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SUPPLEMENT

13 December 1951

SUPPLEMENT TO
TM 11-703
INTERPHONE EXTENSION KIT RC-298

The following information, published on Order No. 6602-P-51, supplements TM 11-703, 19 October 1949.

Personnel using this equipment and having custody of this technical manual will enter suitable notations beside each affected paragraph and figure in the technical manual to indicate the presence of this supplementary information.

Interphone Extension Kit RC-298, procured on Order No. 6602-P-51, is similar to the equipment procured on Order No. 3128-P-45.

Add "For differences in models, see paragraph 7.1." after the captions of the following figures:

Page 2. Fig. 2

Page 3. Fig. 3

Page 5. Fig. 5

Page 5. Fig. 6

Page 7. Fig. 7

Page 8. Fig. 8

Page 9. Fig. 9

Page 10. Fig. 10

Page 11. Fig. 12

Page 14. Fig. 14

Page 17. Fig. 15

Page 3. Par. 5. Change the heading of paragraph 5 to read:
Table of Components on Order No. 3128-P-45 (fig. 5).

Page 3. Par. 5. Add the following after paragraph 5:

5.1. Table of Components on Order No. 6602-P-51

Components	Required No.	Height (in.)	Depth (in.)	Length (in.)
Conduit, flexible.....	14 ft			
Cordage CO-213.....	35 ft			
External Interphone Box BC-1362.....	1	10½	6¼	14
Hardware kit.....	1			
Lamp LM-44.....	4			
Lamp, lens.....	2			
Sealing compound.....	4 oz			
Switch, toggle.....	1	11/16	2½	1¼
Switchbox BC-1361.....	1	3½	2	4
Tape.....	1 roll			
Transmitter cap.....	2			
Wire, #20 solid rubber-covered.....	2 ft			
Gasket.....	2	1/16	1-7/32	31/32
			OD	ID

Page 6. Par. 7a. Delete the last sentence and substitute the following: Later models have two binding posts (fig. 12) mounted next to the volume control for connecting an external field telephone to an internal field telephone through connections to the binding posts of Switchbox BC-1361. This circuit is independent of the vehicle interphone system.

Page 6. Par. 7b. Delete the last sentence and substitute the following: Later models have two binding posts (fig. 8) to connect an internal field telephone to an external field telephone through connections to the binding posts of External Interphone Box BC-1362.

Page 6. Par. 7. Add the following after paragraph 7:

7.1. Difference in Models

Although electrically identical, equipment procured on Order No. 6602-P-51 differs from previous models in two minor respects.

a. The long rod on the latch assembly of External Interphone Box BC-1362 has ¾-round instead of half-round ends (fig. 3).

b. The four-pole, single-throw switch in Switchbox BC-1361 is mounted directly to the panel by a nut and threaded bushing through a hole in the box. (There is no mounting bracket as in the models shown in figures 7 and 8.)

Note. The dimensions of External Interphone Box BC-1362 given in the table of paragraph 5 are dimensions of the box only, not including the latch assembly, mounting flanges, etc. The dimensions given in the table of paragraph 5.1 are over-all dimensions. These two units are actually the same size.

Page 13. Fig. 13. Change INTERNAL INTERPHONE BOX BC-1362 to read:
EXTERNAL INTERPHONE BOX BC-1362.

Page 13. Par. 11a(1). Line 2. Change "lenghts" to read: lengths.

Page 13. Par. 11a(3). Line 1. Change "switch" to read: switches.

Page 13. Par. 11a(3). Line 2. Change "figure 7" to read: figure 13.

Page 14. Par. 11c(2). Line 3. Change "figure 14" to read: figures 13 and 14. .

Page 20. Par. 19a(3). Add the following after the heading of subparagraph *a(3)*: On equipment procured on Order No. 6602-P-51, this switch is mounted by a nut and threaded bushing through a hole in the box. To remove it, remove the nut from the threaded bushing.

Page 20. Par. 19a(3). Add the words "On previous models" before the first sentence of the subparagraph.

Page 24. App. II. Par. 2. Sixth item. Change "FITTING, conduit" to read: STUFFING TUBE.

Page 25. App. II. Par. 2. R-1. Delete information in "Name of part and description" column and substitute the following:
RESISTOR, variable: comp; JAN type RV4ATSD503C.
In the "Signal Corps stock No." column, change "2Z7270-28" to read: 3RV45040.

Page 26. App. II. Par. 2. Add the following information to paragraph 2.

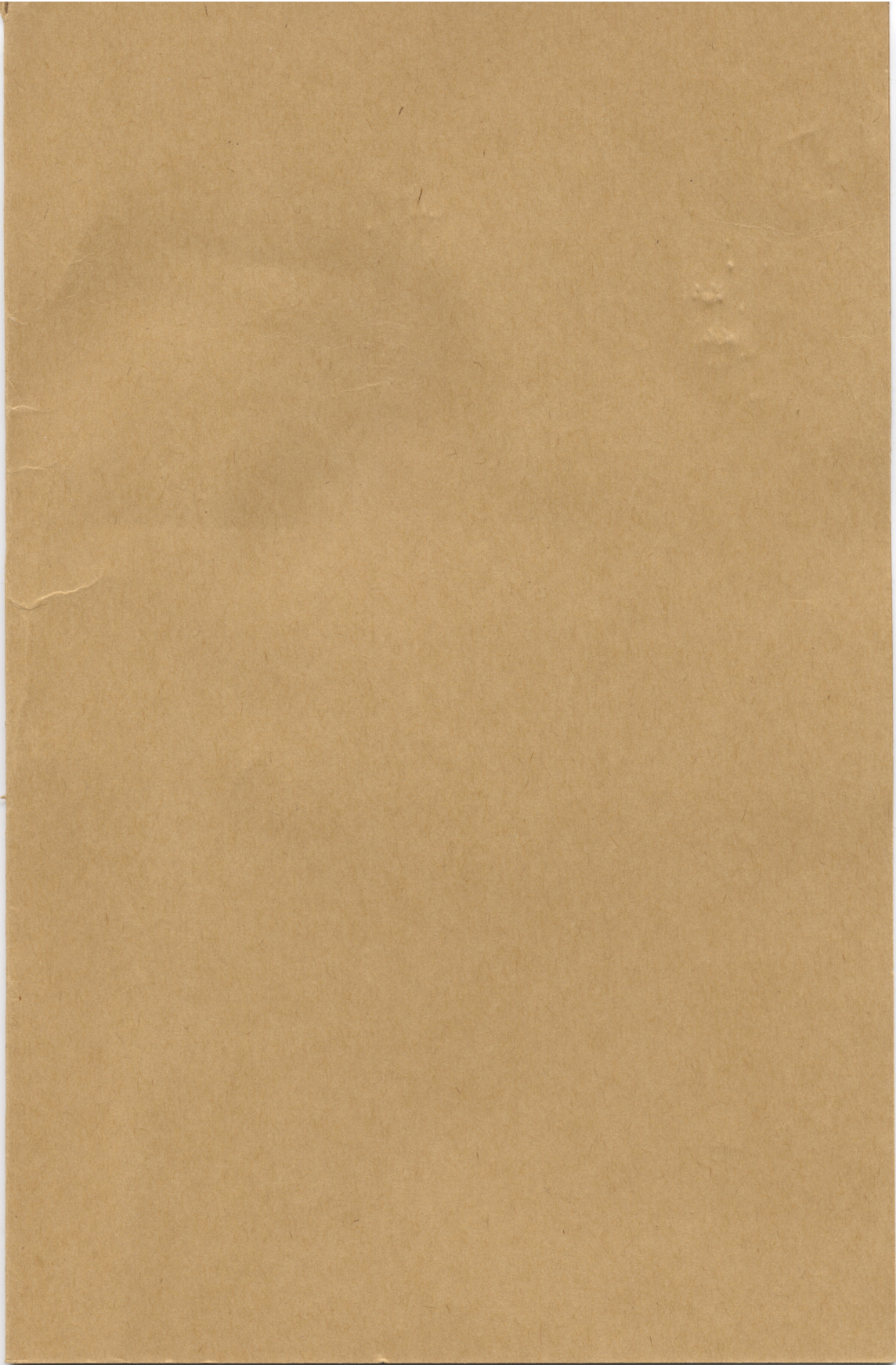
Ref symbol	Name of part and description	Function of part	Signal Corps stock No.
	COVER, switch box; steel; olive drab enamel finish; 4 1/4" lg x 3 3/4" wd x 1/4" thk.	Covers switch box.	2Z3351-339
	CUSHION: felt, gray; 1 3/4" dia x 1/8" thk.	Cushions handset transmitter cap.	2B275-10
	LABEL: BC-1361-A, schematic diagram, 5 1/2" lg x 2 1/4" wd.	Circuit label.	6D16985-5
	LABEL: BC-1362 schematic diagram, 5 1/2" lg x 4-15/16" wd.	Circuit label.	6D16985-6
	LATCH, fastener: steel, olive drab finish; 5/16" sq x 1-3/16" lg.	Latches cover of BC-1362.	6Z6917-5
	PACKING: preformed neoprene, conical shape; 3/4" h x 1-1/16" max dia, 1/2" ID.	Makes waterproof seal in conduit fitting.	6Z7465-12
	SPRING, helical: compression; .165" dia wire; 9 1/2 turns; 2-7/16" lg x 1" OD.	Supplies pressure to latch.	2Z8877.684
	SPRING, helical: compression; .042" dia wire; 11 turns, 1-11/32" lg x 9/16" OD.	Supplies pressure to latch.	2Z8877.683

TM 11-703

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

INTERPHONE
EXTENSION KIT
RC-298

DEPARTMENT OF THE ARMY • OCTOBER 1949



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TM 11-703

This manual supersedes TB SIG 192, July 1945

INTERPHONE
EXTENSION KIT
RC-298



DEPARTMENT OF THE ARMY • OCTOBER 1949

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DEPARTMENT OF THE ARMY
WASHINGTON 25, D. C., 19 October 1949

TM 11-703 is published for the information and guidance of all concerned.

