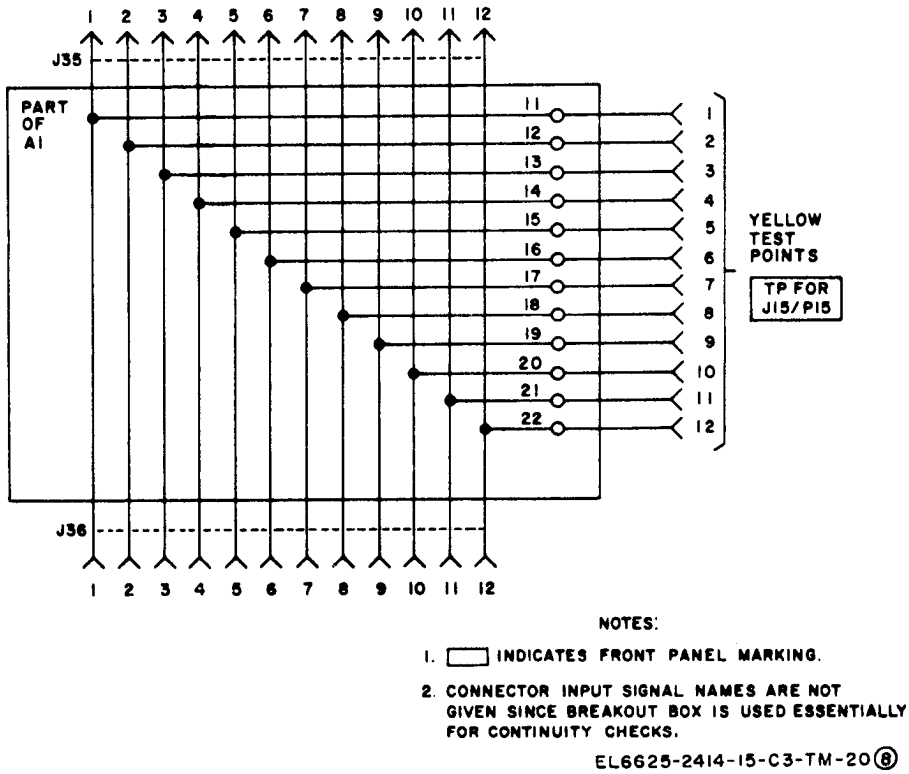

Figure 3-9⑧. Breakout Box (AN/ARC-114), schematic (part 8 of 8).

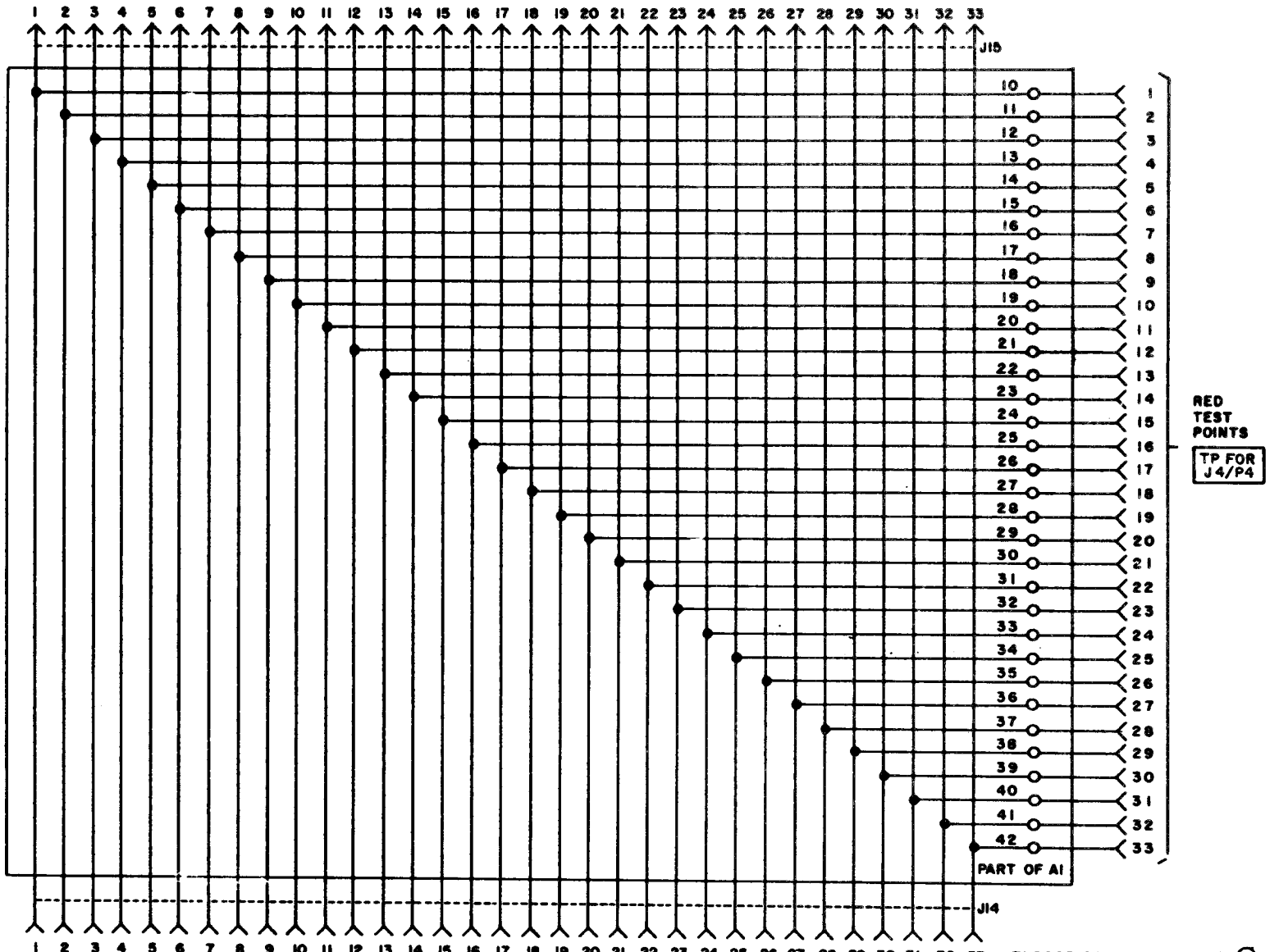

Figure 3-10①. Breakout Box (AN/ARC-115), schematic diagram, (part 1 of 5).

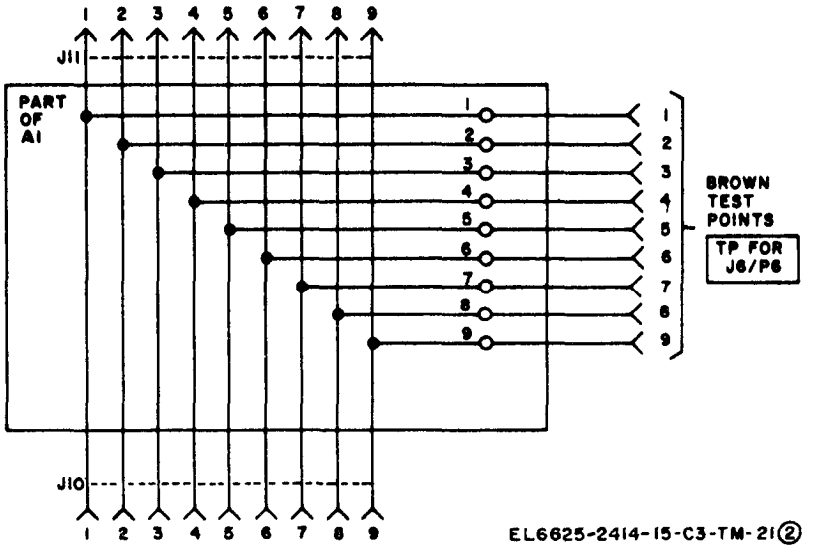

Figure 3–10②. Breakout Box (AN/ARC–115), schematic diagram (part 2 of 5).

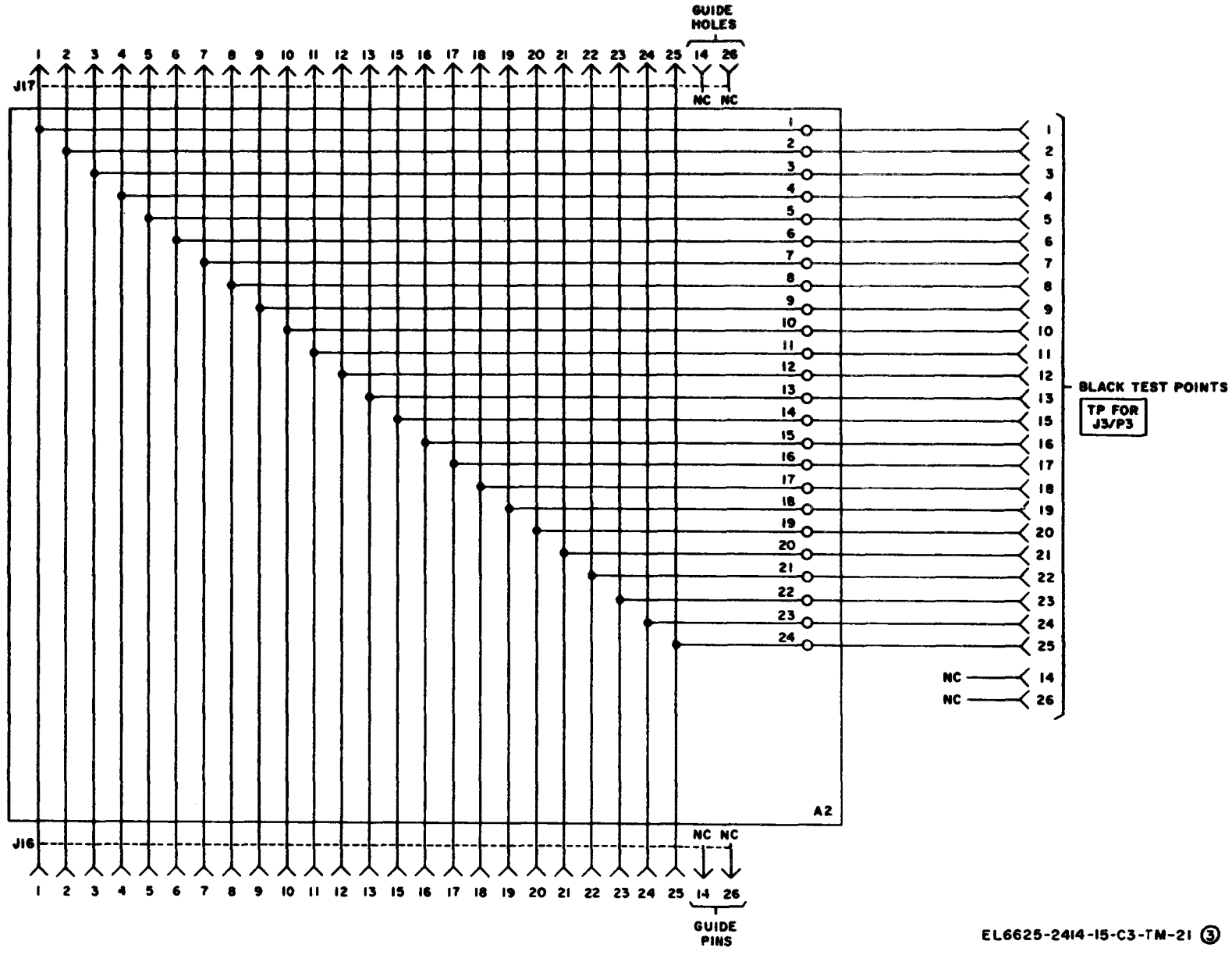

Figure 3-10③. Breakout Box (AN/ARC-115), schematic diagram (part 3 of 5).

