

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

TM 11-5805-201-12

DEPARTMENT OF THE AIR FORCE TECHNICAL
ORDER

TO 31W1-2PT-291

ORGANIZATIONAL MAINTENANCE
MANUAL

**TELEPHONE SET
TA-312/PT**

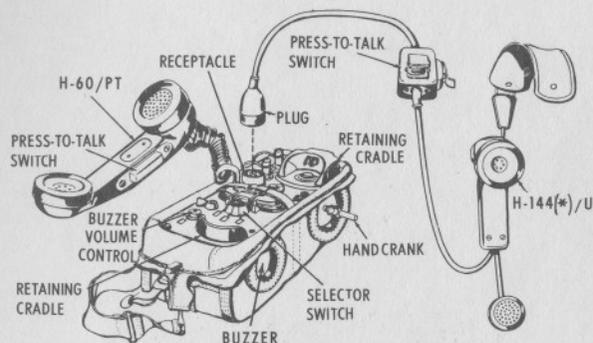


DEPARTMENTS OF THE ARMY AND
THE AIR FORCE

JUNE 1967

TAGO 5242C

CONDENSED OPERATING INSTRUCTIONS



USING HANDSET H-60/PT (EXT-INT) SWITCH AT INT

PLACING CALL (LB OPERATION)

1. WITH H-60/PT IN CRADLE, TURN HANDCRANK.
2. REMOVE H-60/PT LISTEN FOR CALLED PARTY.

PLACING CALL (CB OR CBS OPERATION)

3. REMOVE H-60/PT AND LISTEN FOR OPERATOR.

CONVERSING (LB AND CBS OPERATION)

4. PUSH PRESS-TO-TALK SWITCH TO TALK; RELEASE TO LISTEN.

CONVERSING (CB OPERATION)

5. DO NOT OPERATE PRESS-TO-TALK SWITCH.

TM 5805-201-12-1 ①

(CONTINUED ON INSIDE OF BACK COVER)

TM 11-5805-201-12
*C1

CHANGE } HEADQUARTERS
No. 1 } DEPARTMENT OF THE ARMY
WASHINGTON, D. C., 5 August 1969

Operator and Organizational Maintenance Manual Including Repair Parts and Special Tool Lists TELEPHONE SET TA-312/PT

TM 11-5805-201-12, 22 June 1967, is changed as follows:

1. The title of the manual is changed as shown above.
2. Remove and insert pages as indicated in the page list below:

Remove—	Insert—
1-1 and 1-2	1-1 through 1-2
A-1 and A-2	A-1
B-1 and B-2	B-1 and B-2
	D-1 through D-?

3. File this change sheet in the front of the manual.

*This change supersedes TM 11-5805-201-20P, 21 June 1963.

C1, TM 11-5805-201-12

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 Adjutant General.

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CofSptS (1)	USAESC (70)
USAARENBD (2)	Armies (2) except
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USAAVNS (2)	Army Dep (5)
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USAOEC (2)	LBAD (14)
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Instl (2) except	USACRREL (2)
Fort Gordon (10)	WHCA (2)
Fort Huachuca	MAAG (2)
(10)	USARMIS (2)
WSMR (5)	USARMA (2)
Fort Carson (25)	USMACV (50)
Fort Knox (12)	YPG (5)
Fort Lee (5)	AAF (5)
JCA, FT Ritchie	Edgewood Arsenal
(5)	(5)
Fort Devens (5)	APG (5)

NG: State AG (3) units—same as Active Army except allowance of one (1) copy each unit.

USAR: None.

For explanation of abbreviations used, see AR 320-50.

* TM 11-5805-201-12/TO 31W1-2PT-291

TECHNICAL MANUAL DEPARTMENTS OF THE ARMY
No. 11-5805-201-12 }
TECHNICAL ORDER AND THE AIR FORCE
No. 31W1-2PT-291 WASHINGTON, D.C., 22 June 1967

TELEPHONE SET TA-312/PT

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*This manual supersedes so much of TM 11-2155, 27 December 1957, including C 1, 3 June 1960; C 3, 13 March 1963; and C 4, 18 November 1963, as pertains to operation and organizational maintenance, (TO 31W1-2PT-291, 27 December 1957, including C 1, 3 June 1960).

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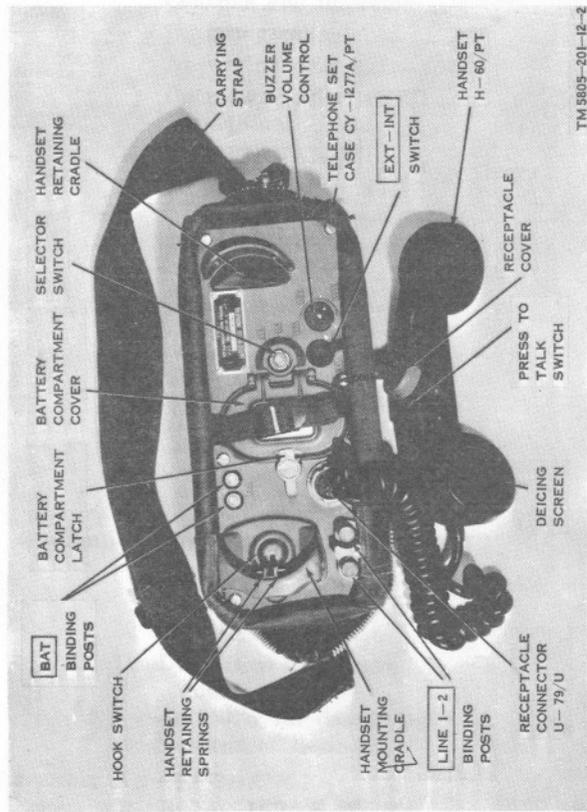


Figure 1-1. Telephone Set TA-312/PT case open, and Handset H-60/PT, removed from cradle.

CHAPTER 1 INTRODUCTION

Section I. GENERAL

1-1. Scope

a. This manual describes Telephone Set TA-312/PT and covers its installation, operation, and organizational maintenance. It includes operation under usual and unusual conditions, cleaning and inspection of the equipment, and replacement of authorized parts for organizational maintenance personnel.

b. Official nomenclature followed by (*) is used to indicate all models of the equipment item covered in this manual. Therefore, Case, Telephone Set CY-1277(*)/PT represents Cases, Telephone Set CY-1277A/PT and CY-1277B/PT. Handset-Headset H-144(*)/U represents Handset-Headsets H-144/U, H-144A/U, H-144B/U, and H-144C/U.

1-2. Index of Publications

a. DA Pam 310-4. Refer to the latest issue of DA Pam 310-4 to determine whether there are new editions, changes, or additional publications pertaining to the equipment.

b. DA Pam 310-7. Refer to DA Pam 310-7 to determine whether there are modification work orders (MWO's) pertaining to the equipment.