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For explanation of distribution formula, see SR 310-90-1.

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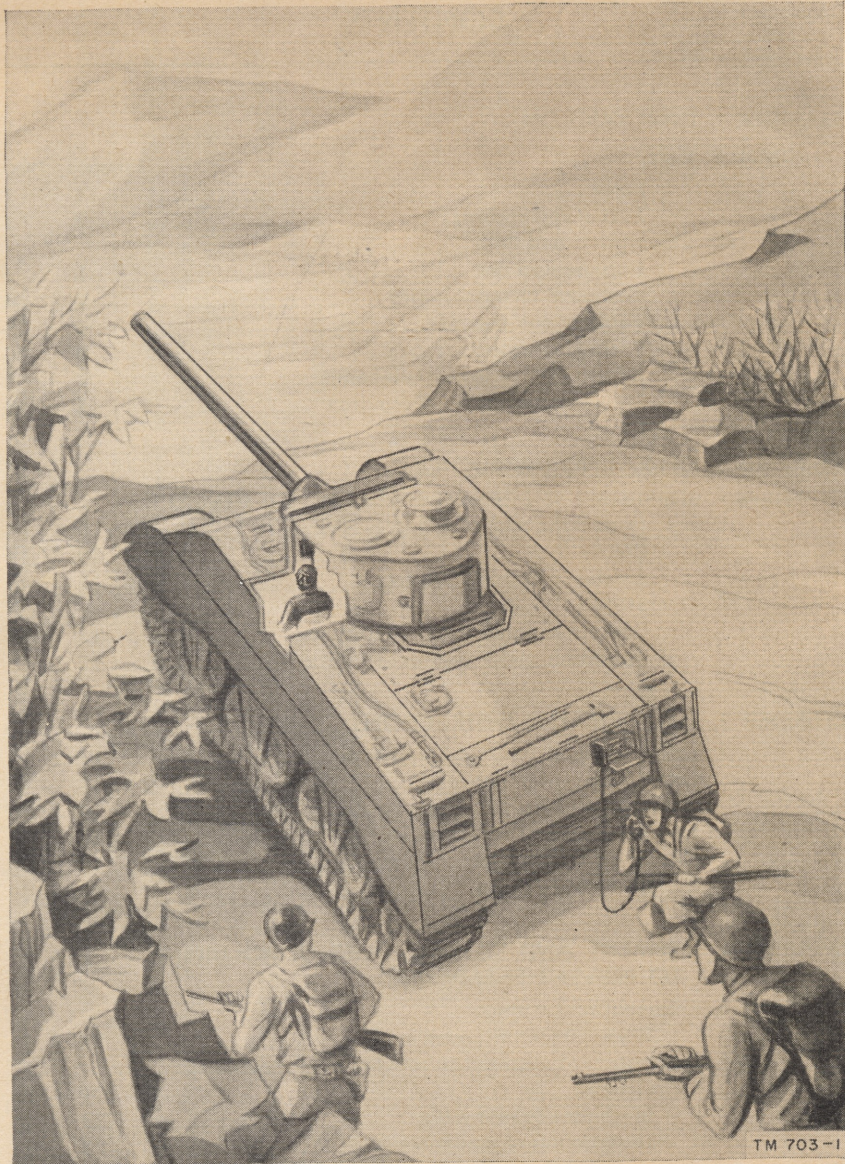


Figure 1. Interphone Extension Kit RC-298, installed in tank.

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1. Scope

a. This manual contains descriptive information on Interphone Extension Kit RC-298, equipment used in conjunction with radio sets installed in various types of tanks, and instructions for its installation, operation, repair, and maintenance.

b. Official nomenclature followed by () represents all models of an equipment.

2. Forms and Records

a. DA AGO Form 468 (Unsatisfactory Equipment Report) for equipment used by the Army will be filled out and forwarded through channels to the Office of the Chief Signal Officer, Washington 25, D. C., when trouble occurs more often than is normal, as determined by qualified repair personnel.

b. Use other forms and records as authorized.

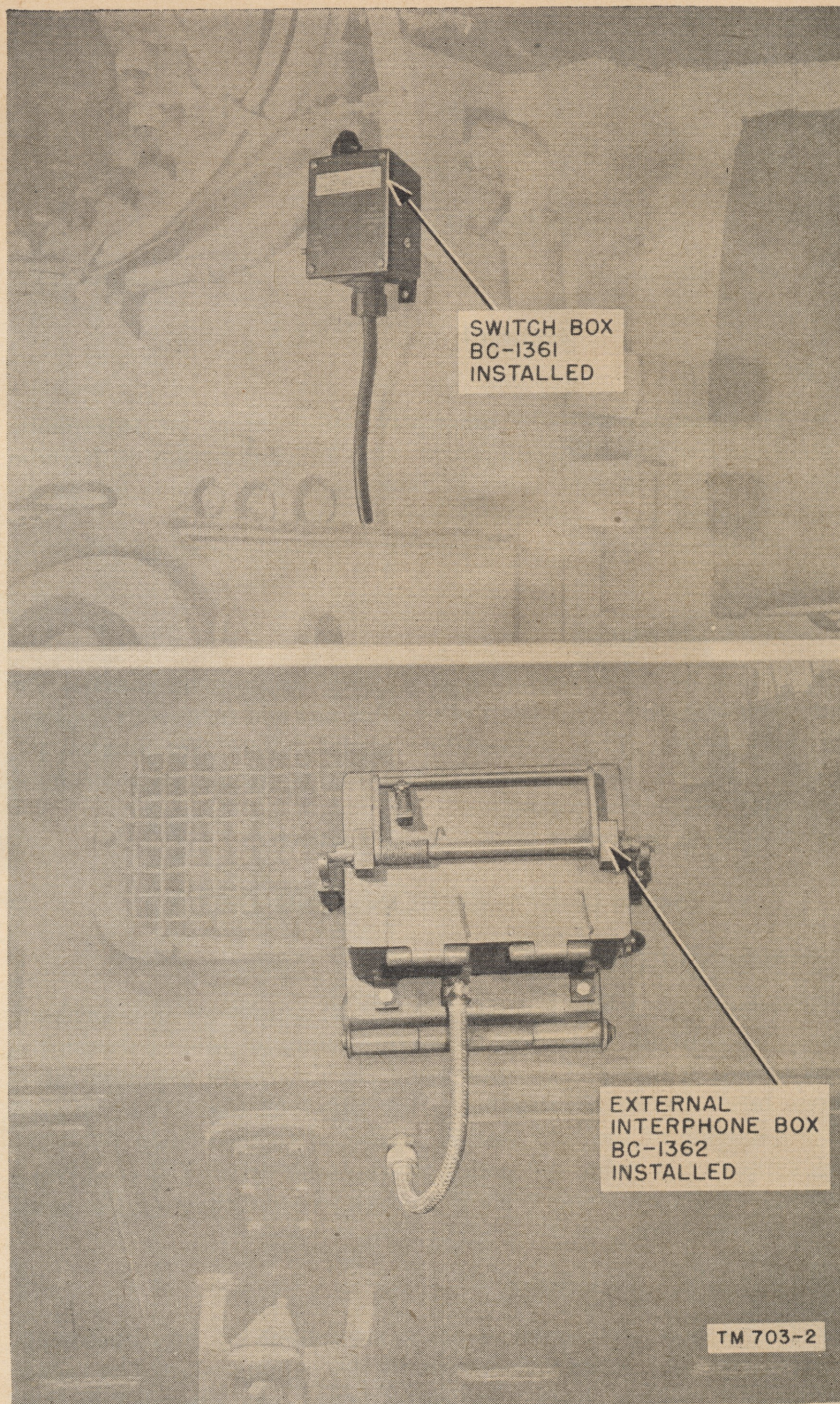
Section II. DESCRIPTION AND DATA

3. Purpose and Use

Interphone Extension Kit RC-298 (fig. 2) consists of an interphone box and a switchbox designed to provide communication between the crew of the vehicle and persons using the externally mounted interphone box. External Interphone Box BC-1362 (fig. 3) is mounted on the outside of the tank and is connected to Switchbox BC-1361 (fig. 4) mounted inside the tank near the tank driver's or co-driver's position. Figures 1 and 2 show the relative positions of the components in the tank.

4. Technical Characteristics

a. OPERATION. For operation of the interphone kit, no adjustments are required other than adjustment of the volume control to secure satisfactory volume level. Indicator lamps are provided in the external interphone box and in the internally positioned switchbox to signal to persons on the outside that contact is desired.



SWITCH BOX
BC-1361
INSTALLED

EXTERNAL
INTERPHONE BOX
BC-1362
INSTALLED

TM 703-2

Figure 2. Interphone Extension Kit RC-298, position of components installed.