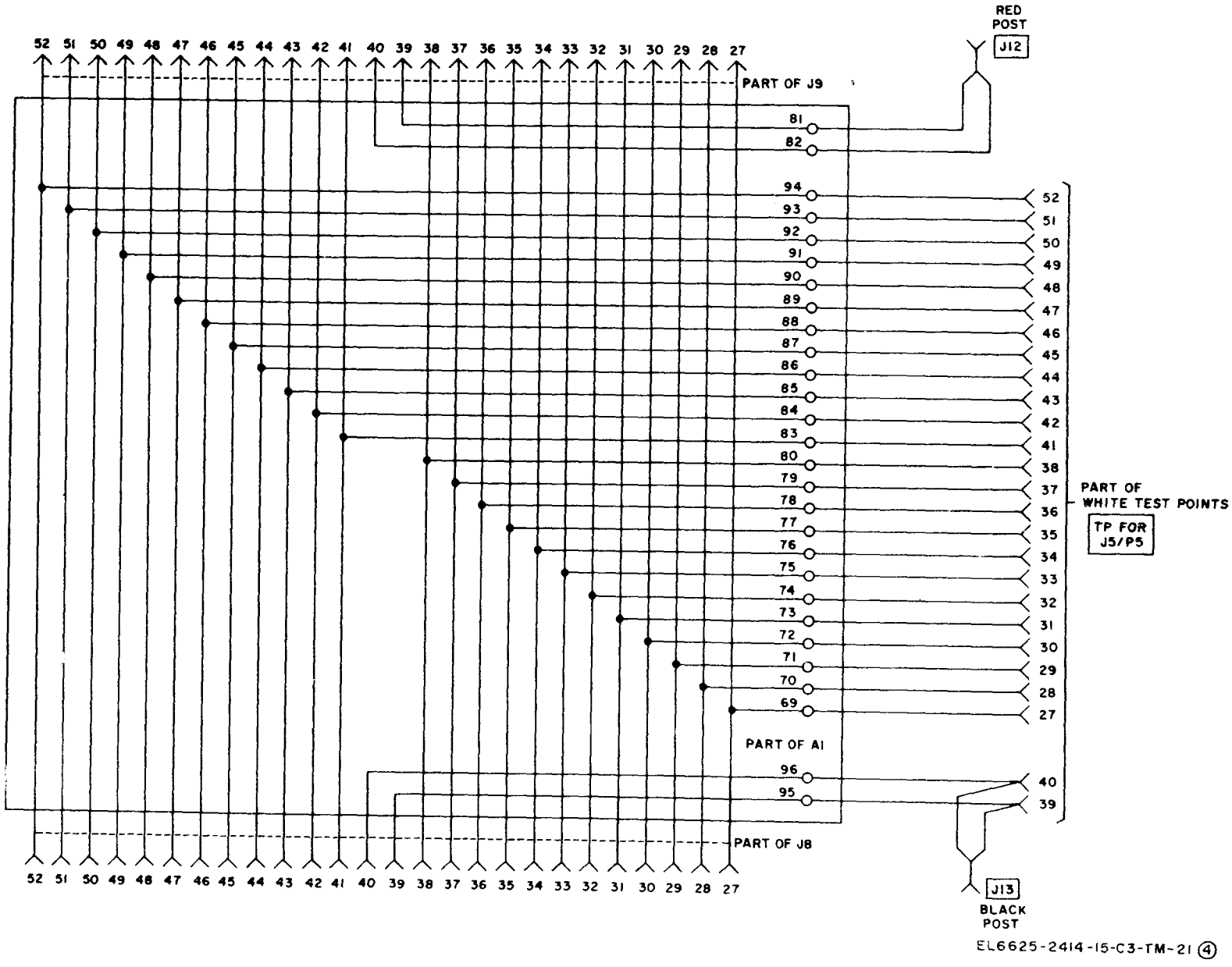

Figure 3-10④. Breakout Box (AN/ARC-115), schematic diagram (part 4 of 5).

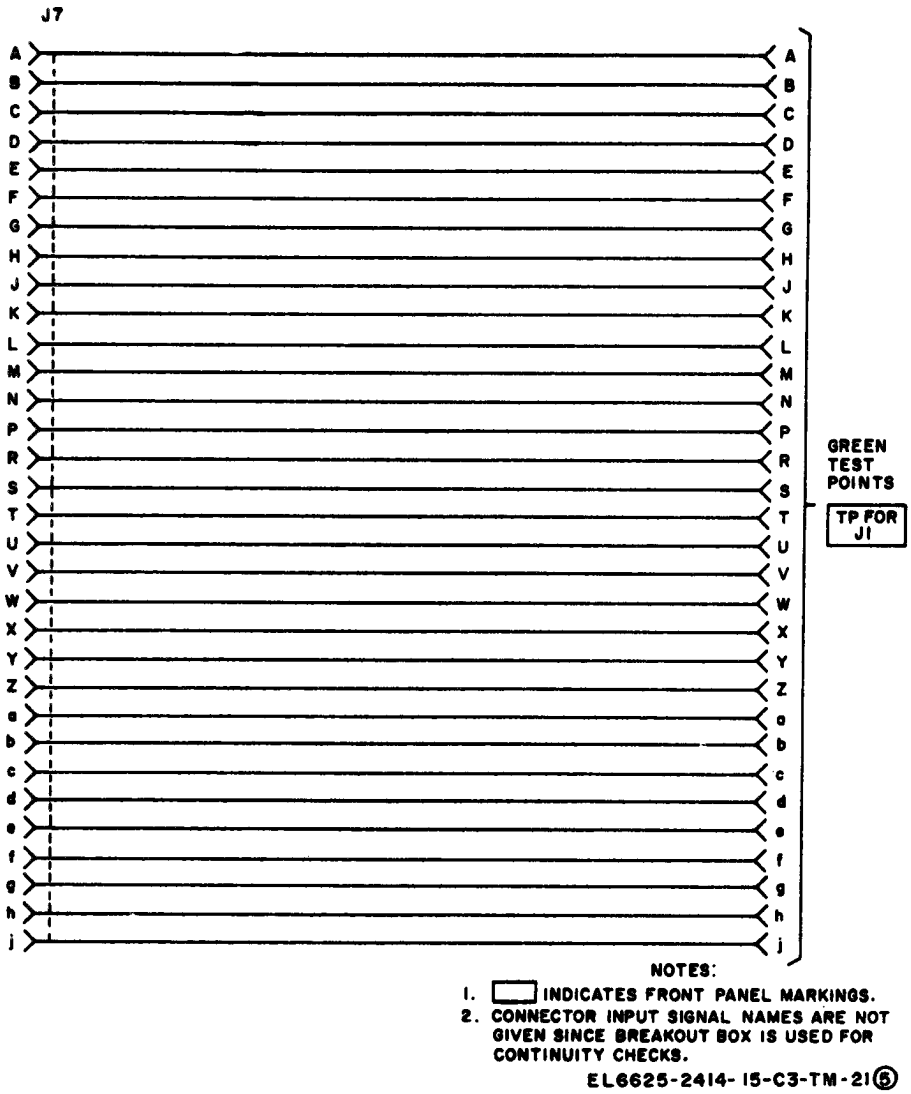

Figure 3–10⑤. Breakout Box (AN/ARC–115), schematic diagram (part 5 of 5).

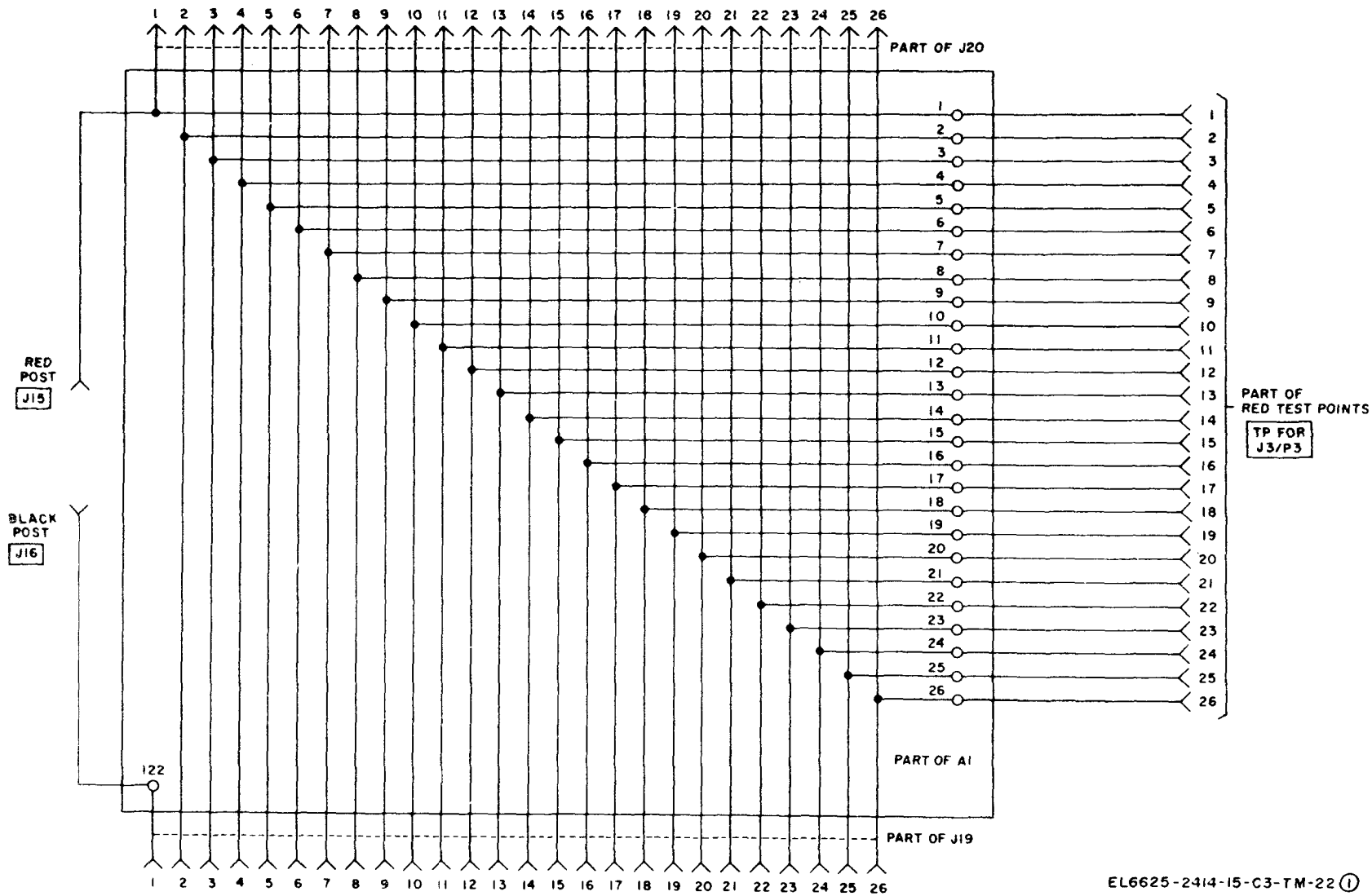

Figure 3-11①. Breakout Box (AN/ARC-116), schematic diagram (part 1 of 8).