1-3. Forms and Records

a. *Reports of Maintenance and Unsatisfactory Equipment.* Use equipment forms and records in accordance with instructions in TM 38-750.

b. *Report of Packaging and Handling Deficiencies.* Fill out and forward DD Form 6 (Report of Packaging and Handling Deficiencies) as prescribed in AR 700-58 (Army), NAVSUP Publication 378 (Navy), AFR 71-4 (Air Force), and MCO P4610-5 (Marine Corps).

c. *Discrepancy in Shipment Report (DISREP) (SF361).* Fill out and forward Discrepancy in Shipment Report (DISREP) (SF361) as prescribed in AR 55-38 (Army), NAVSUP Pub 459 (Navy), AFM 75-34 (Air Force), and MCO P4610.19 (Marine Corps).

d. *Reporting of Equipment Manual Improvements.* The reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded direct to Commanding General, U.S. Army Electronics Command, ATTN: AMSEL-ME-NMP-AD, Fort Monmouth, N.J. 07703.

Section II. DESCRIPTION AND DATA

1-4. Purpose and Use

The TA-312/PT is a two-wire, battery-operated field telephone. It may be used in a simple point-to-point voice frequency (vf) wire communication link or in any two-wire ringdown subscriber position of a telephone communication system.

1-5. Technical Characteristics

- a. Voltage requirements ----- 3 volts dc.
- b. Frequency range ----- 300 to 3,200 cps.
- c. Signaling:
 - Frequency ----- 20 cps.
 - Voltage ----- 90 to 100 volts.
- d. *Station-to-station distance.*

*Wire description and type or gage	Maximum distance (miles)	
	Wet	Dry
Wire, Cable, Telephone WD-1/TT (field wire).	14	22
Wire, Cable, Telephone WD-14/TT (field wire).	Loaded 22	Not loaded 14
Cable Assembly, Telephone CX-1065/G (spiral-four).	50	29
Cable Assembly, Telephone CX-162/G (five-pair cable).		23
Lead-covered cable, 19-gage -----		30
Lead-covered cable, 22-gage -----		20
Lead-covered cable, 24-gage -----		15
Open-wire lines, W-2 #14 AWG copper.		230
Open-wire lines, W-74 #12 AWG copper.		520

1-6. Components

Refer to the basic issue items list in appendix B.

1-7. Description

(figs. 1-1 and 1-2)

All connections and operating controls of the TA-312/PT are located on the panel assembly and housing. The handcrank (part of Generator, Ringing, Hand G-42A/PT) for generating the ringdown signal is located on the side of the housing. Connector, Receptacle U-79/U allows connection of Handset-Headset H-144(*)/U for use in place of the H-60/PT.

1-8. Additional Equipment Required

Two Batteries BA-30 or an external 3-volt direct current (dc) source are required. The external source must be connected to the BAT binding posts.

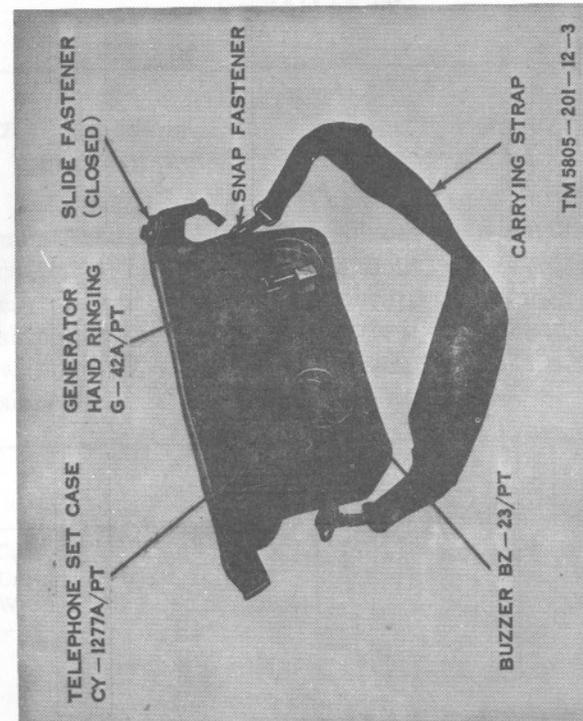


Figure 1-8. Telephone Set TA-312/PT, case closed.

1-6. Components

Refer to the basic issue items list in appendix B.

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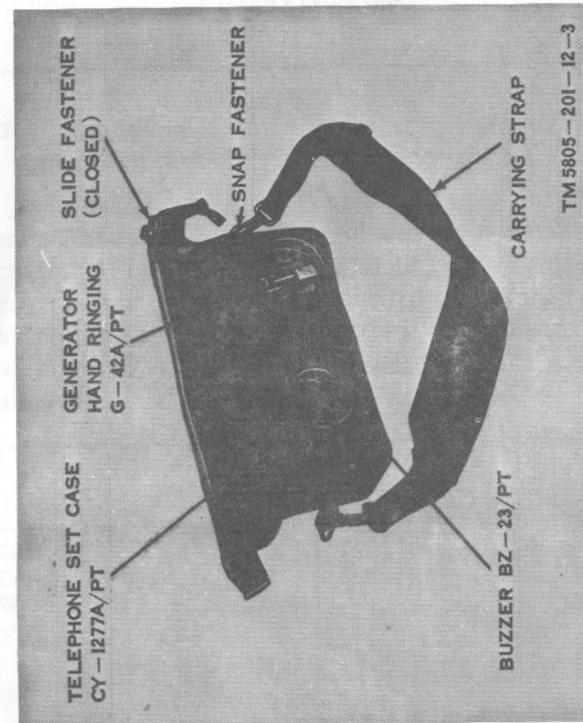


Figure 1-8. Telephone Set TA-312/PT, case closed.

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CHAPTER 2 INSTALLATION

2-1. Unpacking (fig. 2-1)

a. Packaging Data. When packaged for shipment, the TA-312/PT is placed in a cardboard carton. For domestic shipment, six cardboard cartons are placed in a cardboard box. For export shipment, 15 cardboard cartons are packed in a waterproof barrier in a wooden box. The dimensions, volume, and weight are as follows:

Package	Approximate dimensions (in.)			Volume (cu ft)	Weight (lb)
	Length	Height	Width		
Carton -----	15	7 $\frac{3}{4}$	5	.34	9 $\frac{3}{4}$
Cardboard box -----	31	8 $\frac{1}{2}$	15 $\frac{3}{4}$	2.4	62
Wooden box -----	28 $\frac{1}{2}$	17	24 $\frac{1}{2}$	6.86	194

b. Removing Contents.

(1) Cardboard box.

(a) Cut or tear the sealing tape, and fold back the top flaps of the cardboard box.

(b) Remove the cardboard cartons.

(2) *Wooden box.*

- (a) Cut and fold back the metal straps.

Caution: Do not attempt to pry off the wooden cover. Prying may damage the equipment in the wooden box.

- (b) Remove the nails from the cover with a nailpuller, and remove the cover.
- (c) Cut or tear open the waterproof barrier.
- (d) Remove the cardboard cartons.