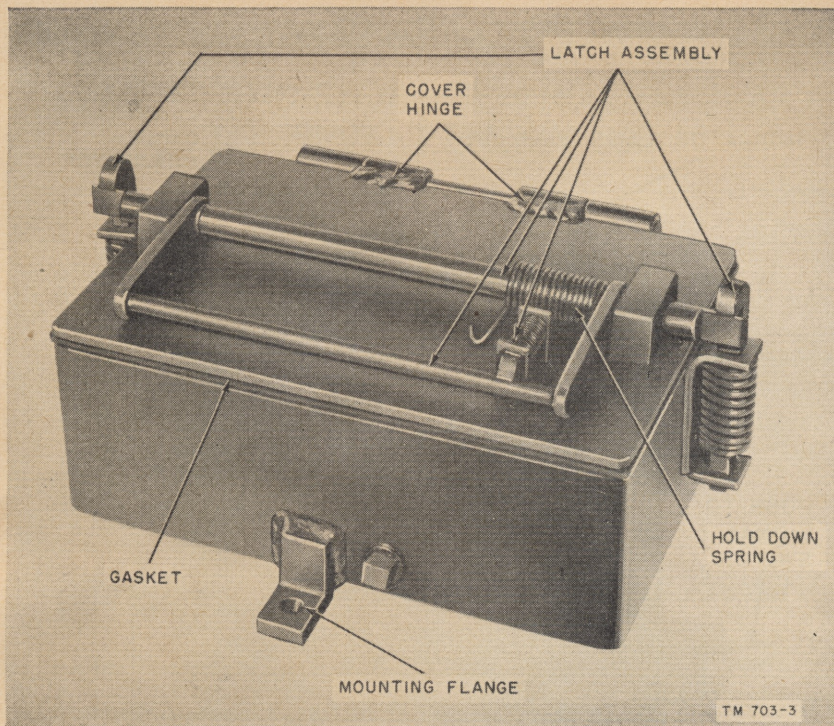


Figure 3. External Interphone Box BC-1362.

b. POWER SUPPLY. The interphone extension kit operates from the electrical system of the vehicle in which it is installed; therefore, unless the vehicle and kit operate with the same voltage (24 volts dc (direct current)), the kit must be adjusted accordingly.

5. Table of Components (fig. 5)

Components	Required No.	Height (in.)	Depth (in.)	Length (in.)
Conduit, flexible.....	10 ft.			
Connector and bondnut.....	1			
Cordage CO-213.....	35 ft.			
External Interphone Box BC-1362.....	1	7½	4½	11½
Hardware kit.....	1			
Lamp LM-44.....	2			
Lamp, lens.....	2	1		¾
Sealing compound.....	1 oz.			
Switch, toggle.....	1	1⅛	2⅛	1¼
Switchbox BC-1361.....	1	3½	2	4
Tape TL-83.....	1 roll			
Transmitter cap.....	2			
Wire, #20 solid rubber-covered.....	2 ft.			

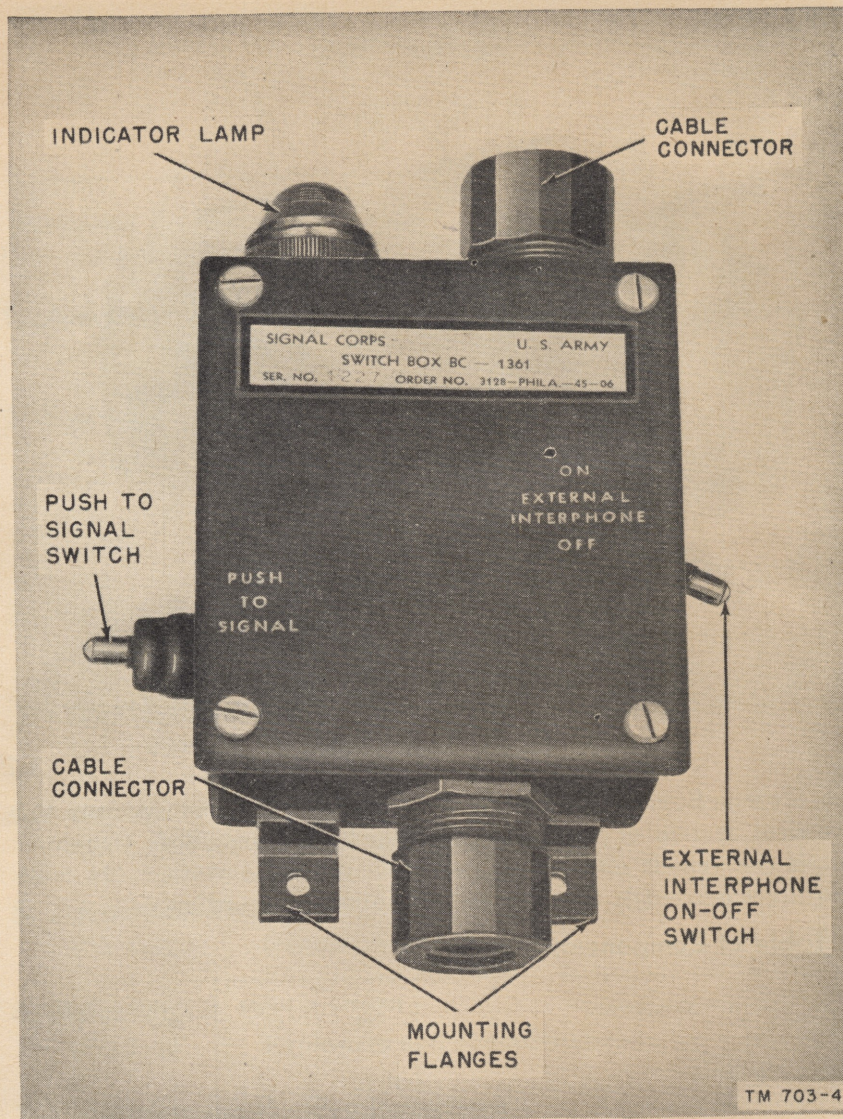


Figure 4. Switchbox BC-1361.

6. Packaging Data

Interphone Extension Kit RC-298 is packed for shipment in a wooden crate measuring $31\frac{1}{2}$ by $17\frac{3}{4}$ by $10\frac{1}{4}$ inches (fig. 6). The components are broken down into lots; each lot is contained in separate cardboard carton within the wooden crate. External Interphone Box BC-1362 is packed in a cardboard box, desiccant is added, and the entire contents are placed in another cardboard box,

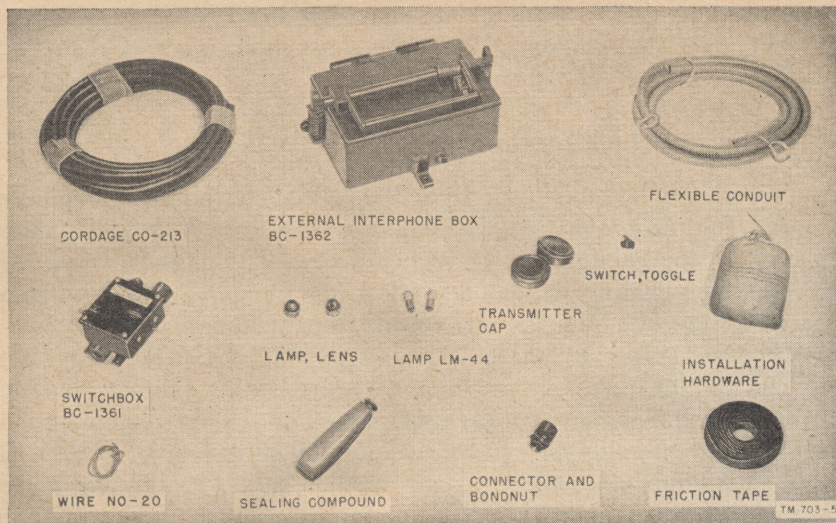


Figure 5. Components of Interphone Extension Kit RC-298.

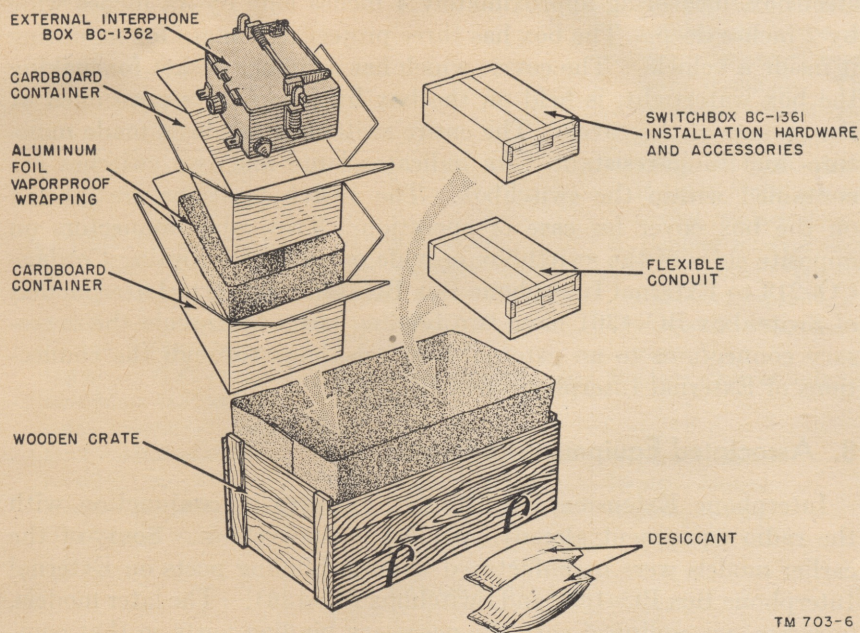


Figure 6. Packaging of Interphone Extension Kit RC-298.

lined with vaporproof aluminum foil. Switchbox BC-1361 and all of the remaining components, with the exception of the flexible conduit, are packed in individual containers; and all containers are placed within a cardboard box. The flexible conduit is protected by a wrapping of moistureproof paper and placed within a separate

cardboard box. The components may be packaged in a manner different from that described above, depending upon the supply channel.

7. Description of Major Components

a. **EXTERNAL INTERPHONE BOX BC-1362.** External Interphone Box BC-1362 is a $\frac{1}{4}$ -inch thick, steel box, approximately $11\frac{1}{2}$ inches long by $7\frac{1}{2}$ inches wide by $4\frac{1}{2}$ inches deep. The case is equipped with three projecting flanges for mounting the box on the outside rear of a vehicle. The volume control, terminal board for connections to Switchbox BC-1361, Handset H-22 ()/U and mounting bracket, and an indicator lamp are contained within the box (figs. 9, 10, and 11). Neoprene rubber gaskets under the box cover and a latch spring assembly provide a means of securing the cover so as to make the box watertight. Later models have two binding posts mounted next to the volume control for connecting the interphone system to an external field telephone (fig. 12).

b. **SWITCHBOX BC-1361.** Switchbox BC-1361 is a $\frac{1}{16}$ -inch thick, steel box, measuring approximately 4 inches long by $3\frac{1}{2}$ inches wide by 2 inches deep. The box has three projecting flanges for mounting it inside a vehicle. The cover, which has a rubber gasket for making the box watertight, is held on the box by four screws positioned at the corners of the cover. The entire switchbox has been made moisture- and fungi-resistant. An indicator lamp and two switches are contained within the switchbox. The switch positions are labeled on the box cover for ease of operation. Two cable connectors on opposite sides of the switchbox provide openings for routing Cordage CO-213 to External Interphone Box BC-1362 (fig. 7). Later models of Switchbox BC-1361 have two binding posts to provide the necessary connections to an external field telephone through the connections of External Interphone Box BC-1362 (fig. 8).