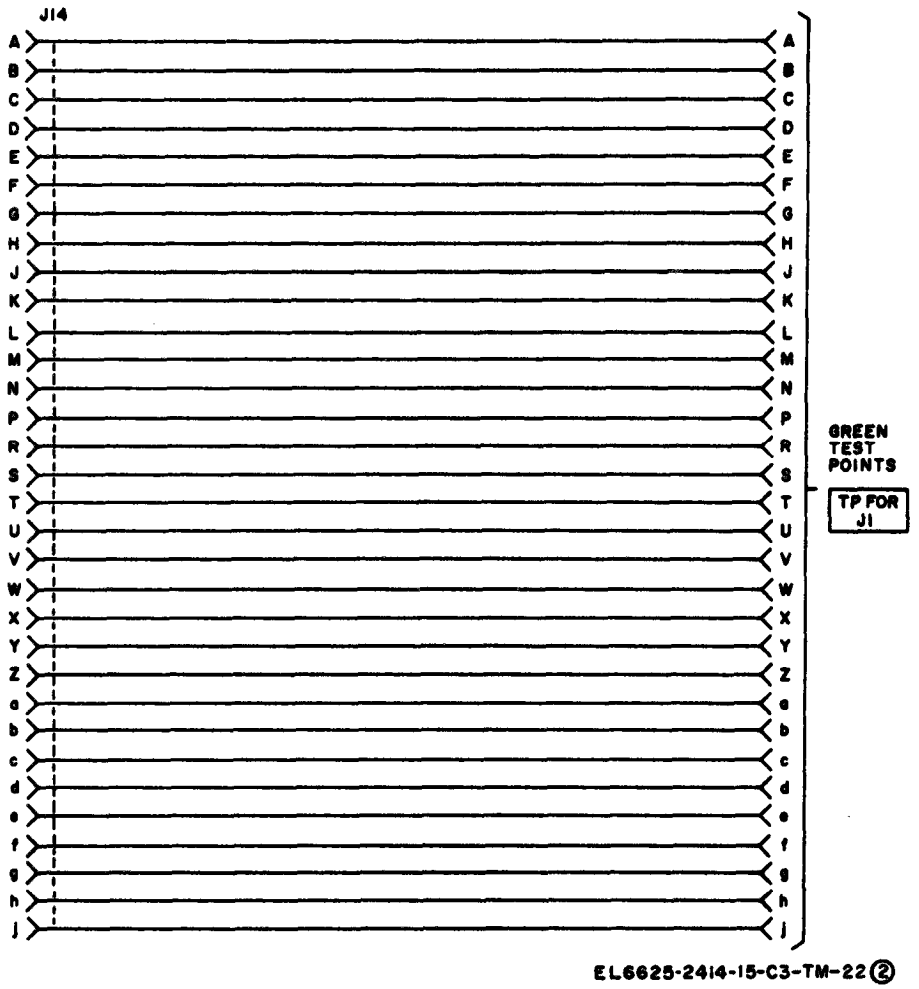

Figure 3-11②. Breakout Box (AN/ARC-116), schematic diagram (part 2 of 8).

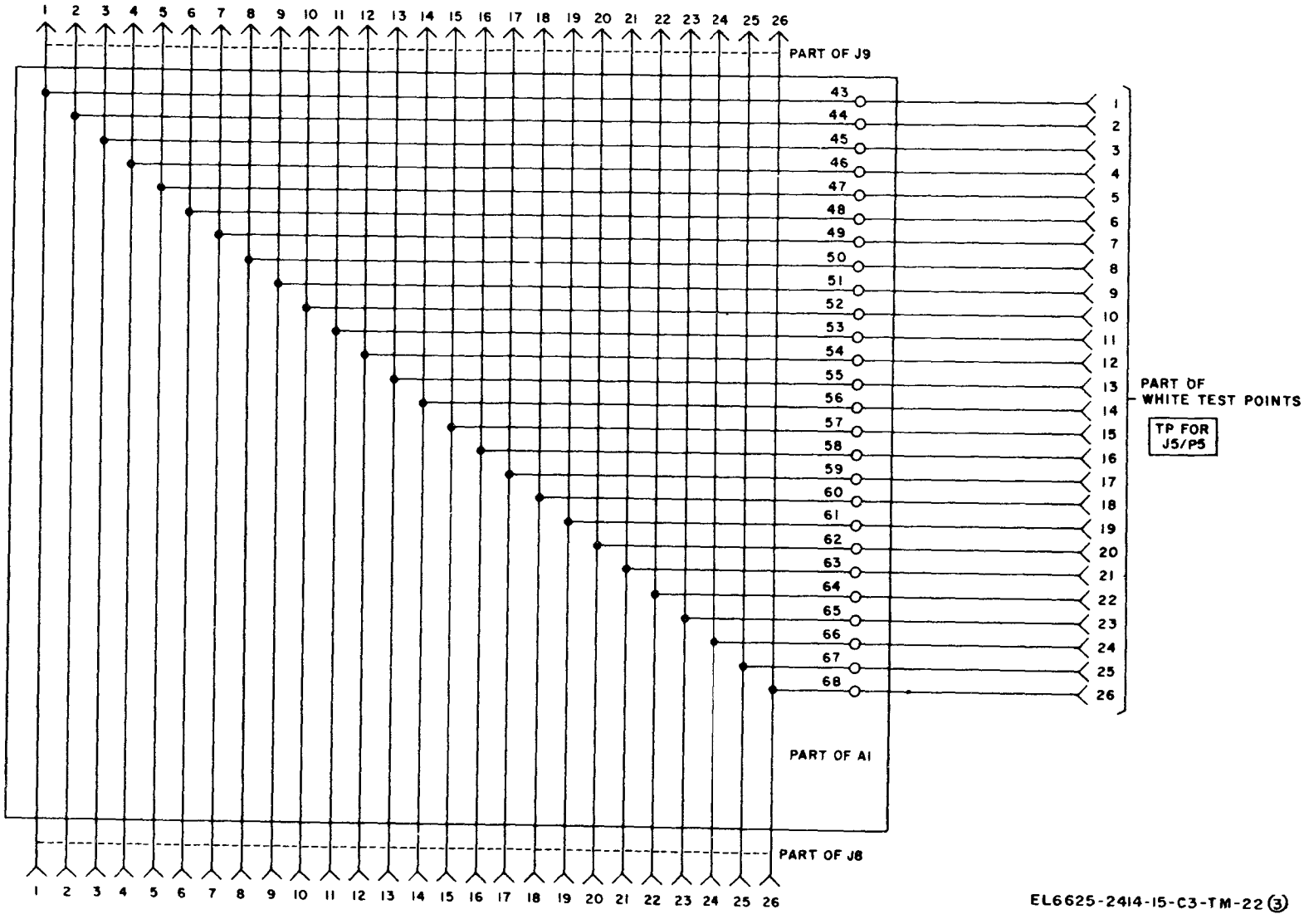

Figure 3-11③. Breakout Box (AN/ARC-116), schematic diagram (part 3 of 8).

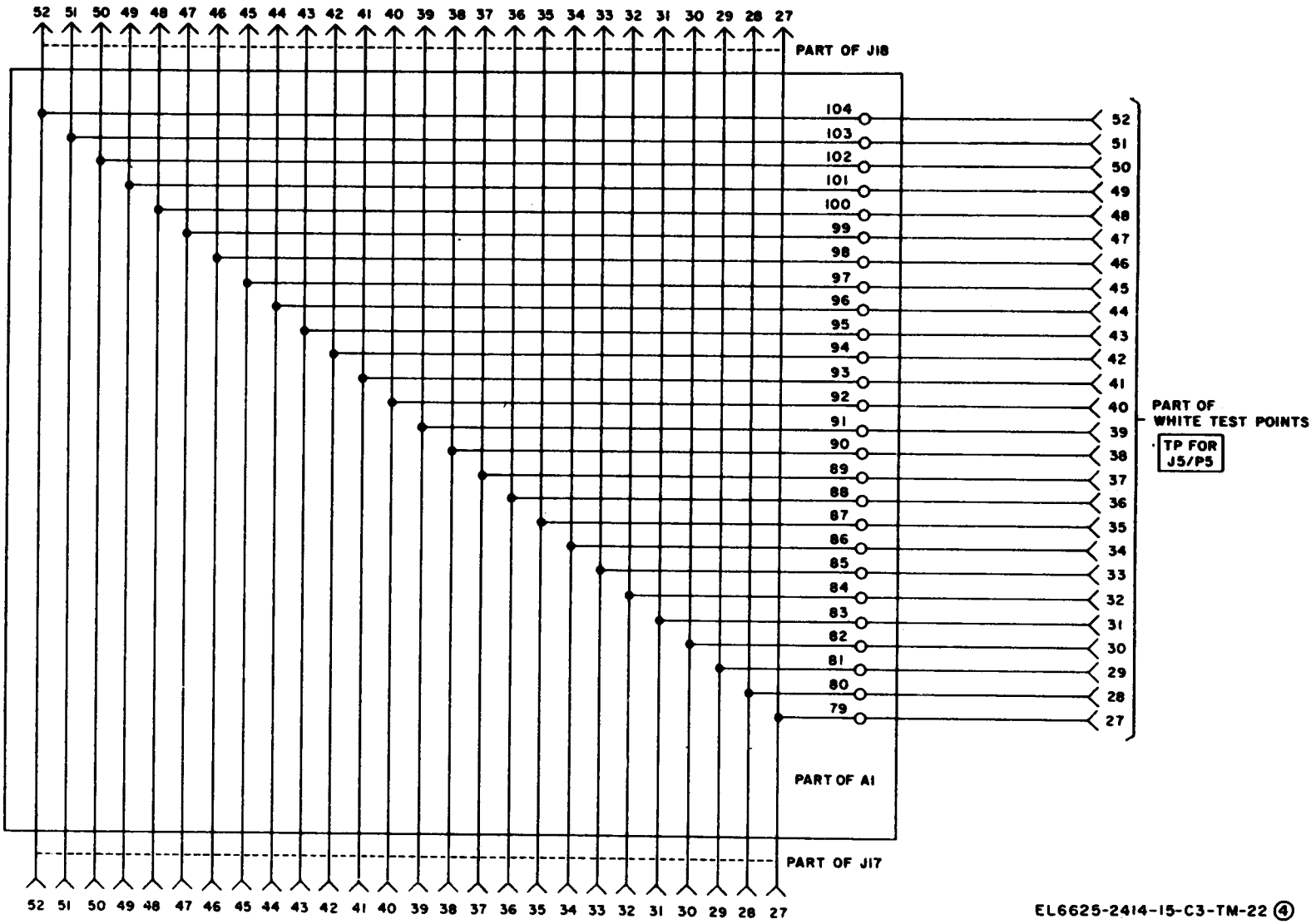

Figure 3-11④. Breakout Box (AN/ARC-116), schematic diagram (part 4 of 8).