(3) *Cardboard cartons.*

- (a) Cut or tear the sealing tape, and fold back the top flaps of the cardboard carton.
- (b) Open the slide fastener, and remove the corrugated paper.

2-2. Checking

a. Inspect the equipment for damage. If a TA-312/PT has been damaged, fill out and forward DD Form 6 (para 1-3b).

b. Check to see that the equipment is complete as listed on the packing slip. If a packing slip is not available, check the equipment against the basic issue items list (appx B). Report all discrepancies in accordance with TM 38-750.

c. If the equipment has been reconditioned, ascertain if it has been modified. If the equipment has been modified, the modification work order (MWO) number will appear on the front

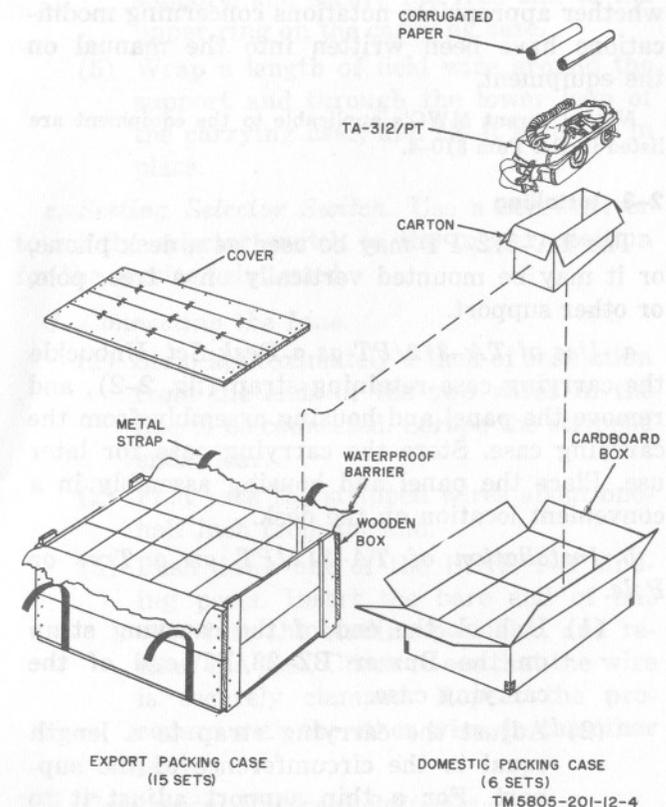


Figure 2-1. Telephone Set TA-312/PT, packaging diagram.

panel near the nomenclature plate. Check to see whether appropriate notations concerning modifications have been written into the manual on the equipment.

Note. Current MWO's applicable to the equipment are listed in DA Pam 310-4.

2-3. Installing

The TA-312/PT may be used as a desk phone, or it may be mounted vertically on a tree, pole, or other support.

a. Use of TA-312/PT as a Desk Set. Unbuckle the carrying case retaining strap (fig. 2-2), and remove the panel and housing assembly from the carrying case. Store the carrying case for later use. Place the panel and housing assembly in a convenient location on the desk.

b. Installation of TA-312/PT on a Tree or Pole.

- (1) Unhook the end of the carrying strap on the Buzzer BZ-23/PT end of the carrying case.
- (2) Adjust the carrying strap to a length equal to the circumference of the support. For a thin support adjust it to twice the circumference to wrap it around twice.
- (3) Place the TA-312/PT against the support with the LINE 1-2 binding posts (fig. 1-1) at the top.

- (4) Wrap the carrying strap around the support, and secure the free end to the upper ring on the carrying case.
- (5) Wrap a length of field wire around the support and through the lower loop of the carrying case, and tie it securely in place.

c. Setting Selector Switch. Use a screwdriver to set the selector switch to the proper position for the service being used.

d. Connecting the Line.

- (1) Strip approximately 1 inch of insulation from the ends of the two wires in the line to be connected. Scrape the stripped ends clear.
- (2) Fold back the stripped wires about one-half inch from the end.
- (3) Push down one of the LINE 1-2 binding posts. Insert the bare end of one wire into the binding post slot, and release the post. Check to see that the wire is securely clamped. Repeat the procedure with the other wire, in the other post.

e. Connecting External Batteries.

- (1) Remove the BA-30's from the battery compartment.
- (2) Connect a 3-volt battery source to the BAT binding posts on the panel.

f. Installing Batteries BA-30 (fig. 2-2).

- (1) Remove the H-60/PT from the retaining cradle, and open the carrying case retaining strap.
- (2) Rotate the battery compartment cover latch clockwise until the cover is released. Lift the cover to expose the battery compartment.
- (3) Insert two Batteries BA-30 in the battery compartment, one with the positive terminal up, and the other with the positive terminal down.
- (4) Close the cover, and turn the cover latch counterclockwise to lock the cover closed.
- (5) Refasten the carrying case retaining strap over the battery compartment, if the TA-312/PT is to be kept in the carrying case.

g. Installing and Removing Deicing Screen (fig. 1-1).

- (1) In cold climates, install the deicing screen to prevent the operator's breath from freezing on the transmitter.
 - (a) Place the screen in position over the front of the transmitter.
 - (b) Use your finger or the blade of a screwdriver to press evenly around the rim of the screen and seat it firmly in the slot around the face of the transmitter cap.

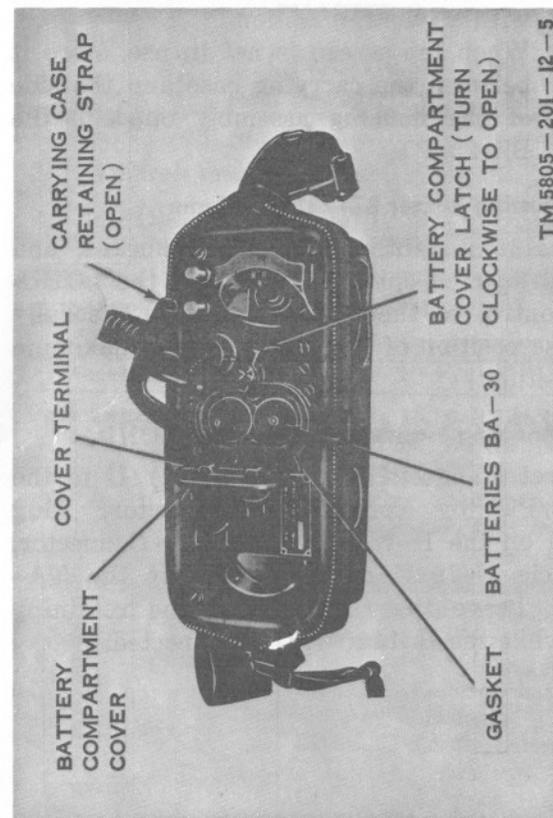


Figure 2-2. Telephone Set TA-312/PT, batteries installed.

