DEPARTMENT OF THE ARMY TECHNICAL MANUAL

DEPOT MAINTENANCE MANUAL

HANDSETS TS-9-(*), TS-10-(*), TS-11(*), TS-12-F, TS-13-(*), TS-14-(*), TS-15-(*), H-22-B/U, H-23-(*)/U AND H-60/PT

Headquarters, Department of the Army, Washington 25, D.C.

7 September 1962

1. Scope and Applicability of Depot Inspection Standards

a. The tests outlined in this manual are designed to measure the performance capability of repaired handsets. Handsets that meet the minimum standards stated in the tests will furnish satisfactory operation, equivalent to that of new handsets.

b. Official nomenclature followed by (*) is used to indicate all models of that particular nomenclature. Individual models of each nomenclature appear in the first column of the chart in paragraph 6.

2. Applicable Reference

Applicable paragraphs of TB SIG 355-1, General Standards for Repaired Signal Equipment, form a part of the requirements for testing these handsets.

3. Modification Work Orders

Perform all applicable modification work orders pertaining to these handsets before making the tests specified. DA Pamphlet 310-4 lists all available modification work orders.

4. Test Facilities Required

The following test equipment, or suitable equivalents, must be employed in determining compliance with the requirements of this inspection standard.

Test equipment	Stock No.	Quantity required	Technical manual
Telephone Test Set AN/ --	662	1	TM 11-2062
Multimeter TS-352/U ----------	6625-242-5023	1	TM 11-5527

*This technical manual replaces Signal Corps Repaired Equipment Standard No. REP-69, Issue No. 5, dated 15 February 1961.

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5. General Test Requirements

a. Test Set ANV/PTM-6. This test set must be permitted a 5-minute warmup period before adjusting the measuring circuit sensitivity. Make all tests at normal room temperatures.

b. Transmitting and Receiving Tests. The handsets must meet the requirements listed in the charts in paragraph 6 when tested with AN/PTM-6. The dials and switches of the test set that are not listed in the charts must remain in the unoperated position. In the *Meter M1 reading* column, the letter R indicates that readings to the right of the designated values are acceptable.

6. Receiving and Transmitting Efficiency Tests

The following charts contain the receiving efficiency and transmitting efficiency tests of the various handsets.

a. Connection of Handset Cords and Adjustment of Test Set.

Handset	Type Test	Telephone Test Set AN/PTM-6								
		Binding post connections for handset cords			Dial settings				circuit ringer cur D5	Equalizer S2
		Receiver	Common	Transmitter	Impedance		V1 gain			
					Trans D1	Rec D2	Trans D3	Rec D4		
TS-9-A	Receiving efficiency --	WH --	RED	----	--	2---	--	6	1	
TS-9-J	Transmitting efficiency	------	RED	BL	3	----	3	--	1	IN
TS-9-K	Receiving efficiency --	WH --	RED	----	--	2---	--	6	1	
	Transmitting efficiency	------	RED	BL	3	----	3	--	1	IN
TS-9-F, -N, -O, -P, -Q, -R, -T, -U, -V, -W, -AA, -AC, -AE, -AF, -AJ, -AK, -AL, -AM, -AN, -AP, and -AQ.	Receiving efficiency --	------	RED	BL	3	2---	3	6	1	
	Transmitting efficiency	------	RED	BL	3	----	3	--	1	IN
TS-10-B, -C, -D, -E, -F, -G, -H, -J, -K, -M, -N, and -P.	Receiving efficiency --	BL---	RED	----	--	6---	--	5	1	
	Transmitting efficiency	BL---	RED	----	--	6---	--	4	1	
TS-11-D, -F, -G, -H, -J, -L, -M, -N.	Receiving efficiency --	RED--	BL	----	--	2---	--	6	1	
	Transmitting efficiency	------	BL	WH	3	----	3	--	1	IN
TS-12-F	Receiving efficiency --	WH --	RED	----	--	2---	--	6	1	
	Transmitting efficiency	------	RED	BL	3	----	3	--	1	IN
TS-13-A, -B, -C, -E, -F, -G, -K, -L.	Receiving efficiency --	WH --	BL	----	--	2---	--	6	1	
	Transmitting efficiency		BL	RED	3	----	3	--	1	IN
TS-14-A, -B, -C, -D	Receiving efficiency --	WH --	BL	----	--	2---	--	6	1	
	Transmitting efficiency	------	RED	BR	3	----	3	--	1	IN
H-22-B/U	Receiving efficiency --	WH --	BL	----	--	4, 5[a]	--	6	1	
	Transmitting efficiency	------	BL	RED	3	----	3	--	1	IN
H-23-A, B, C/U	Receiving efficiency --	WH --	BL	----	--	2---	--	6	1	
	Transmitting efficiency	BL---	RED	----	3	----	3	--	1	IN
H-60/PT	Receiving efficiency --	BLUE	WH YEL	----	--	1---	--	6	1	OUT
	Transmitting efficiency	------	WH YEL	BLK	1	----	2	--	1	OUT