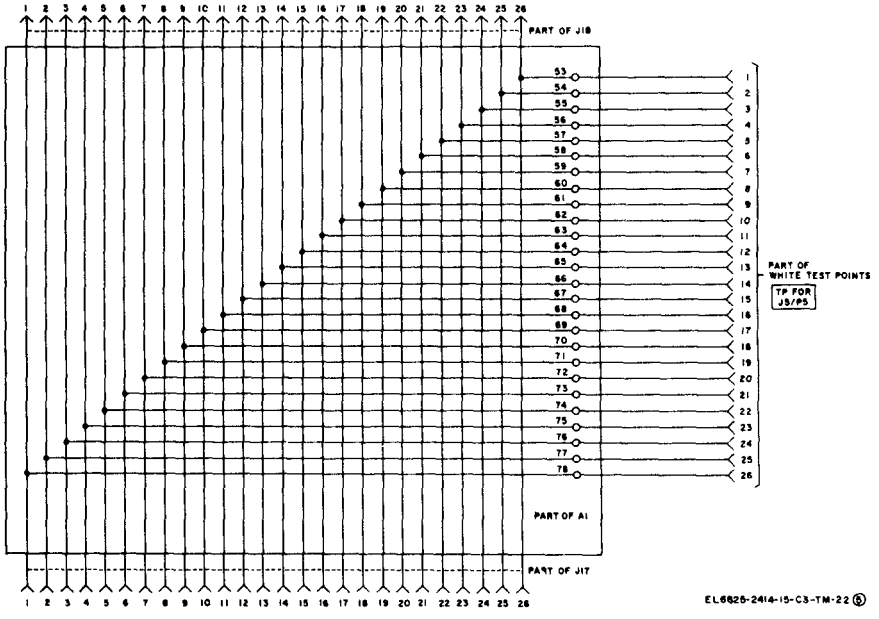

Figure 3–11⑤. Breakout Box (AN/ARC–116), schematic diagram (part 5 of 8).

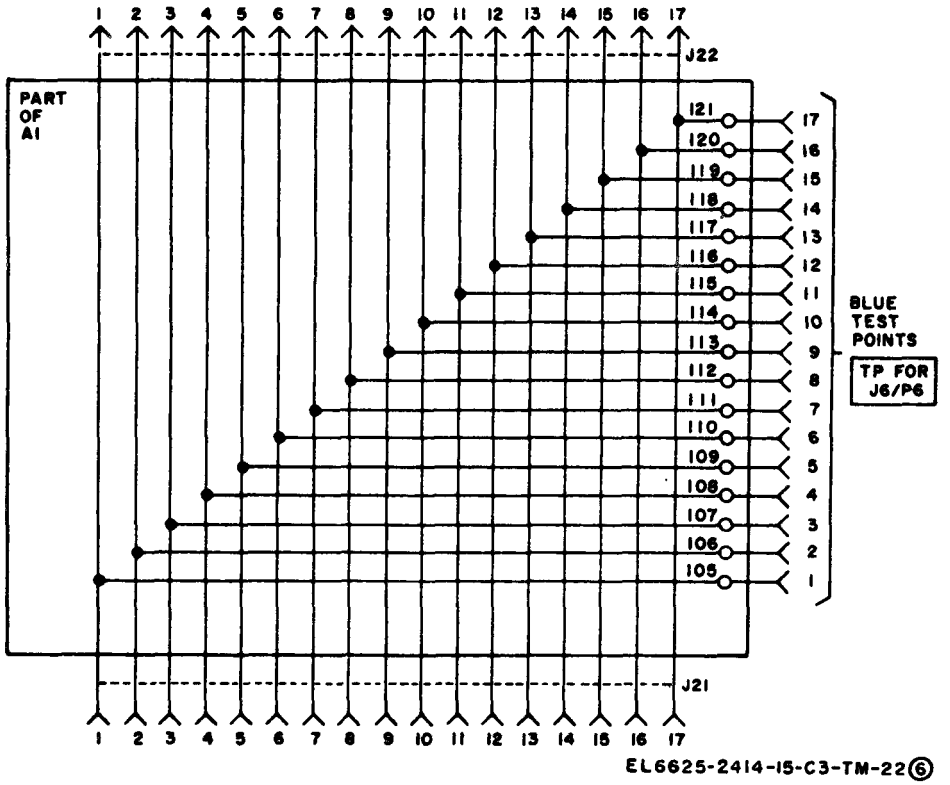

Figure 3-11⑥. Breakout Box (AN/ARC-116), schematic diagram (part 6 of 8).

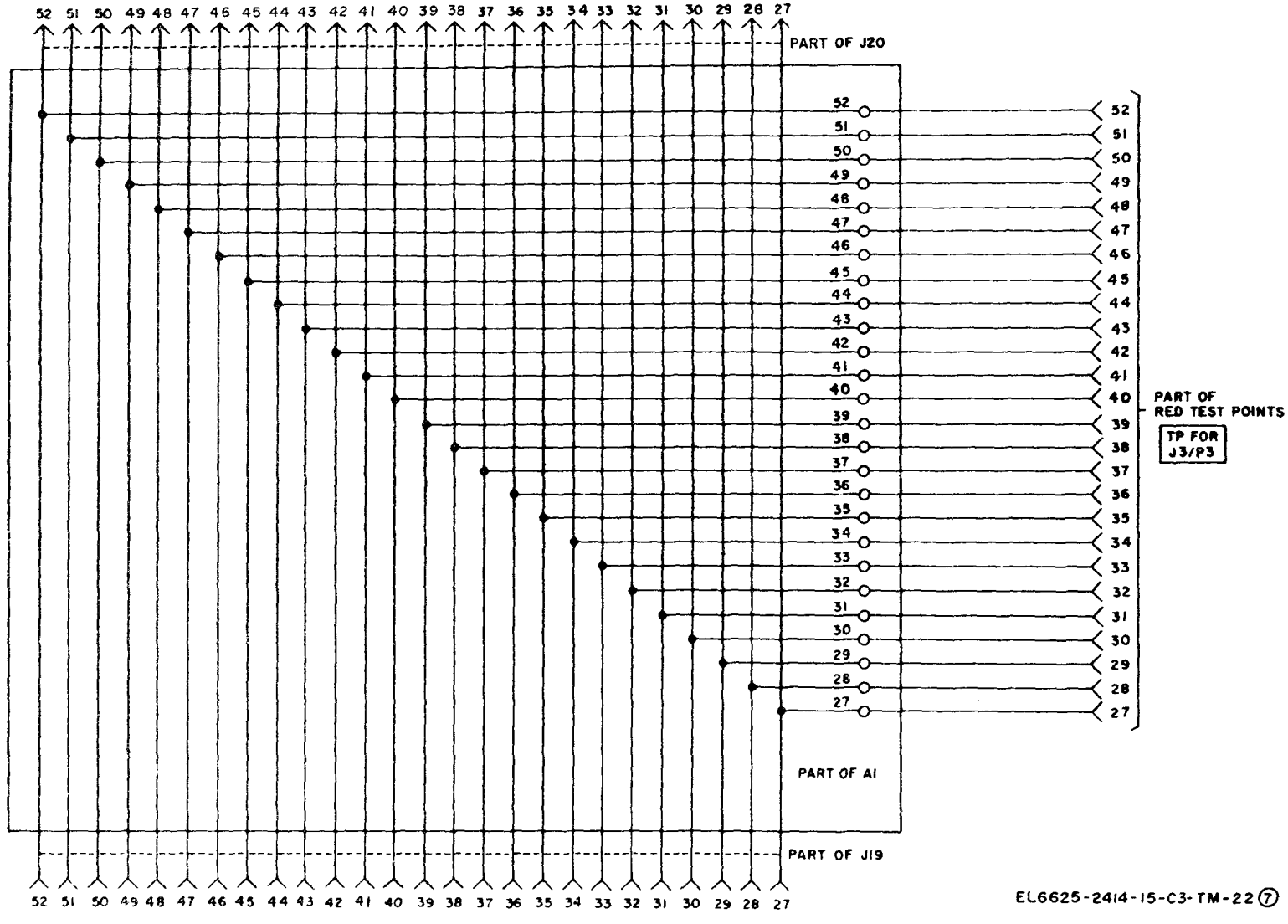

Figure 3-11⑦. Breakout Box (AN/ARC-116), schematic diagram (part 7 of 8).

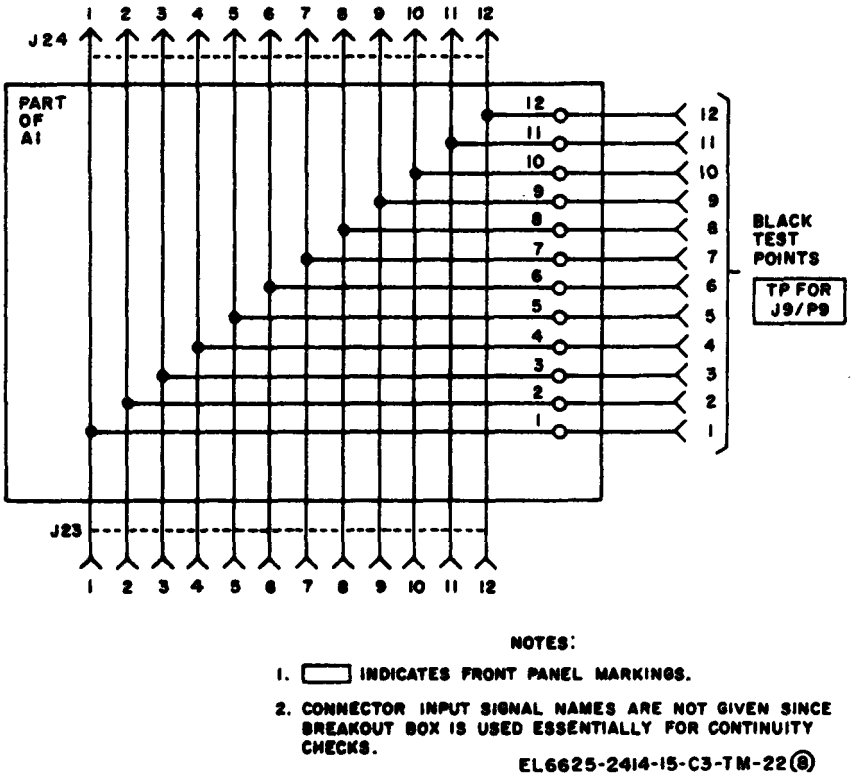

Figure 3–11(8). Breakout Box (AN/ARC–116), schematic diagram (part 8 of 8).