8. Associated Equipment Required

Interphone Extension Kit RC-298 operates in conjunction with the radio equipment already installed in the vehicle. Some of the earlier models were manufactured without binding posts on External Interphone Box BC-1362 and Switchbox BC-1361. The later models, however, are equipped with the necessary binding posts so that communications may be established independently of the vehicle interphone system and at points distant from the vehicle. See TM 11-333 for technical information pertaining to field Telephone EE-8-().

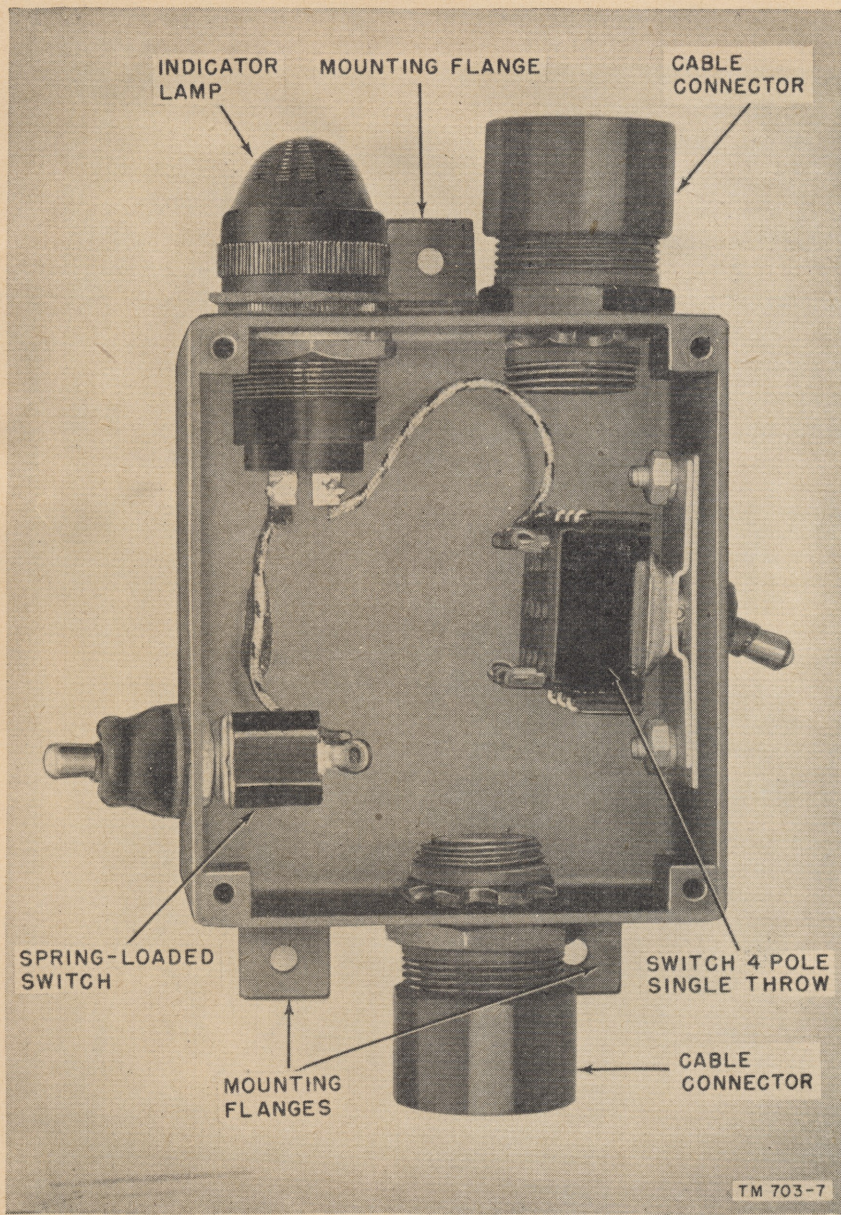


Figure 7. Switchbox BC-1361, interior view.

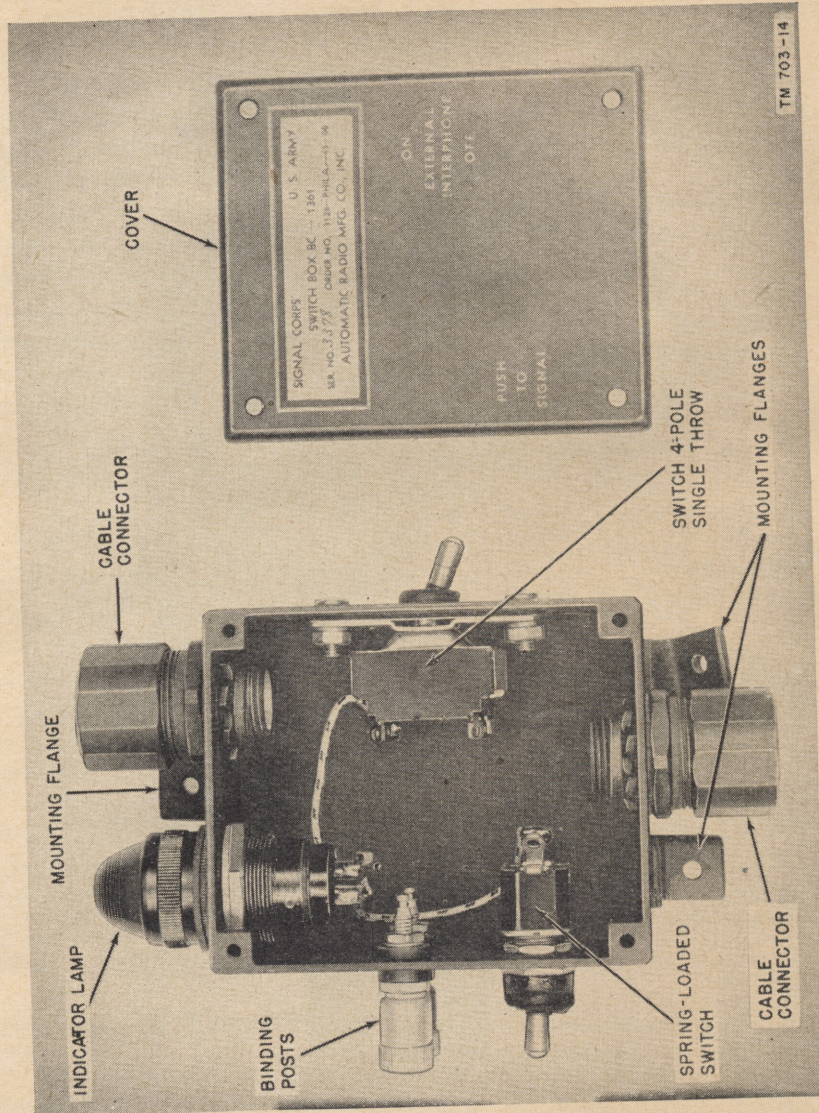


Figure 8. Switchbox BC-1361, later models containing binding posts.

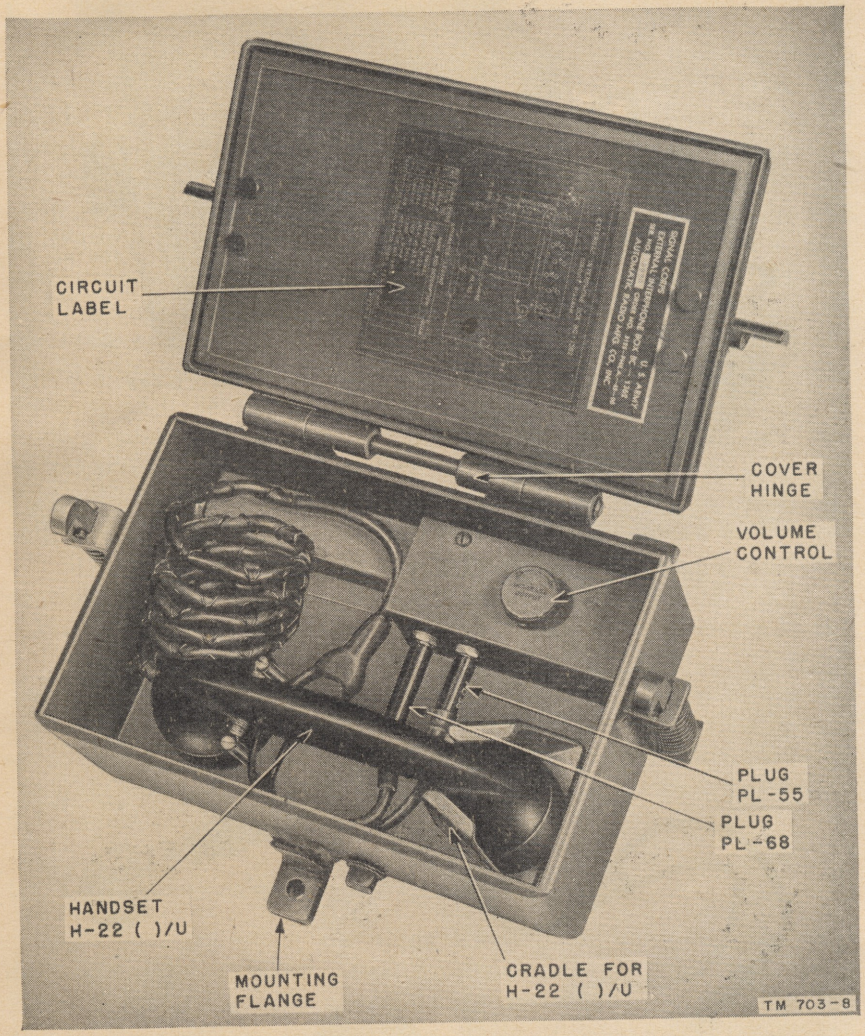


Figure 9. External Interphone Box BC-1362, interior view.