- (2) Remove the deicing screen by inserting the blade of a screwdriver in the slot in the transmitter cap. Pry up the screen with a twisting motion.
- (3) When the screen is not in use, store it between the carrying case and the side of the housing assembly opposite the BZ-23/PT.

2-4. Adjusting Buzzer BZ-23/PT Volume

Contact a distant party or switchboard, and ask them to ring on the line. Adjust the LOUD-LOW control to the desired volume. The fully clockwise position of the control is the maximum loud position.

2-5. Connecting Handset-Headset H-144(*)/U

Connect Handset-Headset H-144(*)/U to the TA-312/PT by connecting Connector, Plug U-77/U on the H-144(*)/U cord to Connector, Receptacle U-79/U on the panel of the TA-312/PT. Leave the H-60/PT in the retaining cradle while the H-144(*)/U is connected.

CHAPTER 3 OPERATION

3-1. Controls and Indicators

(fig. 3-1 and 1-2)

The following chart describes the controls and indicators of Telephone Set TA-312/PT and the function of each.

Control or indicator	Function								
Hook switch -----	Connects H-60/PT to line during operation. Switch is operated when H-60/PT is removed from retaining cradle and is open when H-60/PT is in retaining cradle.								
Selector switch -----	Connects internal circuits of TA-312/PT for particular type of service to be used: <table border="0" style="margin-left: 20px;"> <tr> <td style="text-align: right;"><i>Position</i></td> <td style="text-align: right;"><i>Function</i></td> </tr> <tr> <td>CB -----</td> <td>Common battery operation.</td> </tr> <tr> <td>LB -----</td> <td>Local battery operation.</td> </tr> <tr> <td>CBS ---</td> <td>Common battery signaling (local battery for voice).</td> </tr> </table>	<i>Position</i>	<i>Function</i>	CB -----	Common battery operation.	LB -----	Local battery operation.	CBS ---	Common battery signaling (local battery for voice).
<i>Position</i>	<i>Function</i>								
CB -----	Common battery operation.								
LB -----	Local battery operation.								
CBS ---	Common battery signaling (local battery for voice).								
EXT-INT switch -----	Permits selection of H-144(*)/U in place of H-60/PT:								

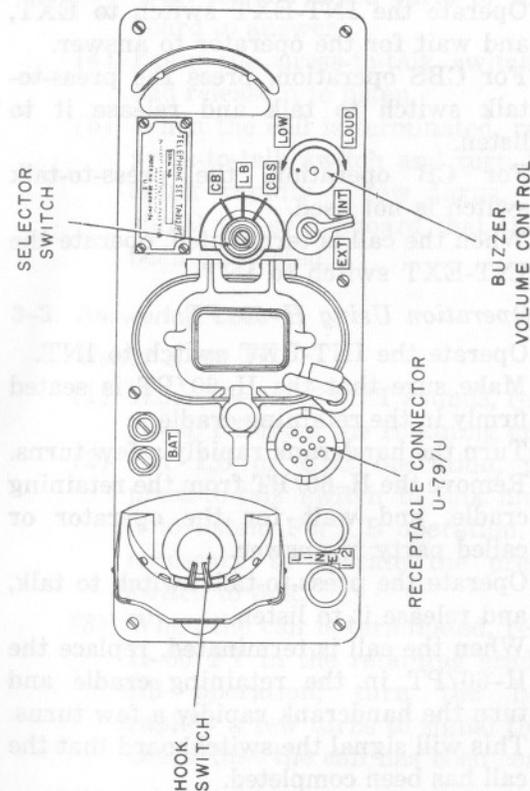
Control or indicator	Function
	<i>Position</i> <i>Function</i>
EXT ----	Selects H-144(*)/U (H-60/PT inoperative).
INT ----	Selects H-60/PT (H-144(*)/U inoperative).
LOW-LOUD control	Adjusts BZ-23/PT volume.
Handcrank (part of G-42A/PT).	When turned, operates G-42A/PT for signaling in LB operation.
BZ-23/PT -----	Provides audible indication of incoming call or disconnect.

3-2. Initiating Calls

Caution: Always perform the appropriate disconnect procedure when the call is terminated. If the proper procedure is not followed, the buzzer may not operate on the next incoming call.

a. CB and CBS Operation Using H-60/PT.

- (1) Operate the INT-EXT switch to INT.
- (2) Remove the H-60/PT from its retaining cradle, and wait for the switchboard operator to answer.
- (3) For CBS operation, operate the press-to-talk switch (fig. 1-1) to talk and release it when listening.
- (4) For CB operation, do not use the press-to-talk switch.
- (5) When the call is terminated, replace the H-60/PT in its retaining cradle.



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Figure 3-1. Telephone Set TA-312/PT, controls and indicators.

b. CB and CBS Operation Using H-144()/U.*

- (1) Make sure that the H-60/PT is seated firmly in the retaining cradle.
- (2) Operate the INT-EXT switch to EXT, and wait for the operator to answer.
- (3) For CBS operation, press the press-to-talk switch to talk and release it to listen.
- (4) For CB operation, the press-to-talk switch is not used.
- (5) When the call is terminated, operate the INT-EXT switch to INT.

c. LB Operation Using H-60/PT.

- (1) Operate the INT-EXT switch to INT.
- (2) Make sure that the H-60/PT is seated firmly in the retaining cradle.
- (3) Turn the handcrank rapidly a few turns.
- (4) Remove the H-60/PT from the retaining cradle, and wait for the operator or called party to answer.
- (5) Operate the press-to-talk switch to talk, and release it to listen.
- (6) When the call is terminated, replace the H-60/PT in the retaining cradle and turn the handcrank rapidly a few turns. This will signal the switchboard that the call has been completed.

d. LB Operation Using H-144()/U.*

- (1) Make sure that the H-60/PT is firmly seated in the retaining cradle.

- (2) Operate the INT-EXT switch to EXT, and turn the handcrank rapidly for a few turns.
- (3) Wait for the called party or the switchboard to answer.
- (4) Press the press-to-talk switch to talk, and release it to listen.
- (5) When the call is terminated, release the press-to-talk switch and turn the handcrank rapidly a few turns. This will signal the switchboard that the call has been completed.

3-3. Answering Calls

a. Using H-60/PT.

- (1) When the BZ-23/PT sounds, remove the H-60/PT from the retaining cradle.
- (2) For LB or CBS operation, press the press-to-talk switch to talk and release it to listen. For CB operation, it is not necessary to operate the press-to-talk switch to talk.
- (3) When the call is terminated, replace the H-60/PT in the retaining cradle. After LB operation, turn the handcrank rapidly a few turns to signal the switchboard that the call has been completed.

b. Using H-144()/U.*

- (1) Make sure that the H-60/PT is seated firmly in the retaining cradle.

- (2) When the BZ-23/PT sounds, operate the INT-EXT switch to EXT.
- (3) For LB or CBS operation, press the press-to-talk switch to answer, release it to listen. For CB operation it is not necessary to operate the press-to-talk switch to answer.
- (4) When the call is terminated, release the press-to-talk switch. After CB or CBS operation, operate the INT-EXT switch to INT. After LB operation, turn the handcrank rapidly a few turns to signal the switchboard that the call is completed.