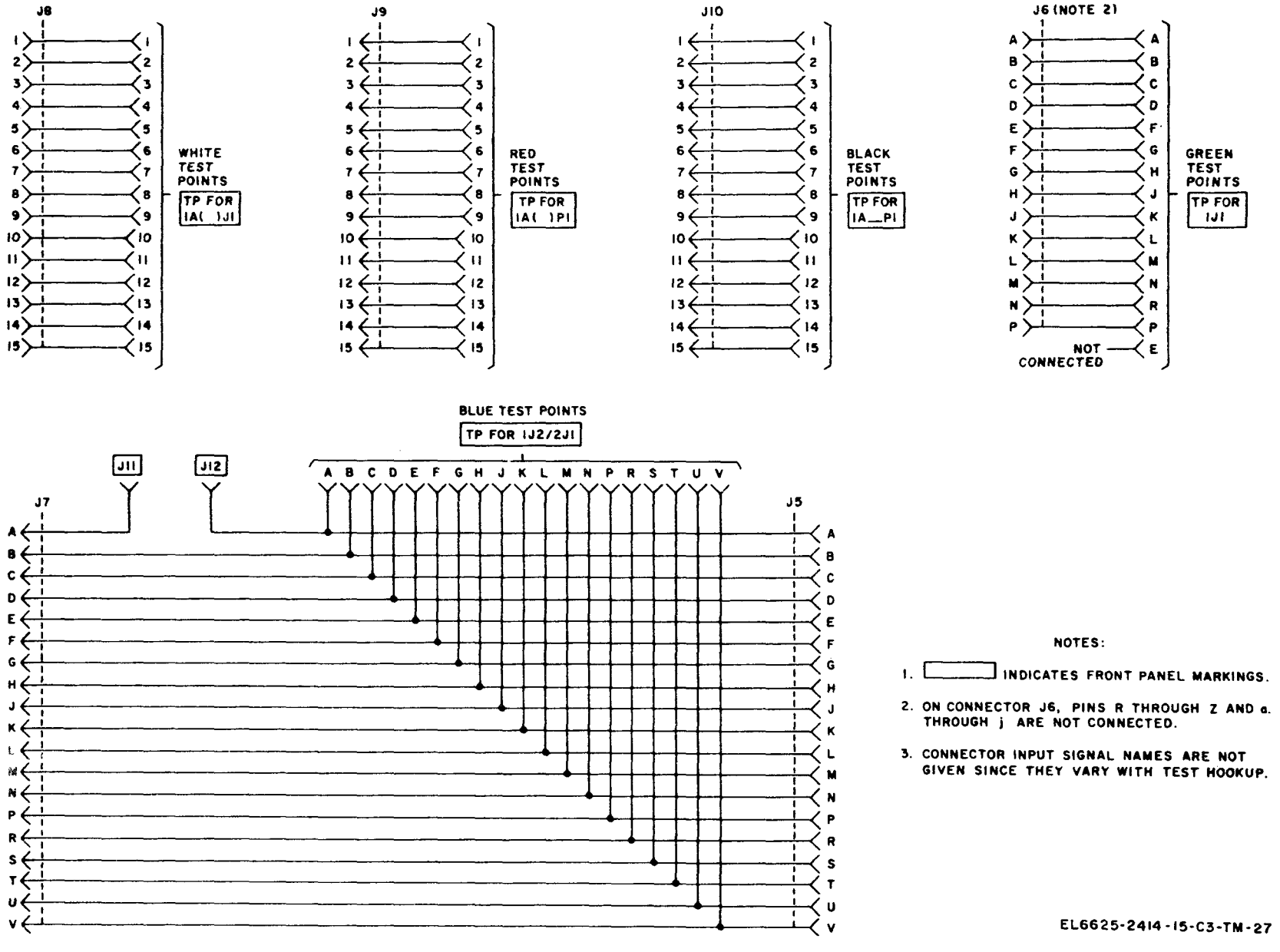

Figure 3-12. Breakout Box (AN/ARN-89), schematic diagram.

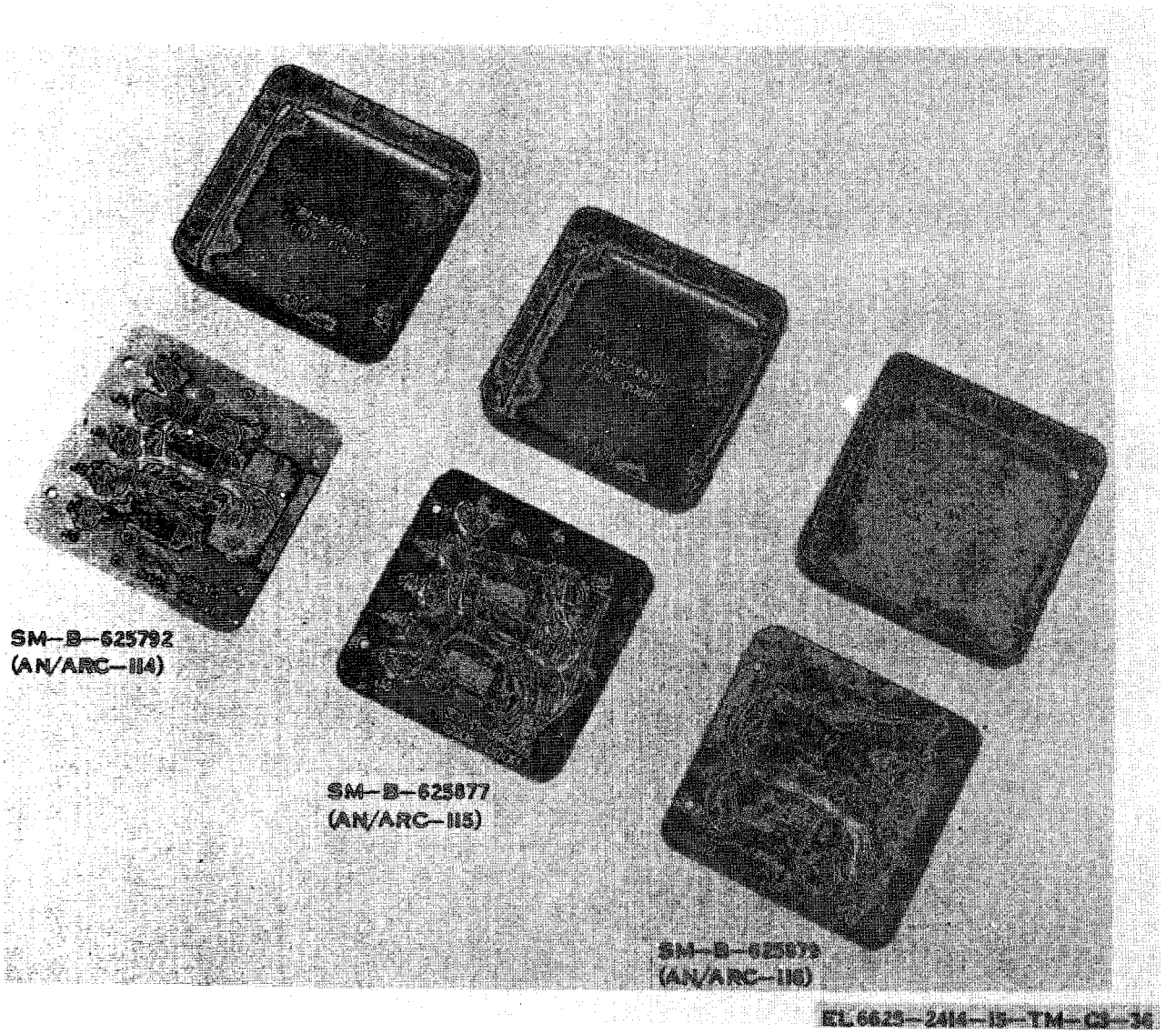

Figure 3-13. Power supply termination boxes, interior view.

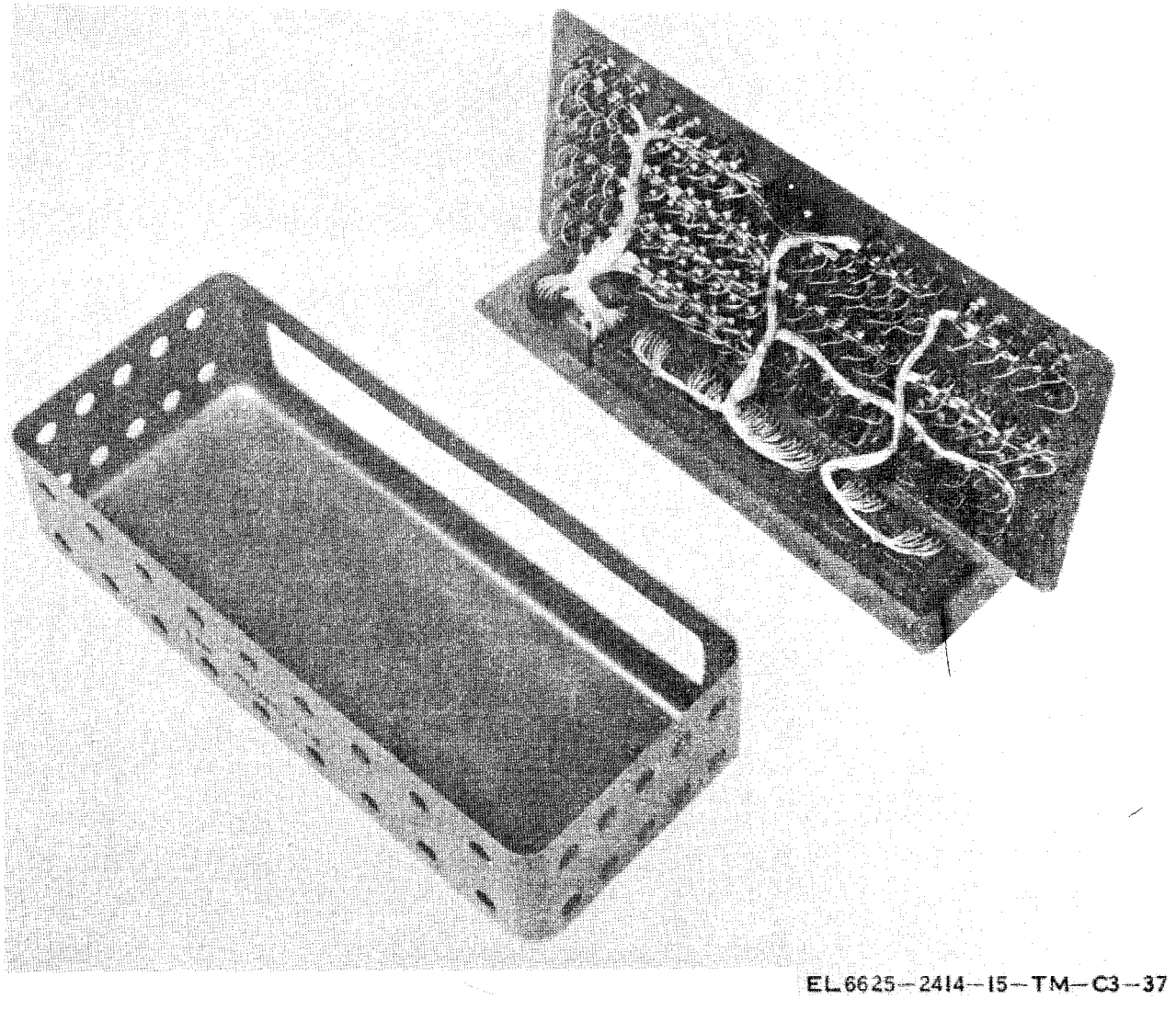

Figure 3-14. Breakout Box (AN/ARC-114), interior view.