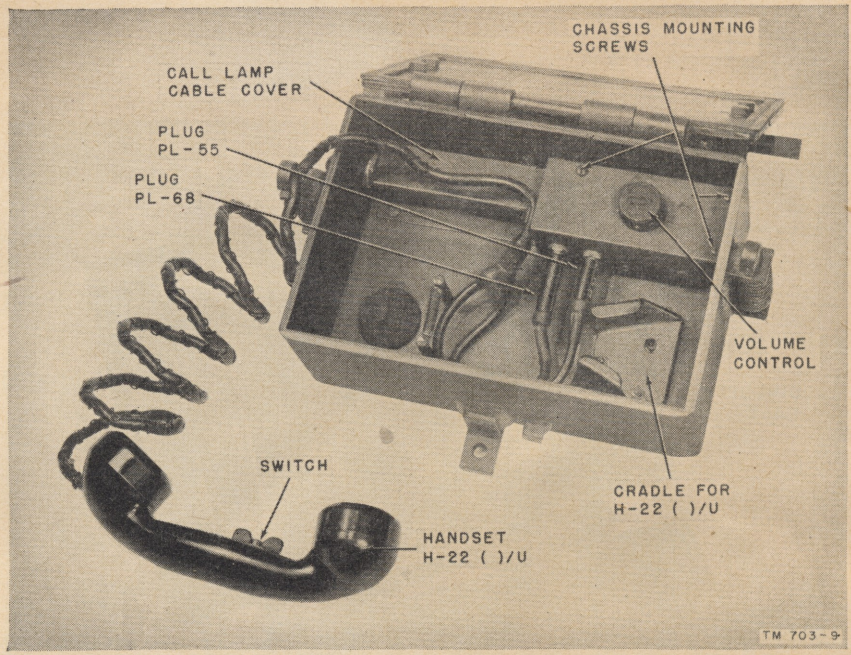


Figure 10. External Interphone Box BC-1362, cover open.

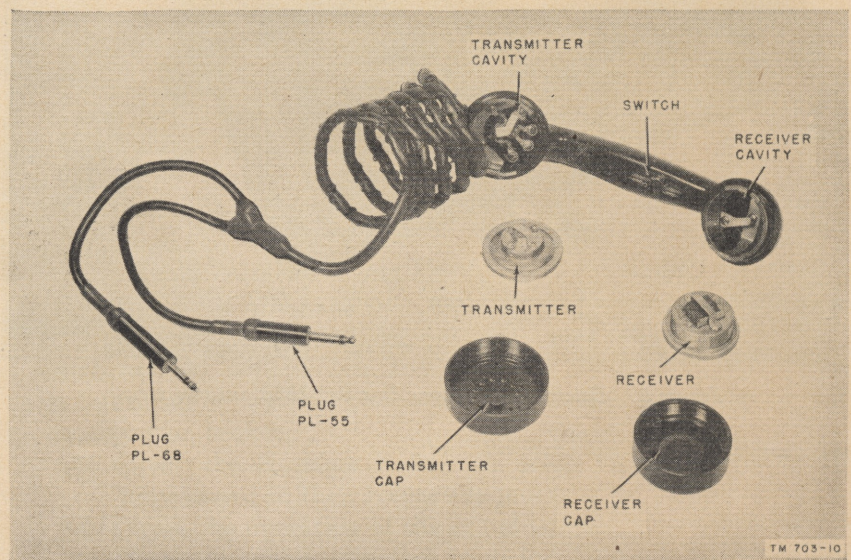


Figure 11. Handset H-22 ()/U.

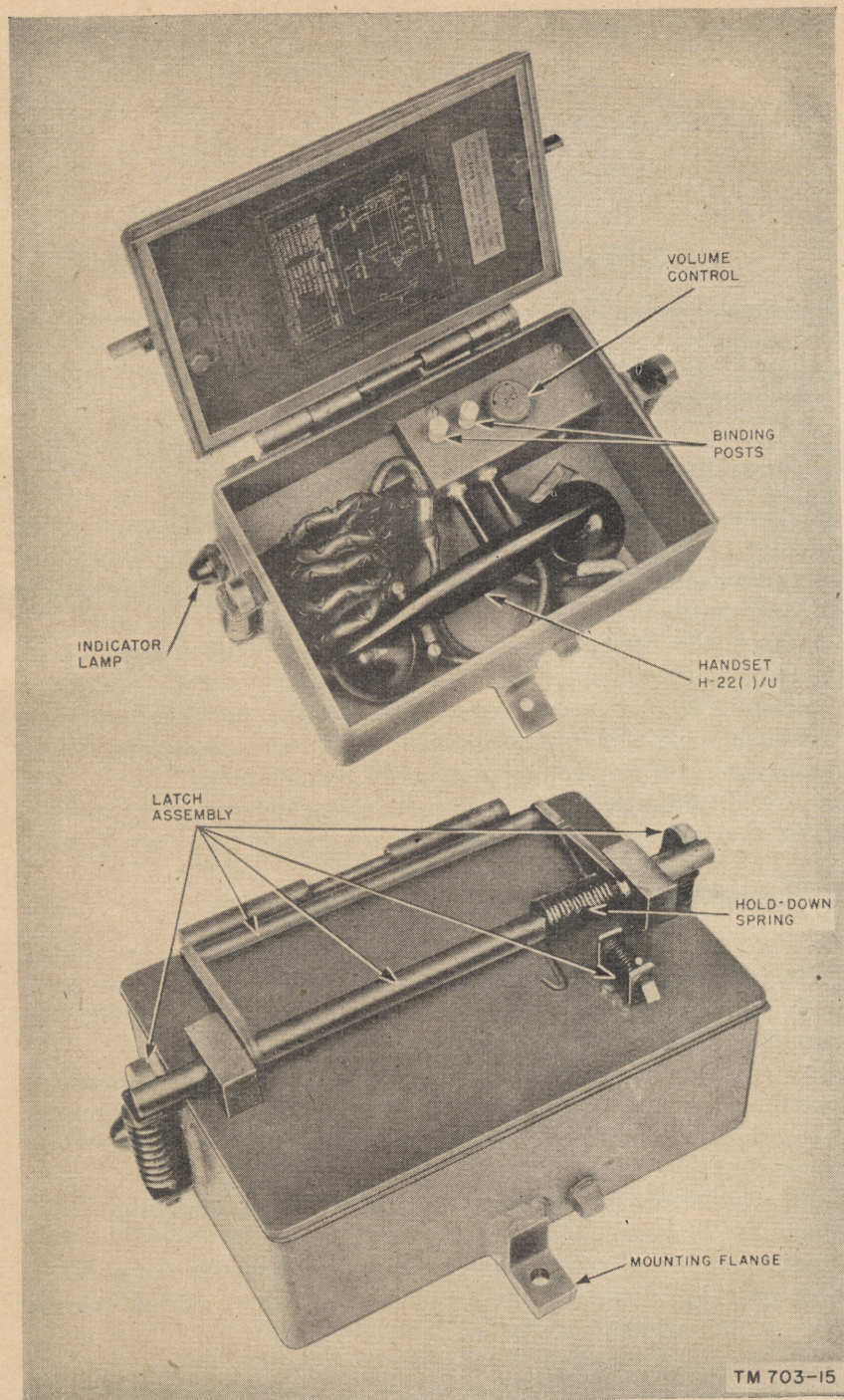


Figure 12. External Interphone Box BC-1362, later models containing binding posts.

CHAPTER 2

OPERATING INSTRUCTIONS

Section I. INSTALLATION OF INTERPHONE EXTENSION KIT RC-298

9. Unpacking and Checking

a. Remove the nails of the wooden shipping crate with a nail puller, and then remove the top of the container. Do not pry deeply into the interior of the crate with a crowbar, or the smaller inside cartons and their contents may be seriously damaged.

b. Open the corrugated cartons and remove the aluminum foil vaporproof wrappings and any other packaging materials (fig. 6).

c. Retain the packaging boxes and material; store them inside the wooden shipping container for possible future use. Either destroy the bags of desiccant or place them aside for reactivation.

d. Compare the packing slip with the unpacked equipment to make certain that all necessary components are present (fig. 5 and par. 5).

10. Precautions

a. For complete and specific instructions on the proper installation of Interphone Extension Kit RC-298 in a particular vehicle, refer to the applicable technical manual for the vehicle involved. See appendix I for a listing of these manuals.

b. Make any necessary electrical modifications of the equipment. Since interphone equipment may be seriously damaged by operation on incorrect power sources, adjust the equipment according to the voltage supply of the vehicle.

c. If the interphone extension kit is installed in tanks equipped with a Radio Set SCR-508-() using Interphone Control Box BC-606-A through -G, include the double-pole double-throw spring-actuated switch provided in the kit. Refer to the applicable technical manual for particulars of this installation.

11. Assembly and Installation

Before installing the equipment in the vehicle, study the schematic diagram, figure 13.