3-4. Operation Under Unusual Conditions

a. Cold Climates. Extreme cold reduces battery voltage, decreases the efficiency of the transmitter and receiver, and makes the H-60/PT and H-144(*)/U cords and other rubber parts stiff and brittle.

- (1) Protect the TA-312/PT as much as possible. If the TA-312/PT must be kept outdoors in the extreme cold, install Batteries BA-2030 in place of Batteries BA-30, or keep an extra set of Batteries BA-30 in your pocket to keep them warm. The extra batteries may be used to replace batteries affected by the cold.
- (2) Make sure the deicing screen is installed.

If no deicing screen is available, carefully remove ice or moisture from the transmitter and cover it with a dry, clean cloth.

- (3) Handle the TA-312/PT carefully to avoid breaking or cracking the rubber parts.

b. Hot, Dry Climates. Hot, dry climates expose the TA-312/PT to damage from dirt, dust, and the effects of strong sunlight.

- (1) Protect the TA-312/PT from sand, dust, and strong sunlight. Clean and dust the equipment frequently.
- (2) When the TA-312/PT is not in use, close the slide fastener to keep out dust and other dirt.

c. Warm, Damp Climates. Warm, damp climates expose the TA-312/PT to damage from moisture and fungus. Wipe all fungus and moisture from the exterior with a clean, lint-free cloth.

d. Noisy Areas.

- (1) Speak directly into the transmitter in a loud, clear voice.
- (2) For LB or CBS operation, release the press-to-talk switch when listening. For CB operation, cover the transmitter with one hand while listening.
- (3) Shield the transmitter from the noise source with the hand or body while talking.

e. Long Telephone Loops. The LB and CBS circuits provide better transmission than the CB circuit over long distances. When the TA-312/PT is used on a long CB circuit and transmission is noticeably affected, operate the selector switch to the CBS position and install batteries.

f. Emergency Sound Power Operation. If no battery supply is available, it is possible to transmit for approximately 4 miles by using the receiver element as a sound-powered transmitter element.

- (1) Signal by turning the handcrank rapidly a few turns.
- (2) Speak directly into the receiver element, then listen while the distant party is transmitting.

CHAPTER 4 MAINTENANCE

4-1. Scope of Maintenance

a. General.

- (1) Operator preventive maintenance is the systematic care, servicing, and inspection of the equipment to prevent the occurrence of trouble, reduce downtime, and maintain the equipment in serviceable condition. Operator preventive maintenance is performed daily; specific procedures are provided in paragraph 4-2.
- (2) Organizational preventive maintenance is performed quarterly; specific procedures are provided in paragraph 4-3.
- (3) The preventive maintenance checks and services described in paragraphs 4-2 and 4-3 outline inspections to be made at specific intervals and are designed to help maintain equipment in serviceable condition. They indicate what items should be checked and how they should be checked. Also included are references to test, illustrations, and

other manuals that contain supplementary information.

- (4) Organizational repair procedures for replacement of parts authorized at organizational maintenance are provided in paragraph 4-4.

b. Preventive Maintenance Checks and Services Periods. Preventive maintenance checks and services for the TA-312/PT are required daily (para 4-2) and quarterly (para 4-3). These checks and services must be performed during the specified periods. In addition, the daily checks and services must be performed under the following special conditions:

- (1) When the equipment is initially installed.
- (2) When the equipment is reinstalled after removal for any reason.
- (3) At least once each week if the equipment is maintained in a standby condition.

Warning: Prolonged breathing of cleaning compound (FSN 7930-395-9542) fumes is dangerous; make certain that adequate ventilation is provided. Cleaning compound is flammable; do not use near a flame. Avoid contact with the skin; wash off any that spills on your hands.

- (1) Remove dust or dirt with a clean soft cloth.
- (2) Remove grease, fungus, and ground-in dirt from the case, cord, H-60/PT housings, connectors, and battery compart-

ment with a clean cloth dampened (not wet) with cleaning compound.

- (3) Remove dust or loose dirt from terminals, binding posts, control knobs, and the H-60/PT transmitter and receiver elements with a brush.

4-2. Operator's Daily Preventive Maintenance Checks and Services

Sequence No.	Item to be inspected	Procedure	References
1	Completeness -----	Check to see that equipment is complete and intact.	Appx B
2	Installation -----	Check to see that TA-312/PT is properly installed.	None.
3	Cleanliness -----	Check to see that case, panel, connector contacts, controls, cord, and H-60/PT are clean and free from fungus or corrosion.	Para 4-1c.
4	Battery compartment ---	Inspect for cleanliness and foreign matter. Check condition of batteries.	None.
5	H-60/PT seating -----	Make sure that H-60/PT seats firmly in retaining cradle and that retaining cradle springs maintain proper tension.	None.
6	Connections -----	Inspect binding posts to insure that connections are tight. Check cord on H-60/PT for cracks or breaks.	None.
7	Knobs and switches -----	Check to see that all control knobs and switches operate properly without binding.	None.
8	Operational check -----	Initiate a call, and check the operation of the TA-312/PT.	Para 3-2.

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4-3. Organizational Quarterly Preventive Maintenance Checks and Services

Sequence No.	Item to be inspected	Procedure	References
1	Completeness -----	Check to see that equipment is complete and has a complete complement of running spare parts.	Appx B.
2	Publications -----	Check to see that manuals are complete and serviceable and that all changes publications are available.	Appx A, DA Pam 310-4.
3	Modification work orders	Make sure that all applicable MWO's have been made or scheduled and that MWO numbers of completed MWO's are marked on equipment.	DA Pam 310-4.

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4-4

AGO 5242C

AGO 5242C

4-5

Sequence No.	Item to be inspected	Procedure	References
4	Gaskets -----	Check gaskets and moisture-blocking diaphragms on receiver and transmitter for cuts, tears, or breaks.	None.
5	Mounting -----	Check to see that mounting hardware is complete and in serviceable condition.	None.
6	Connections -----	Check to see that binding posts have enough tension to hold wires. Check wires for fraying, breaks, or cracked insulation.	None.

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4-4. Organizational Repair

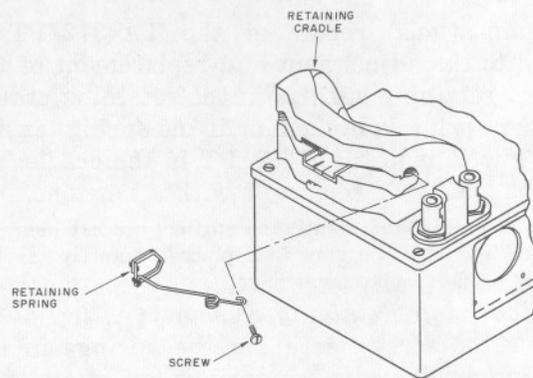
Organizational repair of the TA-312/PT is limited to the adjustment and replacement of the handset retaining springs in the retaining cradle. If either spring is broken, or if the spring tension is too low to hold the H-60/PT in the cradle, adjust the spring or replace it with a new one.