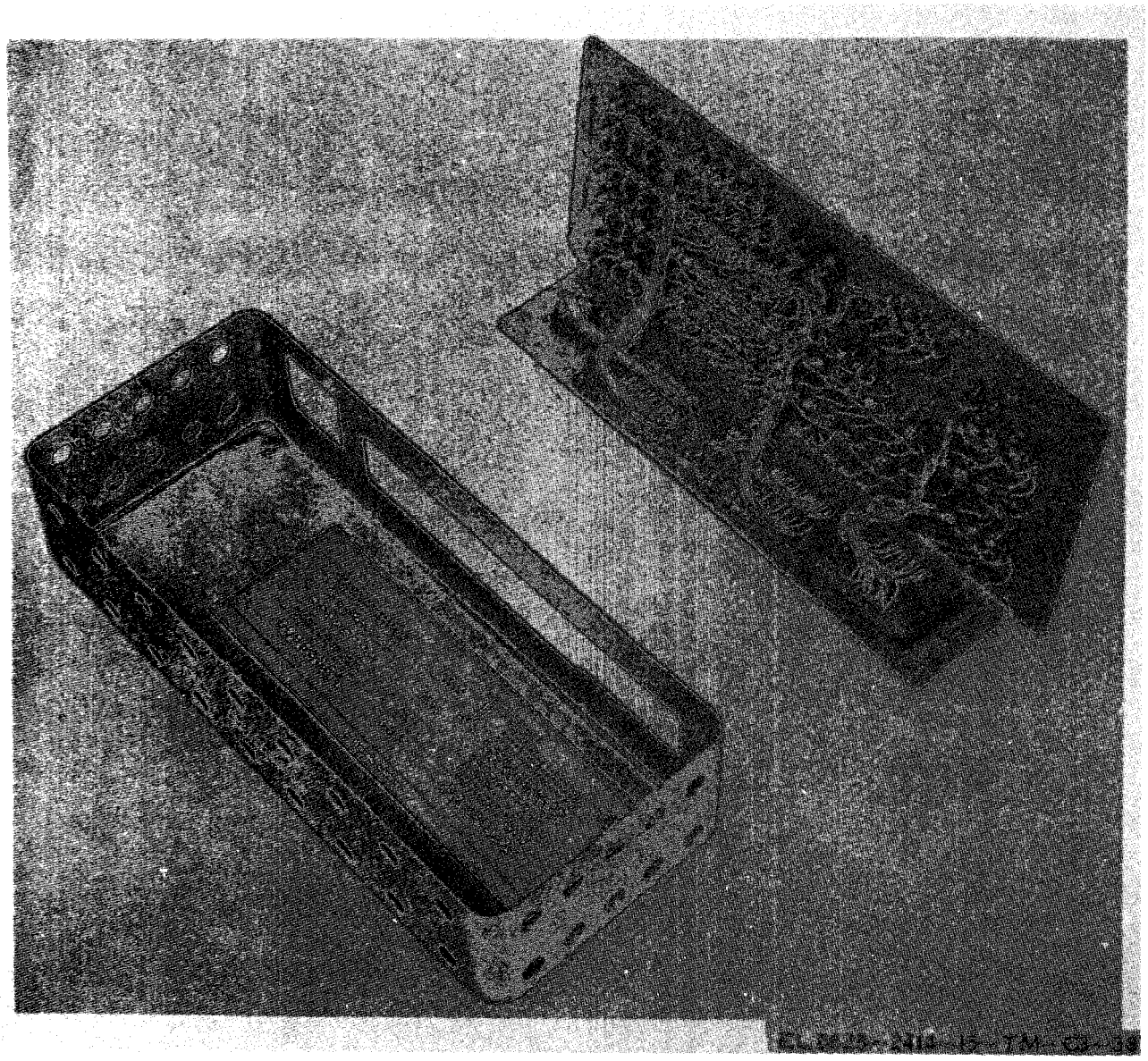

Figure 3–15. Breakout Box (AN/ARC–115), interior view.

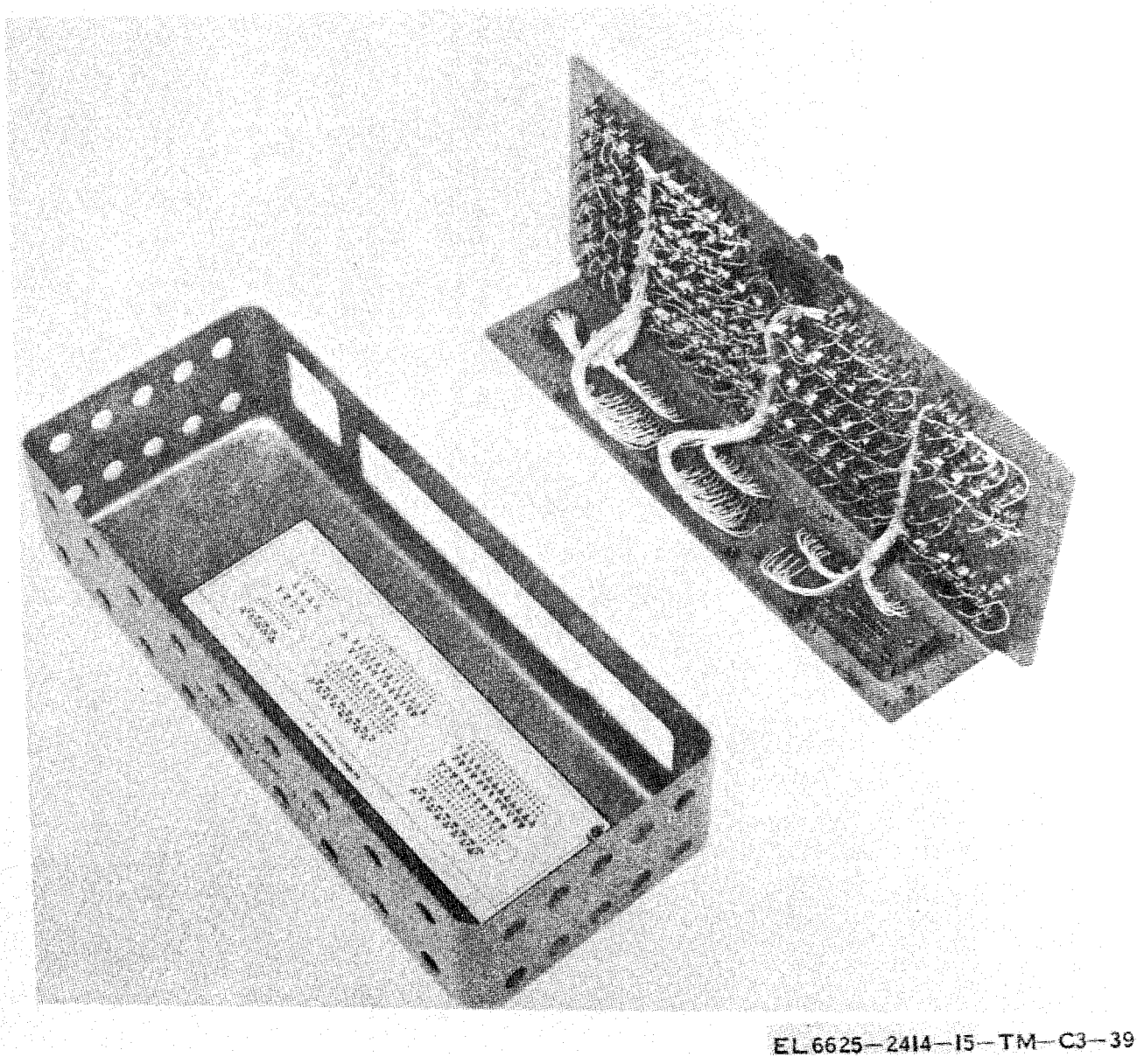

Figure 3-16. Breakout Box (AN/ARC-116), interior view.

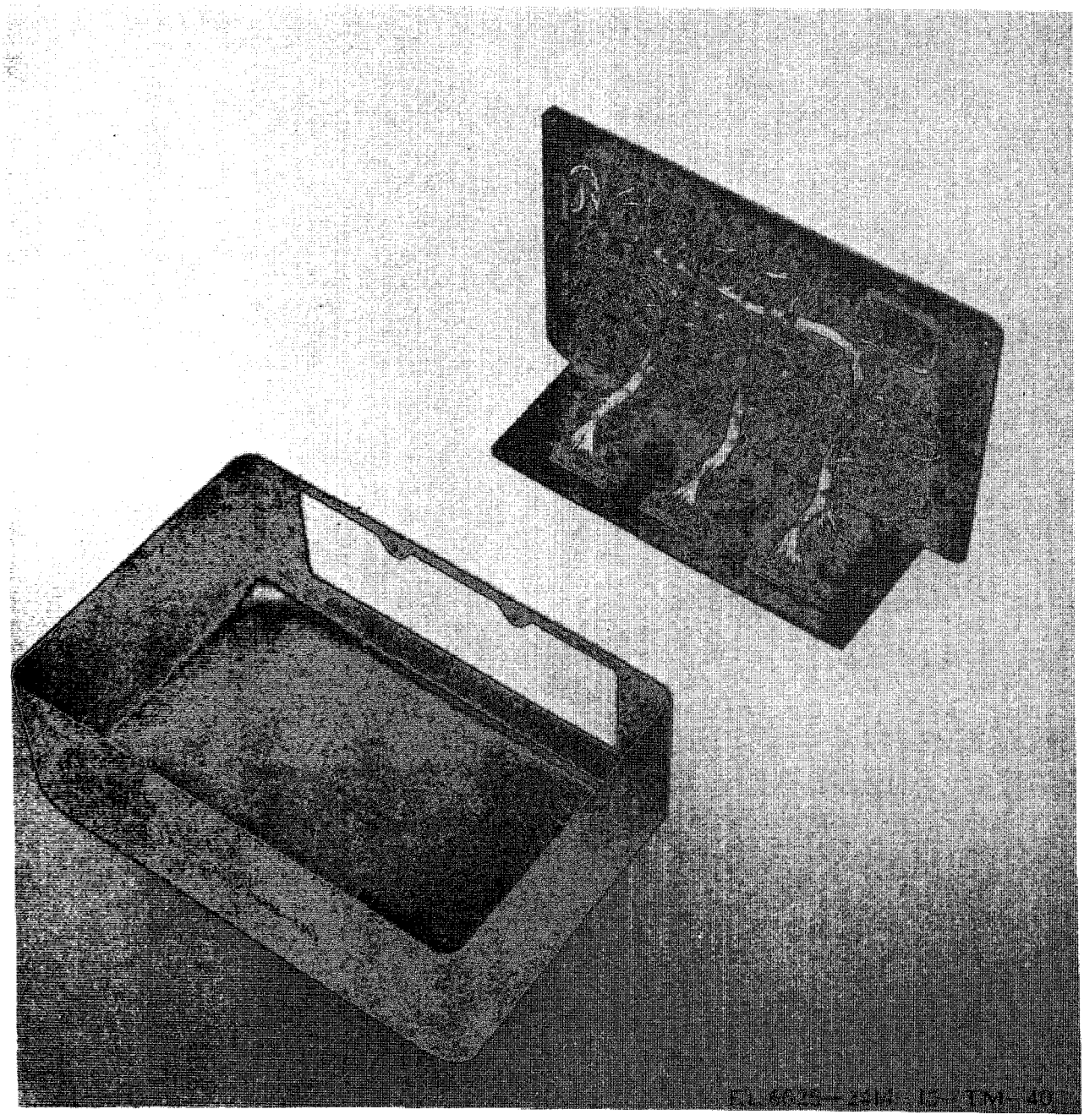

Figure 3–17. Breakout Box (AN/ARN–89, interior view.

CHAPTER 4

SHIPMENT, LIMITED STORAGE, AND DEMOLITION OF MATERIEL TO PREVENT ENEMY USE

Section I. SHIPMENT AND LIMITED STORAGE

4-1. Disassembly of Equipment

Prepare the maintenance accessories kit for shipment or storage as follows:

a. Deleted

b. Deleted

c. Coil each cable assembly carefully and place the cables into the cover.

d. Insert card extenders and special tools in appropriate pockets.

e. Insert the technical manual(s) in the appropriate bag or box (fig. 2-1).

f. Replace the cover plates on their respective case halves and fasten the two case halves together by fastening the 12 hinges.

4-2. Packaging for Shipment

Wrap the maintenance accessories kit in waterproof paper and place the package in a corrugated carton. Use reinforced gummed tape for sealing the corrugated cartons. If limited storage is expected, place the carton within an outer carton and seal.