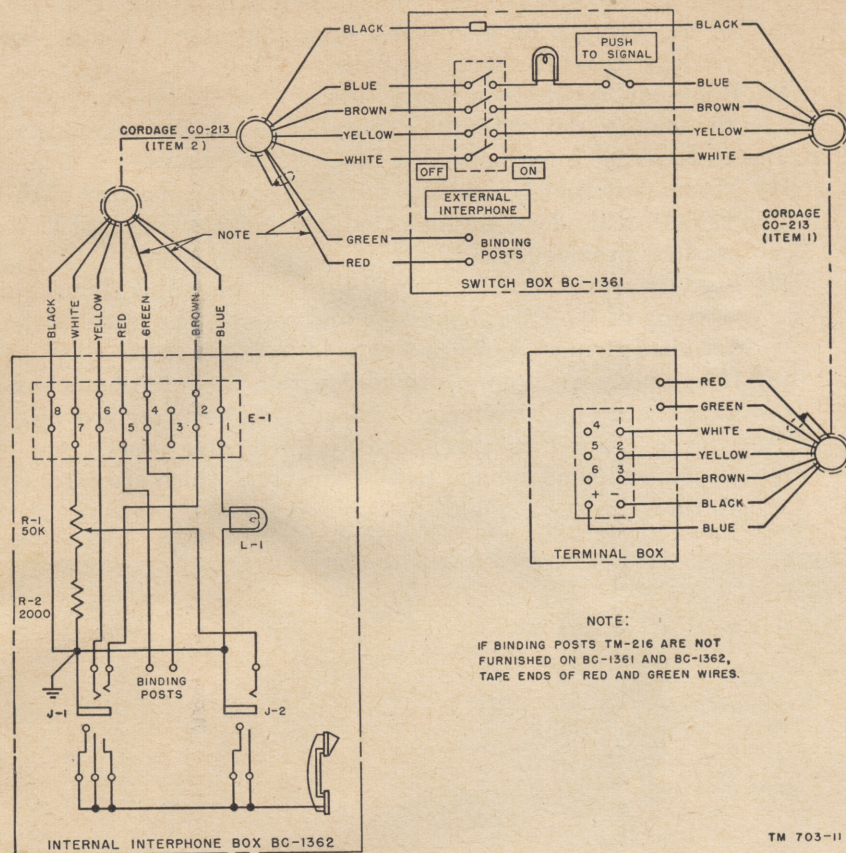


Figure 13. Interphone Extension Kit RC-298, schematic diagram.

a. Prepare and connect Cordage CO-213 outside the vehicle before installing the equipment in the vehicle. Proceed as follows:

- (1) Cut Cordage CO-213 (items 1 and 2, fig. 13) to the proper lengths as specified for installation in a particular vehicle, and prepare the cordage ends.
- (2) Pass the ends of the cordage into Switchbox BC-1361 through the two connectors provided.
- (3) Connect the proper cordage leads to the switch in Switchbox BC-1361 as shown in figure 7.

b. Carry Switchbox BC-1361 and cordage into the vehicle and install as follows:

- (1) Mount Switchbox BC-1361 in the vehicle in the location shown by the applicable installation manual.
- (2) Connect the cordage leads (item 1) to the terminals of the vehicle terminal box (fig. 13). Before applying power, make certain that terminals 1, 2, 3, and — (minus) in the

vehicle terminal box are connected to the proper terminals of the driver's or co-driver's interphone box. Secure the cordage with the clamps provided.

- (3) Route and secure the cordage (item 2) and flexible conduit in the manner shown by the applicable installation manuals.
- c. Install External Interphone Box BC-1362 as follows:
 - (1) Mount External Interphone Box BC-1362 on the rear of the vehicle in the location indicated, using the screws and lock-washers provided.
 - (2) Feed the end of cordage (item 2) through the proper connector opening of the interphone box, and connect the leads to the terminal strip as shown in figure 14.
 - (3) If binding posts are not provided within the interphone box, tape the red and green cordage leads. If posts are provided, connect the red and green leads to the binding posts.
 - (4) Apply sealing compound to all connectors which are external to the vehicle.

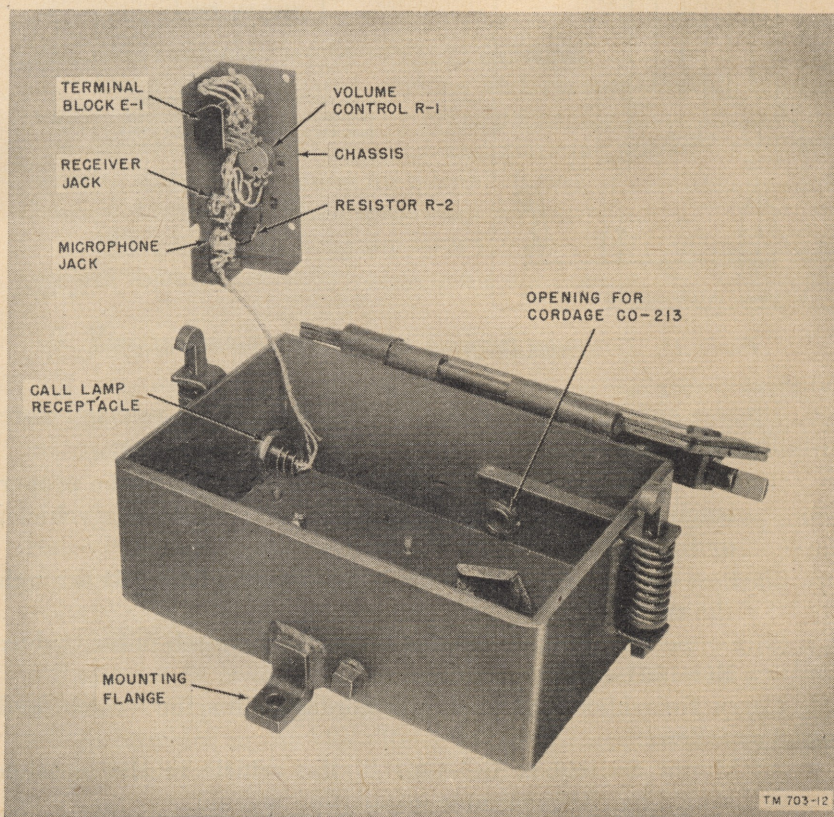


Figure 14. External Interphone Box BC-1362, terminal strip.

Section II. OPERATION

12. Operation under Usual Conditions

When communication between tank crew and personnel outside the tank is desired and an external field telephone system is not connected to the external interphone box, operation is as follows: When, for tactical reasons, the tank commander or another crew member desires communication with personnel outside of the tank, the EXTERNAL INTERPHONE switch is operated to the ON position. To signal visually to outside personnel, the tank driver or co-driver operates the spring-loaded PUSH TO SIGNAL switch, thereby lighting the Switchbox BC-1361 indicator light and the External Interphone Box BC-1362 call light. The call light, which is equipped with a ruby lens, can be blinked by momentary operation of the PUSH TO SIGNAL switch. To answer the call, personnel on the outside of the tank operate the latch spring assembly, thereby opening the external interphone box, lift Handset H-22 ()/U from its hook, operate the push-to-talk switch, and speak as they would with an ordinary cradle phone. The volume can be adjusted to the satisfactory level by operating the volume control on the external interphone box. Personnel on the outside of the tank can speak over the system at will, provided the EXTERNAL INTERPHONE switch on Switchbox BC-1361 is at the ON position and the tank driver's or co-driver's control box is set for interphone operation. The ON-OFF EXTERNAL INTERPHONE switch should therefore always remain in the ON position unless External Interphone Box BC-1362 is damaged. The circuits between the external interphone box and switchbox are disconnected when the four-pole EXTERNAL INTERPHONE switch is set at the OFF position. Signaling and communication are then impossible, but communication among all positions inside the vehicle will not be affected.

13. Operation under Unusual Conditions

Under certain tactical conditions it may be desirable to have communication by wire facilities with some point distant from the vehicle. When the event arises, the following procedure is established for maintaining such communications: Field Telephone EE-8-() is installed within the tank, and the L-1 and L-2 terminals of that field telephone are connected to the binding posts of Switchbox BC-1361. A suitable length of standard pair wire, such as Wire W-110-B, is connected to the binding posts of External Interphone Box BC-1362 and strung out to the distant point, where the wire ends are connected to the L-1 and L-2 terminals of another field Telephone EE-8-(). Operational procedure for using the field telephone is described in TM 11-333.

CHAPTER 3

MAINTENANCE INSTRUCTIONS

14. Organizational Tools and Equipment

The following tools and materials will be needed for maintaining Interphone Extension Kit RC-298:

- Common hand tools
- Clean cloth
- #0000 sandpaper
- Solvent, dry cleaning (SD)
- Paste metal polish

Note. Gasoline will not be used as a cleaning fluid for any purpose.

15. Preventive Maintenance

PM (preventive maintenance) is work performed on equipment (usually when the equipment is not in use) to keep it in such good working order that break-downs and needless interruptions in service will be kept to a minimum. PM differs from trouble shooting and repair since its object is to prevent certain troubles from occurring. The following PM operations should be performed on Interphone Extension Kit RC-298 by organizational personnel at the intervals indicated, unless these intervals are changed by the local commander.

a. DAILY.

- (1) Clean the exterior of Switchbox BC-1361 and External Interphone Box BC-1362.
- (2) Visually inspect the interphone extension kit, particularly the external interphone box, for any obvious looseness of mountings.

Caution: Do not tighten any threaded parts carelessly. Such parts tightened beyond the pressure for which they are designed, will be damaged or broken.

- (3) Check the Handset H-22()/U plugs to see that they are fully seated in their respective jacks.
- (4) Check the operation of the signal lamps.
- (5) Check the volume control knob for improper operation and unsatisfactory electrical adjustment. If necessary, tighten the knob by adjusting the setscrew. Faulty carbon or

broken wire track on the volume control will be evidenced by a crackling noise when the control knob is turned.

(6) Operate the handset butterfly switch to check proper throw-over from receiving to transmitting positions.

b. WEEKLY.