Note. The left- and right-hand springs are not identical or interchangeable. Be sure to replace a defective spring with the proper replacement part.

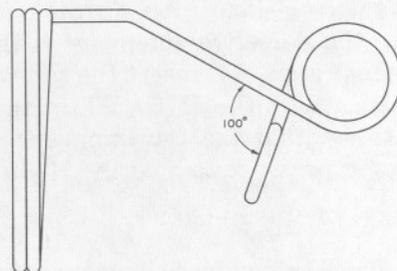
a. *Removing Retaining Springs* (A, fig. 4-1). Remove the screws securing the springs in the retaining cradle. Lift the springs out of the slot.

b. *Adjusting Retaining Springs* (B, fig. 4-1). Adjust the replacement spring to approximately a 100 degree angle between the two arms of the spring. Use a pair of long-nosed pliers or adjust the angle by hand.

c. *Replacing Retaining Springs* (A, fig. 4-1). Replace the defective spring with the proper replacement (appx A), insert the screw, and tighten it in place. Seat the H-60/PT in the cradle, and check to see that the retaining spring maintains the proper pressure to hold the H-60/PT in place.



A. REMOVAL.



B. ADJUSTMENT ANGLE.

TM5805-201-12-7

Figure 4-1. Removal and adjustment of handset retaining spring.

CHAPTER 5

SHIPMENT AND LIMITED STORAGE AND
DEMOLITION TO PREVENT ENEMY USE

Section I. SHIPMENT AND LIMITED STORAGE

5-1. Disassembly

- a. Remove the line wires from the LINE 1-2 binding posts.
- b. Open the battery compartment, and remove the batteries.
- c. Clean all moisture, fungus, or corrosion from the battery compartment.
- d. Clean and dry the battery compartment gasket with a clean cloth, and secure the battery compartment cover.
- e. Remove all dirt and moisture from the TA-312/PT and its carrying case.
- f. Install the deicing screen in the transmitter element of the H-60/PT.

5-2. Repackaging for Shipment or Limited Storage

Repackaging of the TA-312/PT should conform as closely as possible to the original packaging (fig. 2-1). Follow the general procedures outlined below:

a. Mount the H-60/PT in the retaining cradle. Place enough cushioning material around the H-60/PT to prevent it from shifting in transit.

b. Fold the handcrank into the wheel on the hand generator.

c. Close the carrying case cover, and close the slide fastener.

d. Repack the TA-312/PT in the carton; use the original carton or a suitable substitute.

Section II. DEMOLITION TO PREVENT ENEMY USE

5-3. Authority for Demolition

Demolition of the equipment will be accomplished only upon the order of the commander. The destruction procedures in paragraph 5-4 will be used to prevent further use of the equipment.

5-4. Methods of Destruction

Use any or all of the following methods to destroy the equipment.

a. *Smash.* Smash the H-60/PT, panel and housing assembly, switches, BZ-23/PT diaphragm, and battery compartment.

b. *Cut.* Cut the H-60/PT cord, wiring, gaskets, and carrying case.

Warning: Be extremely careful when handling explosives or incendiary devices. Use these items only when the need is urgent.

c. *Burn.* Burn the H-60/PT cord, wiring, generator, carrying case, and manuals.

d. *Bend.* Bend the panel and housing assembly, generator handcrank, binding posts, and controls.

e. *Explode.* Explode if necessary.

f. *Dispose.* Bury or scatter the destroyed parts in slit trenches or foxholes, or throw them into streams or lakes.

APPENDIX A
REFERENCES

-
- DA Pam 310-4 Index of Technical Manuals, Tech-Bulletins, Supply Manuals, (types 7, 8, and 9), Supply Bulletins, and Lubrication Orders.
 - DA Pam 310-7 Modification Work Orders.
 - TM 11-5965-206-15P Operator, Organizational, Field and Depot Maintenance Repair Parts and Special Tool Lists: Handset-Microphone H-91/U, H-91A/U; Handset-Headset H-144/U, H-144A/U, H-144B/U, H-144C/U, and Headset-Microphone H-210/G:
 - TM 11-5965-224-15P Operator, Organizational, Field and Depot Maintenance Repair Parts and Special Tools Lists and Maintenance Allocation Chart: Handsets H-60/PT and H-165/U.
 - TM 38-750 Army Equipment Record Procedures.

**APPENDIX B
BASIC ISSUE ITEMS**

Section I. INTRODUCTION

B-1. General

This appendix lists items for Telephone Set TA-312/PT, the component items comprising it, and the items which accompany it, or are required for installation, operation, or operator's maintenance.

B-2. Explanation of Columns

An explanation of the columns in section II is given below.

a. Source, Maintenance, and Recoverability Codes, Column 1. Not used.

b. Federal Stock Number, Column 2. The Federal stock number for the item is indicated in this column.

c. Description, Column 3. The Federal item name, a five-digit manufacturer's code, and a part number, are included in this column.

d. Unit of Issue, Column 4. The unit used as a basis of issue e.g. ea, pr, ft, yd, etc) is noted in this column.

e. Quantity Incorporated in Unit Pack, Column 5. Not used.

f. Quantity Incorporated in Unit, Column 6. The total quantity of the item used in the equipment is given in this column.

g. Quantity Authorized, Column 7. The total quantity of an item required to be on hand and necessary for the operation and maintenance of the equipment is given in this column.

h. Illustration, Column 8.
 (1) Figure number, column 8a. The number of the illustration in which the item is shown is indicated in this column.
 (2) Item or symbol number, column 8b. Not used.

SECTION II, BASIC ISSUE ITEMS LIST

(1) SOURCE CD	(2) MAINT. CD	(2) FEDERAL STOCK NUMBER	(3) MODEL	(3) DESCRIPTION	(4) UNIT OF ISSUE	(5) QTY INC IN UNIT PACK	(6) QTY INC IN UNIT	(7) QTY AUTH	(8) ILLUSTRATIONS	
									(8a) FIGURE NUMBER	(8b) ITEM OR SYMBOL NUMBER
		5805-543-0012		TELEPHONE SET TA-312/PT-- CANVAS OUTER ENCLOSURE, CB XMTX SUPPLY SOURCE, BUZZER GEN DEVICE CONTAINED IN BASE, SUPPLY SOURCE, BUZZER SIGNALLING DEVICE CONTAINED IN BASE, HAND GEN MAGNETIC TYPE WITHOUT DIAL, PUSH TO TALK SW INCL, VOL CONTROL OF INCOMING SIGNALING, COAX FOR EXT HANDSET (THIS ITEM IS NONEXPENDABLE)	EA			1	1	
		5805-543-0065		TECHNICAL MANUAL TM 11-5805-201-12 REQUISITION THROUGH PINPOINT ACCOUNT NUMBER IF ASSIGNED, OTHERWISE THROUGH NEAREST ADJUTANT GENERAL FACILITY. NOTE-A QUANTITY OF 1 TECHNICAL MANUAL IS AUTHORIZED WITH EACH EQUIPMENT. WHERE A VALID NEED EXISTS, ADDITIONAL COPIES MAY BE REQUISITIONED AND KEPT ON HAND.	EA		1			
		5805-503-1469		CASE, TELEPHONE CY-4277A/PT	EA		1	1	1	
		5965-669-9145		GENERATOR, RINGING, HAND G-42A/PT HANDSET H-60/PT	EA		1	1	1	
		5805-681-9555		CASE TELEPHONE CY-4277/PT	EA		1	1	1	
		8465-634-2806		SM-D-208121 SLING, CARRYING, BAG AND CASE-- 80063, SM-D-208121 NO ACCESSORIES, TOOLS OR TEST EQUIPMENT ARE TO BE ISSUED WITH THIS EQUIPMENT. NO BASIC ISSUE ITEMS ARE MOUNTED IN OR ON THIS EQUIPMENT	EA		1	1	1	