Section II. DEMOLITION OF MATERIEL TO PREVENT ENEMY USE

4-3. Authority for Demolition

Demolition of the equipment will be accomplished only upon the order of the commander. The procedures given in paragraph 4-4 will be used to prevent further use of the equipment.

4-4. Methods of Destruction

Use any of the following methods to destroy the equipment.

a. Smash. Smash the breakout boxes, card extenders and terminal boxes; use sledges, axes, handaxes, pickaxes, hammers, or crowbars.

b. Cut. Cut the interconnecting wire and slash the extender cables; use axes, handaxes, or machetes.

c. Burn. Burn cables and technical manuals; use gasoline, kerosene, or oil.

d. Dispose. Bury or scatter the special fixtures and tools in slit trenches, foxholes, or throw them into streams.

e. If a complete destruction of the equipment cannot be accomplished in the available time, destroy the following components in the order given:

(1 Breakout boxes.
(2 Card extenders
(3 Special fixtures and tools.
(4 Extender cables and termination boxes.
(5 Technical manuals.

f. The reporting of the destruction of equipment is to be done through command channels.

APPENDIX A
REFERENCES

DA Pam 310-1	Consolidated Index of Army Publications and Blank Forms.
TM 10-8415-206-13	Operator, Organizational ,and Direct Support Maintenance Manual (including Repair Parts and Special Tools List): Helmet, Flying, Protective APH-5 (Model SPH-4, Regular) (NSN8415-00-144-4981) and (Model SPH-4, Extra Large) (NSN 8415-00-144-4985).
TM 11-4940-238-15	Operator, organizational, Direct Support, General Support, and Depot Maintenance Manual: Electronic Shops, Shelter Mounted Avionic AN/ASM-146A (NSN 4940-00-877-8726) and AN/ASM-147A (NSN 4920-00-912-3532).
TM 11-4940-238-24P	Organizational, Direct Support, General Support Maintenance Repair Parts and Special Tools for Electronic Shops, Shelters Mounted Avionic, AN/ASM-146A (NSN 4940-00-877-8726) and AN/ASM-147A (NSN 4940-00-912-35320).
TM 11-4940-238-24P-1	Organizational, Direct Support, General Support Maintenance Repair Parts and Special Tools List (including Depot Maintenance Repair Parts and Special Tools) for Electronics Shops, Shelter Mounted, Avionic, AN/ASM-146B (NSN 4940-00-435-7764) and AN/ASM-147B (NSN 4940-00-435-7765).
TM 11-5551D	R. F. Signal Generator Set AN/URM-25D.
TM 11-5821-259-20	Organizational Maintenance Manual: Radio Set AN/ARC-l 14 (NSN 5821-00-935-5071).
TM 11-5821-259-24P	Organizational, Direct Support and General Support Maintenance Repair Parts and Special Tools List (including Depot Maintenance Repair Parts) for Radio Sets, AN/ARC-l14 (NSN 5821-00-935-5071) and AN/ARC-l14A (NSN 5821-00-165-2970).
TM 11-5821-260-12-1	Operator's and Organizational Maintenance Manual: Radio Set AN/ARC-115A(V)1 (NSN 5821-00-057-4037).
TM 11-5821-260-20	Oranizational Maintenance Manual: Radio Set AN/ARC-l 15.
TM 11-5821-260-24P-1	Organizational Maintenance Repair Parts and Special Tools List for Radio Set AN/ARC-l15(V)1 (NSN 5821-01-057-4037).
TM 11-5821-260-24P	Organizational, Direct Support and General Support Maintenance Repair Parts and Special Tools List (including Depot Maintenance Repair Parts and Special Tools) for Radio Set AN/ARC-115 (NSN 5821-00-935-5077).
TM 11-5821-260-34-1	Direct Support and General Support Maintenance Manual for Radio Set AN/ARC-l15A(V)1 (NSN 5821-01-057-4037).
TM 11-5821-260-34P-1	Direct Support and General Support Maintenance Repair Parts and Special Tools List (including Depot Maintenance Repair Parts and Special Tools) for Radio Set AN/ARC-l 15A(V)1 (NSN 5821-01-057-4037).
TM 11-5821-260-35	Direct Support, General Support, and Depot Maintenance Manual: Radio Set AN/ARC-l 15.
TM 11-5821-261-20	Organizational Maintenance Manual: Radio Set AN/ARC-l 16.
TM 11-5821-261-20P	Organizational Maintenance Repair Parts and Special Tools List for Radio Set AN/ARC-l 16 (NSN 5821-00-935-5073).
TM 11-5821-261-35	Direct Support and General Support Maintenance Manual: Radio Set AN/ARC-l 16 (NSN 5821-00-935-5073).
TM 11-5821-261-35P	Direct Support, General Support Maintenance Manual: Radio Set AN/ARC-116 (NSN 5821-00-935-5073).
TM 11-5821-262-20	Organizational Maintenance Manual: Control Communication System C-6533/ARC.
TM 11-5821-262-20P	Organizational Maintenance Repair Parts and Special Tools Lists; Control, Communication System C-6533/ARC (NSN 5821-00-895-4175).
TM 11-5821-262-35	Direct Support and General Support Maintenance and Depot Maintenance Manual: Control, Communication System C-6533/ARC.
TM 11-5821-262-35P	Direct Support, General Support, and Depot Maintenance Repair Parts and Special Tools Lists: Radio Set AN/ARC-l 11.

TM 11-5826-227-20	Organizational Maintenance Manual: Direction Finder Sets AN/ARN-89 (NSN 5826-00-790-6453), AN/ARN-89A (5826-00-151-2685) and AN/ARN-89B(5826-00-021-3289).
TM 11-5826-227-24P	Organizational, Direct Support and General Support Maintenance Repair Parts and Special Tools Lists for Direction Finder Sets AN/ARN-89 (NSN 5826-00-790-6453) and AN/ARN-89A (NSN 5826-00-151-2685).
TM 11-5826-227-34	Direct Support and General Support Maintenance Manual: Direction Finder Sets AN/ARN-89 (NSN 5826-00-790-6453) and AN/ARN-89A (5826-00-151-2685) and AN/ARN-89B (5825-01-021-3289).
TM 11-5895-537-50	Depot Maintenance Manual: Indicator, Heading-Radio Bearing ID-1351/A and ID-1351(B)/A.
TM 11-6605-202-12	Operator and Organizational Maintenance Manual: Gyromagnetic Compass Set AN/ASN-43.
TM 11-6605-202-24P	Organizational, Direct Support and General Support Maintenance Repair Parts and Special Tools Lists (including Depot Maintenance Repair Parts and Special Tools) for Gyromagnetic Compass Sets AN/ASN-43 and AN/ASN-43A (NSN 6605-00-069-8762).
TM 11-6605-202-35	Direct Support, General Support and Depot Maintenance Manual: Gyromagnetic Compass Set AN/ASN-43.
TM 11-6625-200-15	Operator's, Organizational, Direct Support, General Support, and Depot Maintenance Manual: Multimeter ME-26A/U (NSN 6625-00-360-2493), ME-26B/U and ME-26WU (6625-00-464-9409), and ME-26D/U (6625-00-913-9781).
TM 11-6625-200-24P	Organizational, Direct Support, and General Support Maintenance Repair Parts and Special Tools List (including Depot Maintenance Repair Parts and Special Tools): Multimeters ME-26A/U (NSN 6625-00-360-2493), ME-26B/U, ME-26C/U (6625-00-646-9409) and ME-26 D/U (6625-00-91 3-978 1).
TM 11-6625-320-12	Operator's and Organizational Maintenance Manual: Voltmeter, Meter ME-30A/U and Voltmeter Electronic ME-30B/U and ME-30C/U.
TM 11-6625-320-24P	Organizational, Direct Support and General Support Maintenance Repair Parts and Special Tools List (including Depot Maintenance Repair Parts and Special Tools) for Voltmeters, Electronic ME-30A/U, ME-30B/U, ME-30C/U, and ME-30E/U (NSN 6625-00-643-1670).
TM 11-6625-320-35	Direct Support, General Support, and Depot Maintenance Manual: Voltmeter, Meter ME-30A/U and Voltmeters, Electronic ME-30 B/U and ME-30C/U.
TM 11-6625-438-15	Organizational, Direct Support, General Support, and Depot Maintenance Manual: Voltmeter, Electronic AN/USM-98.
TM 11-6625-508-10	Operator's Manual: Signal Generators AN/USM-44 and AN/USM-44A.
TM 11-6625-508-14-1	Operator's, Organizational, Direct Support and General Support Maintenance Manual: Signal Generator AN/U SM-44B (NSN 6625-00-176-5708),
TM 11-6625-508-24P	Organizational, Direct Support, and General Support Maintenance Repair Parts and Special Tools List (including Depot Maintenance Repair Parts and Special Tools) for Signal Generator Test Sets AN/URM-44 (NSN 6625-00-669-403 1) and AN/USM-44A (6625-00-176-5708).
TM 11-6625-508-35	Organizational, Field and Depot Maintenance Manual: Signal Generator AN/USM-44 and AN/USM-44A.
TM 11-6625-524-12-3	Operator's and Organizational Maintenance Manual: Voltmeter, Electronic AN/URM-145c.
TM 11-6625-524-14	Operator's, Organizational and Field Maintenance Manual: Voltmeter, Electronic AN/URM-145.
TM 11-6625-524-14-2	Operator's, Organizational, Direct Support, and General Support Maintenance Manual: Voltmeter, Electronic AN/URM-14513 (NSN 6625-00-437-4865).

TM 11-6625-524-15-1	Operator's, Organizational, Direct Support, General Support, and Depot Maintenance Manual: Electronic Voltmeter AN/URM-145 (NSN 6625-00-973-3986).
TM 11-6625-524-20P	Organizational Maintenance Repair Parts and Special Tools Lists, Voltmeter, ElectronicAN/URM-145.
TM 11-6625-524-24P	Organizational, Direct Support and General Support Maintenance Repair Parts and Special Tools List for Voltmeter, ElectronicAN/URM-145C (NSN6625-0l-076-7087).
TM 11-6625-524-24P-1	Organizational, Direct Support, and General Support Maintenance Repair Parts and Special Tools List (including Depot Maintenance Repair Parts and Special Tools) for Voltmeter, Electronic AN/URM-145 (NSN 6625-00-973-3986).
TM 11-6625-524-24P-2	Organizational, Direct Support, and General Support Maintenance Repair Parts and Special Tools List (including Depot Maintenance Repair Parts and Special Tools) for Voltmeter, Electronic AN/URM-145B (NSN 6625-00-437-4865).
TM 11-6625-524-40-3	General Support Maintenance Manual: Voltmeter, Electronic AN/URM-145C.
TM 11-6625-524-45P	Field (fourth echelon) and Depot Maintenance Repair Parts and Special Tools Lists: Voltmeter, Electronic AN/URM-145.
TM 11-6625-683-15	Operators, Organizational, Direct Support and Depot Maintenance Manual: Signal Generator AN/URM-127 (NSN 6625-00-783-5%5).
TM 11-6625-683-24P	Organizational, Direct Support, and General Support Maintenance Repair Parts and Special Tools List (including Depot Maintenance Repair Parts and Special Tools) for Signal Generator AN/URM-127 (NSN 6625-00-783-5%5).
TM 11-6625-928-12	Operators and Organizational Maintenance Manual: Test Facilities Kit MK-994/AR (NSN 6615-00-802-7191),
TM 11-6625-928-20P	Organizational Maintenance Repair Parts and Special Tools List for Test Facilities Kit MK-994/AR (NSN 6625-00-802-7191).
TM 11-6625-928-34P	Direct Support and General Support Maintenance Repair Parts and Special Tools List for Test Facilities Kit MK-994/AR (NSN 6625-00-802-7191).
TM 11-6625-928-35	Direct Support, General Support and Depot Maintenance Manual: Test Facilities Kit MK-994/AR (NSN 6625-00-802-7191).
TM 11-6625-2405-15	Operators, Organizational, Direct Support and General Support Maintenance Manual: Maintenance Accessory Kit MK-1192/ARM.
TM 11-6625-2405-24P	Organizational, Direct Support, and General Support Maintenance Repair Parts and Special Tools List (including Depot Maintenance Repair Parts and Special Tools) Maintenance Accessories Kit MK-1192/ARM (NSN 6625-00-179-1699).
TM 11-6625-2414-15	Operators, Organizational, Direct Support, and General Support Maintenance Manual: Test Facilities Kit MK-1191/AR.
TM 11-6625-2414-24P	Organizational, Direct Support, and General Support Maintenance Repair Parts and Special Tools List for Test Facilities MK-1191/AR (NSN 6625-00-179-2528).
TM 38-750	The Army Maintenance Management System (TAMMS).