- (1) Clean and lubricate the latch spring assembly of External Interphone Box BC-1362 with Grease, Lubricating, Special AXS 637 (GL). The box is exposed to the elements, and the action of sun and rain will rust the assembly. Refer to figure 15 for the lubrication points illustrated.
- (2) Apply sealing compound to all exposed connectors where needed.
- (3) Inspect Handset H-22()/U cords for cut and frayed insulation. Check the cord plugs for looseness and broken shells.
- (4) Check the terminal board for cracks, dirt, corrosion, and loose connections. The dirt and corrosion on contacts and plugs may be removed with #0000 sandpaper and solvent (SD).

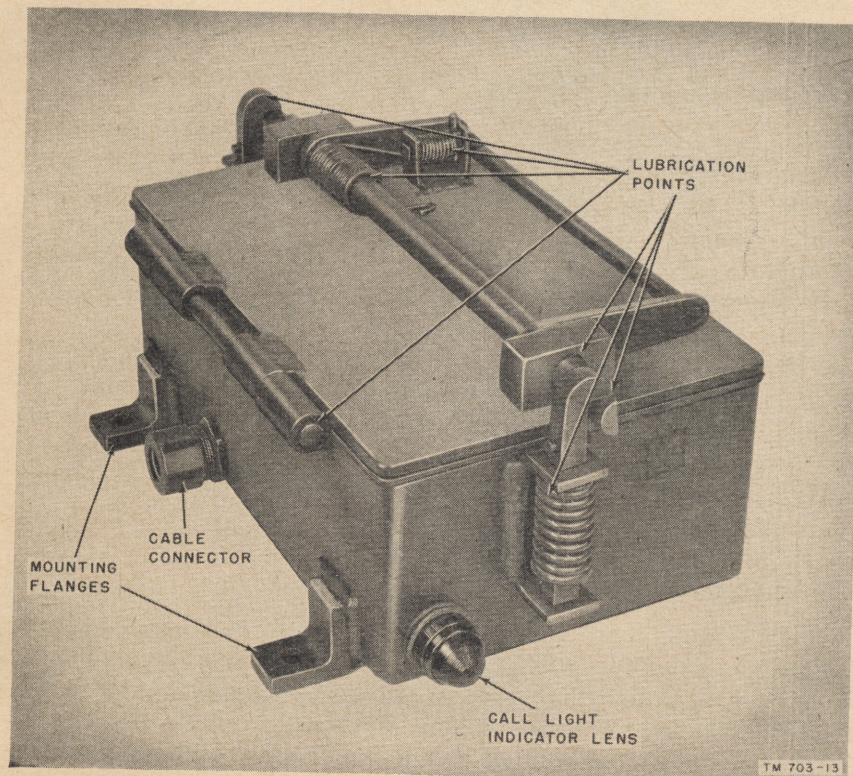


Figure 15. External Interphone Box BC-1362, lubrication points.

16. Weatherproofing

a. GENERAL. Signal Corps equipment, when operated under severe climatic conditions such as prevail in tropical, arctic, and desert regions, requires special treatment and maintenance. Fungus growth, insects, dust, corrosion, salt spray, excessive moisture, and extreme temperatures are harmful to most materials.

b. TROPICAL MAINTENANCE. A special moistureproofing and fungi-proofing treatment has been devised which, if properly applied, provides a reasonable degree of protection. This treatment is fully explained in TB SIG 13 and TB SIG 72.

c. WINTER MAINTENANCE. Special precautions necessary to prevent poor performance or total operational failure of equipment in extremely low temperatures are fully explained in TB SIG 66.

d. DESERT MAINTENANCE. Special precautions necessary to prevent equipment failure in areas subject to extremely high temperatures, low humidity, and excessive sand and dust are fully explained in TB SIG 75.

e. LUBRICATION. The effects of extreme cold and heat on materials and lubricants are explained in TB SIG 69.

17. Rustproofing and Painting

a. When the finish on the case has been badly scarred or damaged, rust and corrosion can be prevented by touching up bared surfaces. Use #00 or #000 sandpaper to clean the surface down to the bare metal; obtain a bright smooth finish.

Caution: Do not use steel wool. Minute particles frequently enter the case and cause harmful internal shorting or grounding of circuits.

b. When a touch-up job is necessary, apply paint with a small brush. Remove rust from the case by cleaning corroded metal with solvent (SD). In severe cases it may be necessary to use solvent (SD) to soften the rust and to use sandpaper to complete the preparation for painting. Paint used will be authorized and consistent with existing regulations.

18. Trouble-Shooting Chart

The following chart is supplied as an aid in locating trouble in Interphone Extension Kit RC-298. This chart lists the symptoms which the repairman may observe, either visually or by ear, while making a few simple tests. Before attempting trouble shooting as listed in the chart, perform all the checks of equipment as described in paragraph 15. Proper performance of these checks may immediately localize the trouble to specific components.

Symptom	Probable trouble	Correction	
1. PUSH TO SIGNAL and EXTERNAL INTERPHONE switches at the on positions. Signal lamps light. Person on the outside can receive on Handset H-22 ()/U but cannot transmit.	1. Open cord wiring to Plug PL-68. Defective handset switch...	1. Repair cord. Clean switch contacts. Check spring pressure. Before replacing, shake or rap transmitter case sharply; carbon granules may be "frozen." Try talking again. If it is still inoperative, replace handset transmitter.	
	Defective handset transmitter.	Replace switch.	
	Faulty EXTERNAL INTERPHONE switch contacts. No continuity through switch for brown and yellow leads. Defective resistor R-2----	Check resistor terminal connections. If these are secure, place an ohmmeter across the resistor terminals. The ohmmeter should read between the limits of 1,600 and 2,500 ohms. If these limits are exceeded, replace R-2.	
2. PUSH TO SIGNAL and EXTERNAL INTERPHONE switches at the on positions. Signal lamps light. External switchbox talking circuit operative, but tank commander's directions cannot be heard on Handset H-22 ()/U receiver.	2. Faulty receiver----- Faulty earpiece contact spring. Open winding-----	2. Replace receiver unit. Clean spring contact and check tension. Check continuity, case to contact. Replace receiver unit.	
	Pole piece has lost its magnetism. Volume control: Poor slider arm contact Open track or winding--	Replace control. Replace control.	
	Faulty EXTERNAL INTERPHONE switch contacts. No continuity through switch for white lead.	Replace switch.	
	3. Signal lamps do not light but circuits work.	3. Open lamp filament---- Faulty EXTERNAL INTERPHONE or PUSH SIGNAL switch.	3. Replace lamps. Check switch contacts for continuity through blue leads. Replace faulty switch.

19. Replacement of Parts

Most of the parts in Interphone Extension Kit RC-298 are readily accessible and are easily replaced if found to be faulty. When replacing parts to which wires have been soldered, examine the leads and make note of the original connections before unsoldering. If the replacement of parts requires the removal of rubber or cork or other fibrous gaskets, take care that the gaskets are removed intact whenever possible, so that the waterproofing qualities are not impaired.

a. SWITCHBOX BC-1361.

- (1) *Signal lamp.* The signal lamp is removed in the following manner: Turn the indicator lens housing or shell counterclockwise and remove it. The signal lamp has a bayonet type base and is removed by pressing the lamp into the base and exerting a counterclockwise twist.
- (2) *PUSH TO SIGNAL switch.* The PUSH TO SIGNAL switch has a rubber cover over its handle. Remove the rubber cover close to the mounting nut. Bend the locking tab on the washer underneath the mounting nut and remove the nut. Remove the switch from the interior of the box.
- (3) *EXTERNAL INTERPHONE switch.* The EXTERNAL INTERPHONE switch has an individual mounting plate which is held flush with the side of the box by threaded screws, nuts, and lockwashers. Use a long-nose pliers to hold the nuts stationary inside the box while the screws are removed. Save the hardware for possible use with the replacement part.

b. EXTERNAL INTERPHONE BOX BC-1362.

- (1) *Signal lamp.* For removal of the signal or call lamp, follow the procedure described in a (1) above.
- (2) *Volume control.* The volume control is mounted on a subassembly chassis within the external interphone box. To remove the control, remove the call lamp cable cover and then remove the chassis by unscrewing the three machine screws which secure the chassis to its mounting flange. The chassis can be raised from the box, the volume control knob setscrew loosened, the knob removed, and the volume control mounting nut removed.
- (3) *Jacks.* Before the jacks can be removed, the subassembly chassis must be removed. The jacks are held on the chassis by large hexagonal nuts.

CHAPTER 4

SHIPMENT AND STORAGE AND DEMOLITION TO PREVENT ENEMY USE

Section I. SHIPMENT AND STORAGE

20. Repacking Equipment

- a. The exact procedure used in repacking equipment for shipment or limited storage depends upon the material available. If the original shipping containers have been retained, pack as illustrated in figure 6.
- b. Place a dehydrating agent in the box containing External Interphone Box BC-1362.
- c. Store all packaged equipment in a dry location.

Section II. DEMOLITION OF MATÉRIEL TO PREVENT ENEMY USE

21. General

The demolition procedures outlined in paragraphs 22 and 23 will be used to prevent the enemy from using or salvaging this equipment. Demolition of the equipment will be accomplished *only* upon order of the commander.

22. Methods of Destruction

- a. *Smash*. Use sledges, axes, handaxes, pickaxes, hammers, crow-bars, and heavy tools.
- b. *Cut*. Use axes, handaxes, and machetes.
- c. *Burn*. Use gasoline, kerosene, oil, flame throwers, and incendiary grenades.
- d. *Explosives*. Use firearms, grenades, and TNT.
- e. *Other*. Use anything immediately available for destruction of this equipment.
- f. *Disposal*. Bury in slit trenches, fox holes, and other holes. Throw in streams. Scatter.

23. Destruction of Components

- a. *Smash* controls, switches, and handset.
- b. *Cut* cords and wiring.
- c. *Burn* cords, wiring, and technical manuals.
- d. *Bury or scatter* all the above pieces after destroying.
- e. *Destroy everything*.