APPENDIX C MAINTENANCE ALLOCATION

Section I. INTRODUCTION

C-1. General

This appendix provides a summary of the maintenance operations covered in the equipment literature for Telephone Set TA-312/PT. 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. Explanation of Format for Maintenance Allocation Chart

a. Group Number. Group numbers correspond to the reference designation prefix assigned in accordance with ASA Y32.16, Electrical and Electronics Reference Designations. They indicate the relation of listed items to the next higher assembly.

b. Component Assembly Nomenclature. This column lists the item names of component units,

assemblies, subassemblies, and modules on which maintenance is authorized.

c. Maintenance Function. This column indicates the maintenance category at which performance of the specific maintenance function is authorized. Authorization to perform a function at any category also includes authorization to perform that function at higher categories. The codes used represent the various maintenance categories as follows:

<i>Code</i>	<i>Maintenance Category</i>
C -----	Operator/Crew
O -----	Organizational Maintenance
F -----	Direct Support Maintenance
H -----	General Support Maintenance
D -----	Depot Maintenance

d. Tools and Equipment. The numbers appearing in this column refer to specific tools and equipment which are identified by these numbers in Section III.

e. Remarks. Self-explanatory.

C-3. Explanation of Format for Tool and Test Equipment Requirements

The columns in the tool and test equipment requirements chart are as follows:

a. Tools and Equipment. 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 for the maintenance function.

b. Maintenance Category. The codes in this

column indicate the maintenance category normally allocated the facility.

c. Nomenclature. This column lists tools, test, and maintenance equipment required to perform the maintenance functions.

d. Federal Stock Number. This column lists the Federal stock number.

e. Tool Number. Not used.

APPENDIX D
ORGANIZATIONAL REPAIR PARTS

Section I. INTRODUCTION

D-1. Scope

This appendix contains a list of repair parts required for the performance of organizational maintenance for Telephone Set TA-312/PT.

NOTE

No special tools, test, and support equipment are required.

D-2. General

The repair parts list is divided into the following sections:

a. Prescribed Load Allowance (PLA), Section II. The PLA is a consolidated listing of repair parts allocated for initial stockage at the organizational maintenance category. This is a mandatory minimum stockage allowance.

b. Repair Parts for Organizational Maintenance, Section III. Repair parts authorized for organizational maintenance are included in this section.

NOTE

Both indexes noted below are cross referenced to index numbers. The index numbers appear in ascending sequence in column 1 of the repair parts list (para D-3a). The index number for the particular item will be the same for the item in all sections of this appendix.

c. Federal Stock Number Cross-Reference to Index Number, Section IV. This is a cross-reference index of Federal stock numbers and manufacturer's part numbers to index numbers.

d. Figure and Item Number Cross-Reference to Index Number, Section V. This is a cross-reference index of figure number and item number to index number. The figure numbers are listed in numerical sequence; item numbers are listed for each figure. Figure and item numbers in this index appear in TM 11-5805-201-35.

D-3. Explanation of Columns

An explanation of the columns is given below.

a. Source, Maintenance, and Recoverability Codes (SMR) and Index Numbers Column. The first line in this column lists the applicable SMR codes for the part. Listed in ascending order di-

rectly below the codes is the index number assigned to the repair part.

(1) *Source code (S).* The selection status and source for the listed item is noted here. Source codes and their explanations are as follows:

Code	Explanation
P ----	Applied to repair parts that are stocked in or supplied from GSA/DSA, or Army supply system, and authorized for use at indicated maintenance categories.
X2 ----	Applies to repair parts that are not stocked. The indicated maintenance category requiring such repair parts will attempt to obtain them through cannibalization; if not obtainable through cannibalization, such repair parts will be requisitioned with supporting justification through normal supply channels.
G ----	Applies to major assemblies that are procured with PEMA funds for initial issue only to be used as exchange assemblies at DSU and GSU categories. These assemblies will not be stocked above DSU and GSU category or returned to depot supply category.

(2) *Maintenance code (M).* The lowest category of maintenance authorized to install the listed item is noted here.

Code	Explanation
O ----	Organizational maintenance.

(3) *Recoverability code (R).* The information in this column indicates whether unserviceable items should be returned for recovery or sal-

vage. Recoverability code and its explanation is as follows:

NOTE

When no code is indicated in the recoverability column, the part will be considered expendable.

Code	Explanation
R ----	Applies to repair parts and assemblies which are economically repairable at DSU and GSU activities and normally are furnished by supply on an exchange basis.

b. Federal Stock Number Column. The Federal Stock number for the item is listed in this column.

c. Description Column. This column includes the Federal item name and any additional description of the item required, the manufacturer's part number (reference number), and the applicable five-digit Federal supply code for manufacturers (para D-5). For subsequent appearances of the same item, the manufacturer's code and part number (reference number) are omitted. The words "same as" followed by the index number assigned to the item when it first appeared in the list will follow the item name, e.g., "RESISTOR, FIXED, COMPOSITION: SAME AS A298." Usable on code column is not used.

d. Unit of Measure Column. The unit used as a basis of measure (e.g., ea, pr, ft, yd, etc.) is indicated in this column.

e. Quantity Incorporated in Unit Column. The quantity of repair parts in an assembly is given in this column.

f. Maintenance Allowance Column.

(1) The maintenance allowance column is divided into subcolumns. Indicated in each subcolumn opposite the first appearance of the item is the total quantity of items authorized for the number of equipments supported. Subsequent appearances of the same item will have no entry in the allowance columns, but will have a reference in the description column to the first appearance of the item. Items authorized for use as required, but not for initial stockage, are identified with an asterisk (*) in the allowance column.

(2) The quantitative allowances for organizational category of maintenance represents one initial prescribed load for a 15-day period for the number of equipments supported. Units and organizations authorized additional prescribed loads will multiply the number of prescribed loads authorized by the quantity of repair parts reflected in the appropriate density column to obtain the total quantity of repair parts authorized.