APPENDIX C
MAINTENANCE ALLOCATION

Section I. INTRODUCTION

C-1. General

This appendix provides a summary of the maintenance operations for MK-1191 /AR. It authorizes categories of maintenance for specific maintenance functions on repairable items and components and the tools and equipment required to perform each function. This appendix may be used as an aid in planning maintenance operations.

C-2. Maintenance Function

Maintenance functions will be limited to and defined as follows:

a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination.

b. Test. To verify serviceability and to detect incipient failure by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition, i.e., to clean (decontaminate), to preserve, to drain, to paint, or to replenish fuel, lubricants, hydraulic fluids, or compressed air supplies.

d. Adjust. To maintain, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to the specified parameters.

e. Align. To adjust specified variable elements of an item to bring about optimum or desired performance.

f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test measuring and diagnostic equipments used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. Install. The act of emplacing, seating, or fixing into position an item, part, module (component or assembly) in a manner to allow the proper functioning of the equipment or system.

h. Replace. The act of substituting a serviceable like type part, subassembly, or module (component or assembly) for an unserviceable counterpart.

i. Repair. The application of maintenance services (insect, test, service, adjust, align, calibrate, replace) or other maintenance actions (welding, grinding, riveting, straightening, facing, remachining, or resurfacing) to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j. Overhaul. That maintenance effort (service/action) necessary to restore an item to a completely serviceable/operational condition as prescribed by maintenance standards (i.e., DMWR) in appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

k. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours, miles, etc.) considered in classifying Army equipments/components.

C-3. Column Entries

a. Column f, Group Number. Column 1 lists group numbers, the purpose of which is to identify components, assemblies, subassemblies, and modules with the next higher assembly.

b. Column 2, Component/Assembly. Column 2 contains the noun names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. Column 3, Maintenance Functions. Column 3 lists the functions to be performed on the item listed in column 2. When items are listed without maintenance functions, it is solely for purpose of having the group numbers in the MAC and RPSTL coincide.

d. Column 4, Maintenance Category. Column 4 specifies, by the listing of a "work time" figure in the appropriate subcolumns(s), the lowest level of maintenance authorized to perform the function listed in column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate "work time" figures will be shown for each category. The number of task-hours specified by the "work time" figure represents the average time required to restore an item (assembly, subassembly, component, module, end item or system) to a serviceable condition under typical field operating conditions. This time includes preparation time, troubleshooting time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for

the maintenance functions authorized in the maintenance allocation chart. Subcolumns of column 4 are as follows:

C—Operator/Crew
O—Organizational
F—Direct Support
H—General Support
D—Depot

e. Column 5, Tools and Equipment. Column 5 specifies by code, those common tool sets (not individual tools) and special tools, test, and support equipment required to perform the designated function.

f. Column 6, Remarks. Column 6 contains an alphabetic code which leads to the remark in section IV, Remarks, which is pertinent to the item opposite the particular code.

C-4. Tool and Test Equipment Requirements (Sect. III)

a. Tool or Test Equipment Reference Code. The numbers in this column coincide with the numbers used in the tools and equipment column of the MAC. The numbers indicate the applicable tool or test equipment for the maintenance functions.

b. Maintenance Category. The codes in this column indicate the maintenance category allocated the tool or test equipment.

c. Nomenclature. This column lists the noun name and nomenclature of the tools and test equipment required to perform the maintenance functions.

d. National/NATO Stock Number. This column lists the National/NATO stock number of the specific tool or test equipment.

e. Tool Number. This column lists the manufacturer's part number of the tool followed by the Federal Supply Code for manufacturers (5-digit) in parentheses.

C-5. Remarks (Sect. IV)

a. Reference Code. This code refers to the appropriate item in section II, column 6.

b. Remarks. This column provides the required explanatory information necessary to clarify items appearing in section II.

(Next printed page is C-3)

SECTION II MAINTENANCE ALLOCATION CHART
FOR

TEST FACILITIES KIT MK-1191/AR

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY					(5) TOOLS AND EQPT.	(6) REMARKS
			C	O	F	H	D		
00	TEST FACILITIES KIT MK-1191/AR	Inspect		0.3				1	A
		Service		0.3					B
		Test				0.3		3	C
		Service				0.5		2,3	
		Repair				1.0		2,3	
		Overhaul				8.0		2,3	
		Calibrate				1.0		2,3	D
01	ADAPTER, BREAKOUT BOX AN/ARC-114	Test				0.3		3	
		Repair				1.0		2,3	
02	ADAPTER, BREAKOUT BOX AN/ARC-115	Test				0.3		3	
		Repair				1.0		2,3	
03	ADAPTER, BREAKOUT BOX AN/ARC-116	Test				0.3		3	
		Repair				1.0		2,3	
04	ADAPTER, BREAKOUT BOX AN/ARN-89	Test				0.3		3	
		Repair				1.0		2,3	
05	CABLE ASSEMBLY, RADIO FREQUENCY CG-3475/U (6 Ft)	Test				0.3		3	
		Repair				0.5		2,3	
06	CABLE ASSEMBLY, SPECIAL PURPOSE ELECTRICAL CX-10894/AR	Test				0.3		3	
		Repair				0.5		2,3	
07	CABLE ASSEMBLY, SPECIAL PURPOSE ELECTRICAL CX-12182/U (1 Ft).	Test				0.3		3	
		Repair				0.5		2,3	
08	CABLE ASSEMBLY, SPECIAL PURPOSE ELECTRICAL CX-12183/U (1 Ft)	Test				0.3		3	
		Repair				0.5		2,3	
09	CABLE ASSEMBLY, SPECIAL PURPOSE ELECTRICAL CX-12185/U (1 Ft)	Test				0.3		3	
		Repair				0.5		2,3	
10	CABLE ASSEMBLY, SPECIAL PURPOSE ELECTRICAL CX-12187/U (1 Ft)	Test				0.3		3	
		Repair				0.5		2,3	
11	CABLE ASSEMBLY, SPECIAL PURPOSE ELECTRICAL CX-12184/U (1 Ft)	Test				0.3		3	
		Repair				0.5		2,3	
12	CABLE ASSEMBLY, SPECIAL PURPOSE ELECTRICAL CX-12191/U (1 Ft)	Test				0.3		3	
		Repair				0.5		2,3	
13	CABLE ASSEMBLY, SPECIAL PURPOSE ELECTRICAL CX-12188/U (1 Ft)	Test				0.3		3	
		Repair				0.5		2,3	
14	CABLE ASSEMBLY, SPECIAL PURPOSE ELECTRICAL CX-12189/U (1 Ft)	Test				0.3		3	
		Repair				0.5		2,3	
15	CABLE ASSEMBLY, SPECIAL PURPOSE ELECTRICAL CX-12190/U (1 Ft)	Test				0.3		3	
		Repair				0.5		2,3	
16	CABLE ASSEMBLY, SPECIAL PURPOSE ELECTRICAL CX-12192/U (1 Ft)	Test				0.3		3	
		Repair				0.5		2,3	
17	CABLE ASSEMBLY, SPECIAL PURPOSE ELECTRICAL CX-12186/U (1 Ft)	Test				0.3		3	
		Repair				0.5		2,3	
18	RFI CONNECTOR ASSEMBLY	Inspect				0.3			
		Repair				0.1		2	
19	MISCELLANEOUS SPECIAL HAND TOOLS	Inspect				0.1			
		Repair				0.1		5	
20	FIXTURE ASSEMBLIES	Inspect				0.2			
		Repair				0.5			
2001	FIXTURE ASSEMBLY, HOLDING AN/ARC-114( )	Inspect				0.2			
		Repair				0.5			
2002	FIXTURE ASSEMBLY, HOLDING AN/ARC-115( )	Inspect				0.2			
		Repair				0.5			
2003	FIXTURE ASSEMBLY, HOLDING AN/ARC-116	Inspect				0.2			
		Repair				0.5			

SECTION II MAINTENANCE ALLOCATION CHART FOR

TEST FACILITIES KIT MK-1191/AR

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY C	O	F	H	D	(5) TOOLS AND EQPT.	(6) EMA RKS
21	TERMINATION ASSEMBLIES	Test Repair				0.3 0.5			B
2101	MIKE TERMINATION; SM-B-625789	Test Repair				0.3 0.5		.3	
2102	HEADSET TERMINATION; SM-B-625790	Test Repair				0.3 0.5		,3	
2103	POWER SUPPLY TERMINATION ASSEMBLY AN/ARC-114	Test Repair				0.2 0.4		,3	
2104	POWER SUPPLY TERMINATION ASSEMBLY AN/ARC-115	Test Repair				0.2 0.4		,3	
2105	POWER SUPPLY TERMINATION ASSEMBLY AN/ARC-116	Test Repair				0.2 0.4		,3 ,3	
22	CASE, ELECTRICAL MAINTENANCE KIT	Inspect Repair				0.2 0.5			

SECTION III TOOL AND TEST EQUIPMENT REQUIREMENTS
FOR

TEST FACILITIES KIT MK-1191/AR

TOOL OR TEST EQUIPMENT REF CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
1	O	TOOL KIT, ELECTRONIC EQUIPMENT TK-1 01/G	5180-00-064-5178	
2	H	TOOL KIT, ELECTRONIC EQUIPMENT TK-105/G	5180-00-610-8177	
3	H	MULTIMETER TS-352( )/U	6625-00-553-0142	

SECTION IV. REMARKS

REFERENCE CODE	REMARKS
A	GENERAL SUPPORT PERFORMS ORGANIZATIONAL MAINTENANCE OPERATIONS.
B	PERFORMS OPERATIONAL CHECKS. VISUALLY INSPECT FOR BROKEN/CRACKED CONNECTORS, JACKS, FRAYED WIRING, MISSING ACCESSORIES, CLEAN UNIT. REPAIR BY COMPONENT REPLACEMENT.
C	PERFORM CONTINUITY CHECKS. REPAIR DEFECTIVE COMPONENTS AND CABLING. REPLACE JACKS, CONNECTORS, SWITCHES.
D	CALIBRATE TORQUE WRENCHES, PERFORM VISUAL INSPECTION. REPLACE MISSING ITEMS. CLEAN.

By Order of the Secretary of the Army:

W. C. WESTMORELAND,
General, ***United States Army,***
Chief of Staff.

Official:

KENNETH G. WICKHAM,
Major General, United States Army,
The Adjuant General.

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