APPENDIX I

REFERENCES

Note.—For availability of items listed, check SR 310-20-6, FM 21-6, and Department of the Army Supply Catalog SIG 1.

1. Army Regulations

AR 380-5..... Safeguarding Military Information.

2. Supply Publications

SIG 1..... Introduction and Index.

SIG 3..... List of Items for Troop Issue.

SB 11-76..... Signal Corps Kit and Materials for Moisture- and Fungi-Resistant Treatment.

3. Painting, Preserving, and Lubrication

TB SIG 13... Moistureproofing and Fungiproofing Signal Corps Equipment.

TB SIG 69... Lubrication of Ground Signal Equipment.

TM 9-2851... Painting Instructions for Field Use.

4. Camouflage

FM 5-20..... Camouflage, Basic Principles.

5. Decontamination

TM 3-220.... Decontamination.

6. Demolition

FM 5-25..... Explosives and Demolitions.

7. Packaging and Packing Instructions

a. JOINT ARMY-NAVY PACKAGING SPECIFICATIONS.

JAN-D-169.. Desiccants, Activated.

JAN-P-100.. General Specifications.

JAN-P-106.. Boxes, Wood, Nailed.

JAN-P-116.. Preservation, Methods of.

JAN-P-125.. Barrier Material, Waterproof.

JAN-P-131.. Barrier Material, Moisture-Vaporproof, Flexible.

b. U. S. ARMY SPECIFICATION.

100-2E..... Marking Shipments by Contractors (and Signal Corps Supplement thereto).

- c. SIGNAL CORPS INSTRUCTIONS.
720-7..... Standard Pack.
726-15..... Interior Marking.

8. Technical Manuals Covering Installation in Vehicles

- TM 11-2754.. Installation of Radio and Interphone Equipment
in Tank, Light, M24.
TM 11-2758.. Installation of Radio and Interphone Equipment
in Tank, Medium, M26.
TM 11-2762.. Installation of Radio and Interphone Equipment
in Tanks, Flame Thrower M42B1 and M42B3.
TM 11-2763.. Installation of Radio and Interphone Equipment
in Tank, Medium, M45.

9. Other Publications

- SR 310-20-6.. Index of Blank Forms and Army Personnel Classi-
fication Tests.
FM 21-6..... List and Index of Department of the Army
Publications.
TM 11-333... Telephones EE-8, EE-8-A, and EE-8-B.
TB SIG 66... Winter Maintenance of Signal Equipment.
TB SIG 72... Tropical Maintenance of Ground Signal Equip-
ment.
TB SIG 75... Desert Maintenance of Ground Signal Equip-
ment.

10. Forms

- DA AGO Form 468 (Unsatisfactory Equipment Report).

APPENDIX II

IDENTIFICATION TABLE OF PARTS

1. Requisitioning Parts

The fact that an item appears in this technical manual is not sufficient basis for requisitioning the item. Requisitions must cite an authorized basis such as T/O & E, T/A, T/BA, SIG 6, SIG 7 & 8, SIG 7-8-10, SIG 10, list of allowances of expendable material, or another authorized supply basis. For an index of available supply catalogs in the Signal portion of the Department of the Army Supply Catalog, see the latest issue of SIG 1, Introduction and Index.

2. Identification Table of Parts for Interphone Extension Kit RC-298

Ref symbol	Name of part and description	Function of part	Signal Corps stock No.
E-1	<p>INTERPHONE EXTENSION KIT RC-298: includes ext interphone station, disconnect sw, and associated cables and mtgs; used to provide means of communication from outside of tanks to the tank interphone system.</p> <p>BOARD, terminal: 8 solder term, staggered; phenolic base; 1$\frac{1}{32}$" x 1$\frac{15}{32}$" x 1$\frac{1}{16}$" o/a; WECO #700A.</p> <p>CONDUIT, flexible metallic: $\frac{5}{8}$" OD; steel, galv; plain ends; $\frac{5}{8}$" OD std flexible sq lock tubing; Penna Flexible Hose Co.</p> <p>COVER: sw; neoprene; $\frac{1}{2}$" diam x $\frac{1}{2}$" h; C-H #8916K615.</p> <p>COVER: sw; neoprene; 2$\frac{1}{8}$" lg x 1" wd x $\frac{1}{2}$" h o/a; C-H #8916-K616.</p> <p>FITTING, conduit: armored cable box connector; steel, galv; 1$\frac{3}{2}$" ID x 1$\frac{1}{4}$" OD; squeeze type; Appleton #61007, w/bond-nut #BL-50.</p> <p>GASKET: synthetic rubber; $\frac{1}{2}$" flange, 3$\frac{1}{2}$" wd x 4$\frac{3}{32}$" lg x $\frac{1}{16}$" thk; Auto Radio #SC-10-58A.</p> <p>GASKET: synthetic rubber; $\frac{1}{2}$" flange, 11$\frac{1}{16}$" lg x 7$\frac{1}{16}$" wd x $\frac{1}{8}$" thk; Auto Radio dwg #SC-10-57.</p> <p>HANDSET H-22()/U; telephone; impedance approx 3500 ohms; black phenolic; approx 9" lg x 2$\frac{3}{32}$" wd x 3$\frac{1}{16}$" d o/a; w/Cord CD-494 and Plugs PL-69 and PL-55; Sig C dwg #SC-D-14651.</p> <p>INSULATOR, bushing: round; natural plastic; $\frac{3}{16}$" lg x $\frac{1}{2}$" diam; JAN type P-79.</p>	<p>-----</p> <p>Terminal Board on External Interphone Box BC-1362 for connecting cordage leading from Switchbox BC-1361.</p> <p>Flexible conduit for protection of Cordage CO-213.</p> <p>Cover for waterproofing signal switch on Switchbox BC-1361.</p> <p>Cover for waterproofing ON-OFF switch on Switchbox BC-1361.</p> <p>Connect Cordage CO-213</p> <p>-----</p> <p>Gasket for waterproofing cover of Switchbox BC-1361.</p> <p>Gasket for waterproofing between cover and box of External Interphone Box BC-1362.</p> <p>Handset used to communicate from External Interphone Box BC-1362 on outside of the vehicle to Switchbox BC-1361 inside the vehicle.</p> <p>Part of Switchbox BC-1361</p> <p>-----</p>	<p>2C1963-298</p> <p>2Z79408.4</p> <p>6Z2252-2</p> <p>3Z9849.39-1/BI</p> <p>2Z760-8</p> <p>6Z3147</p> <p>2Z4867.428</p> <p>2C1963-298/GI</p> <p>2B620-22</p> <p>3G1837-6.14</p>

J-1	INSULATOR, washer: round; natural plastic; $\frac{3}{32}$ " lg; JAN type P-79.	Part of Switchbox BC-1361	3G1838-8-27
J-2	JACK JK-33: telephone; for 3 cond 0.205" diam plug; $1\frac{1}{4}$ " lg x $\frac{7}{8}$ " diam o/a; Sig C dwg #SC-D-2332 and #SC-D-2339.	Telephone jack accommodates Plug PL-68.	2Z5533
J-1	JACK JK-34: headset; 2 cond; $1\frac{1}{4}$ " x $1\frac{1}{4}$ " x $\frac{3}{4}$ " overall diam.	Accommodates Plug PL-55	2Z5818
J-1	KNOB: round, knurled; aluminum, olive drab; for $\frac{1}{4}$ " diam shaft; single #10-32 set-screw; marked INCREASE OUTPUT w/curved arrow; $1\frac{1}{4}$ " diam x $\frac{1}{2}$ " thk, $\frac{3}{8}$ " d shaft hole; Auto Radio #SC-20-11A.	Knob controls volume increases or decreases on External Interphone Box BC-1362.	6Z6812-3
J-1	LAMP LM-44: incandescent; 12-16 v, 3 CP; bulb G-6 clear; candelabra bayonet base.	Indicates, when on, that equipment is in operation.	2Z6125-21
J-1	LENS, indicator light: red; thd shank; 1" diam torpedo shaped glass; bezel 1" diam x $\frac{1}{16}$ " lg; Dialco #9622UT.	Protects LM-44	2Z6125-22
J-1	LIGHT, indicator: double cont bayonet base; brass; nickel pl; 12-16 v; $1\frac{1}{4}$ " diam x $2\frac{3}{4}$ " lg o/a; Dialco #CS-9622-S.	Binding post used for connection to field Telephone EE-8.	3Z316
J-1	POST, binding: Sig C Binding Post TM-216; screw cap; slotted knob; $\frac{1}{2}$ " diam x $1\frac{1}{2}$ " lg o/a, mtg shoulder $\frac{1}{4}$ " lg x $\frac{3}{32}$ " diam, mtg stem #10-32 x $\frac{3}{8}$ " lg; fixed solder term on end.	Part of audio voltage divider R-1 and R-2	3RC21BF202J
R-2	RESISTOR, fixed: composition; 2000 ohms $\pm 5\%$; $\frac{1}{4}$ w; max body dimen 0.655" lg x 0.249" diam; JAN type RC21BF-202J.	Volume control, part of audio voltage divider consisting of R-1 and R-2.	2Z7270-28
R-1	RESISTOR, variable: carbon; 0.05 meg; $\frac{1}{4}$ w; 3 term; $1\frac{1}{16}$ " diam, x $\frac{1}{2}$ " lg, shaft $\frac{9}{16}$ ".	Spring provides tight closing of cover on External Interphone Box BC-1362.	2Z8878-41
R-1	SPRING: compression; 0.043" diam steel wire; catch spring in box cover; 12 turns, $1\frac{3}{32}$ " ID x $1\frac{1}{16}$ " lg.	Extension spring retracts handset cord.	2Z8878-40
R-1	SPRING: extension; 0.056" diam steel wire; $1\frac{3}{8}$ " lg x 3" wd (retracts handset cord).		