(3) Subsequent changes to organizational allowances will be limited as follows: No change in the range of items is authorized. If additional items are considered necessary, recommendations should be forwarded to Commanding General, U.S. Army Electronics Command, ATTN: AMSEL-ME-NMP-CW, Fort Monmouth, N.J. 07703, for

SECTION III. REPAIR PARTS FOR ORGANIZATIONAL MAINTENANCE

(1) SMR CODE INDEX NO.	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION Reference Number & Mfr Code	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALW				(7) ILLUSTRATIONS	
					(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(a) FIG NO.	(b) ITEM NO. OR REFERENCE DESIGNATION
G-0-R A001	5805-543-0012	TELEPHONE SET TA-312/PT (This item is nonexpendable)	ea						1-1	
P-0 A006	5805-752-6166	CASE CY-1277B/PT	ea	1	*	*	*	*	1-2	
P-0 A007	8465-269-0682	SLING CARRYING BAG AND CASE: MIL-S-1698; 81349	ea	1	*	*	*	*	1-2	
P-0 A048	5805-392-7726	CRANK HAND: SC-C-108657; 96344	ea	1	*	*	*	*	3-11	13
P-0 A049	5305-408-0129	SCREW MACH PH SPL: SM-B-339585; 96344	ea	1	*	*	2	2	3-11	12
P-0 A072	5805-301-3865	SPRING HELICAL TORSION: SM-C-207794; 96344	ea	1	*	*	*	*	3-2	
P-0 A073	5805-301-5866	SPRING HELICAL TORSION: SM-C-207797; 96344	ea	1	*	*	*	*	3-2	
P-0 A074	5305-408-0129	SCREW MACH PH: SAME AS A049	ea	2	*	*	*	*	3-5	1
P-0 A127	5305-408-0129	SCREW MACH PH: SAME AS A049	ea	1					3-5	47
X2-0 A130		KNOB: SM-B-283419-4; 96344	ea	1					3-5	
P-0 A133	5305-408-0129	SCREW MACH PH: SAME AS A049	ea	8					3-6	1

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SECTION IV. INDEX-FEDERAL STOCK NUMBER CROSS REFERENCE

FEDERAL STOCK NUMBER	INDEX	FEDERAL STOCK NUMBER	INDEX	FEDERAL STOCK NUMBER	INDEX
5305-408-0129	A049	5805-301-3865	A072	5805-301-5866	A073
5805-543-0012	A001	5805-752-6166	A006	8465-269-0682	A007
SM-B-283419-4	A130				

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Boards (5)
CD Cmd Agcy (1)
USAMC (5)
USCONARC (5)
ARADCOM (5)
ARADCOM Rgn
(2)
OS Maj Comd (4)
USARSO (5)
LOGCOMD (2)

USAMICOM (4)
USASTRATCOM
(4)
USASTRATCOM-
CONUS (5)
USAESC (70)
USARYIS (10)
USA Panama (10)
MDW (1)
Armies (2) except
Eighth (5)
USARJ (5)
USACOMZEUR
(10)
Corps (2)
USAC (3)
Div (2) except

SECTION V. INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE
TO INDEX NUMBER

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.	FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
3-5	1	A074			
3-6	38	A130			
	1	A133			
3-11	12	A049			
	13	A048			

(CONTINUED FROM INSIDE FRONT COVER)

CONDENSED OPERATING INSTRUCTIONS

ADJUSTING BUZZER VOLUME

6. REQUEST DISTANT PARTY TO SIGNAL AND REPLACE H-60/PT.
7. WHEN SIGNAL IS RECEIVED, ADJUST BUZZER VOLUME CONTROL.

COMPLETING CALL

8. REPLACE H-60/PT.
9. IF CONNECTED THROUGH LB SWITCHBOARD, "RING OFF" BY TURNING HANDCRANK.

USING HANDSET-HEADSET H-144(*)/U (HANDSET H-60/PT IN MOUNTING)

PLACING CALL (LB OPERATION)

1. OPERATE **EXT-INT** SWITCH TO **EXT**.
2. TURN HANDCRANK; LISTEN FOR CALLED PARTY.

PLACING CALL (CB OR CBS OPERATION)

3. OPERATE **EXT-INT** SWITCH TO **EXT**; LISTEN FOR OPERATOR TO ANSWER.
4. DO NOT LEAVE **EXT-INT** SWITCH AT **EXT** WHEN NOT IN USE.

CONVERSING (LB AND CBS OPERATION)

5. PUSH PRESS-TO-TALK SWITCH TO TALK; RELEASE TO LISTEN.

CONVERSING (CB OPERATION)

6. DO NOT OPERATE PRESS-TO-TALK SWITCH.

ADJUSTING BUZZER VOLUME

7. REQUEST DISTANT PARTY TO SIGNAL AND THEN OPERATE **EXT-INT** SWITCH TO **INT**.
8. WHEN SIGNAL IS RECEIVED, ADJUST BUZZER VOLUME CONTROL.

COMPLETING CALL

9. OPERATE **EXT-INT** SWITCH TO **INT**.
10. IF CONNECTED THROUGH LB SWITCHBOARD, "RING OFF" BY TURNING HANDCRANK.

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1st Cav Div (5)	Fort Hancock (4)
Bde (2)	Fort Gordon (10)
Regt/Gp (2)	Fort Huachuca (10)
Bn (2)	WSMR (5)
Co/Btry (2)	Fort Carson (25)
Det/Teams (2)	Fort Knox (12)
1st USASA Fld Sta (5)	Fort Lee (5)
2nd USASA Fld Sta (5)	JCA, Ft Ritchie (5)
5th USASA Fld Sta (5)	Fort Myer (5)
9th USASA Fld Sta (5)	Fort Devens (5)
12th USASA Fld Sta (5)	Fort Belvoir (5)
13th USASA Fld Sta (5)	Army Dep (5) except
14th USASA Fld Sta (5)	LBAD (14)
Svc Colleges (2)	SAAD (30)
Br Svc Schools (2) except	TOAD (14)
USASCS (20)	LEAD (7)
USASESCS (60)	ATAD (10)
USATC Armor (2)	GENDEPS (2)
USATCFLW (2)	Sig Sec GENDEPS (5)
USATC Inf (2)	Sig Dep (12)
USASTC (2)	Sig FLDMS (2)
WRAMC (1)	AMS (1)
Army Pic Cen (2)	USAERDAA (2)
USACDCEC (10)	USAERDAW (13)
USATCFE (5)	USACRREL (2)
USAJFK- CENSPWAR (5)	WHCA (2)
USACSTATC (5)	MAAG (2)
Instl (2) except	USARMIS (2)
	YPG (5)
	AAF (5)
	Edgewood Arsenal (5)
	APG (5)

NG: State AG (3); units—same as active Army except allowance is one (1) copy per unit.

USAR: None.

For explanation of abbreviations used, see AR 320-50.