[a] Dial control D2 must be set for the maximum decibel (db) reading on meter M1, with control D4 in position 6.

b. Performing Tests.

Handset	Type test	Telephone Test Set AN/PTM-6					
		Keys[a]					Meter M1 reading
		1	2	7	8	9	
TS-9-A	Receiving efficiency --	LBPE	RCT	AC	REC--	OPR	R -10db
TS-9-J	Transmitting efficiency	LBPE	RCT	AC	TRANS	OPR	R -6db
TS-9-K	Receiving efficiency --	LBPE	RCT	AC	REC--	OPR	R -10db
	Transmitting efficiency	LBPE	RCT	AC	TRANS	OPR	R -1db
TS-9-F, -N, -O, -P, -Q, -R, -T, -U, -V, -W, -AA, -AC, -AE, -AF, -AJ, -AK, -AL, -AM, -AN, -AP, and -AQ.	Receiving efficiency --	LBPE	RCT	AC	REC--	OPR	R -4db
	Transmitting efficiency	LBPE	RCT	AC	REC--	OPR	R -4db
TS-10-B, -C, -D. -G, -K, -E, -F, -H, -J, -M, -N, and -P.	Receiving efficiency --	-----	RCT	AC	REC--	OPR	R -2db
	Transmitting efficiency	-----	RCT	AC	REC--	OPR	R -5db

Handset	Type test	Telephone Test Set AN/PTM-6					
		Keys[a]					Meter M1 reading
		1	2	7	8	9	
TS-11-D, -F, -G, -H, -J, -L, -M, and -N --	Receiving efficiency --	LBPE	RCT	AC	REC--	OPR	R -10db
	Transmitting efficiency	LBPE	RCT	AC	TRANS	OPR	R -6db
TS-12-F ----------	Receiving efficiency --	LBPE	RCT	AC	REC--	OPR	R -10db
	Transmitting efficiency	LBPE	RCT	AC	TRANS	OPR	R -6db
TS-13-A, -B, -C, -E, -F, -G, -K, and -L --	Receiving efficiency --	LBPE	RCT	AC	REC--	OPR	R -10db
	Transmitting efficiency	LBPE	RCT	AC	TRANS	OPR	R -6db
TS-14-A, -B, -C, and -D ----------	Receiving efficiency --	LBPE	RCT	AC	REC--	OPR	R -10db
TS-15-A, -B, -C ----------	Receiving efficiency --	LBPE	RCT	AC	REC--	OPR	R -10db
	Transmitting efficiency	LBPE	RCT	AC	TRANS	OPR	R -6db
H-22-B/U ----------	Receiving efficiency --	LBPE	RCT	AC	REC--	OPR	R -10db
	Transmitting efficiency	LBPE	RCT	AC	TRANS	OPR	R -6db
H-23-A, B, C/U ----------	Receiving efficiency --	LBPE	RCT	AC	REC--	OPR	R -10db
	Transmitting efficiency	LBPE	RCT	AC	TRANS	OPR	R -6db
H-60/PT ----------	Receiving efficiency --	LBPE	RCT	AC	REC--	OPR	R 0db
	Transmitting efficiency	LBPE	RCT	AC	TRANS	OPR	R +1db

[a]Keys not listed in the chart remain in the unoperated position.

7. Insulation Resistance Test

With the plug on Test Lead CX-3303/G inserted in L1-L2 on the AN/PTM-6, and the clips on the other end of the test leads attached to the handset cords, an insulation resistance test must be made with the handset cord and switch wired to the handset. The transmitting and receiving units must be removed from the handset. A reading to the left of -6 db must be indicated on. meter M1 in the AN/PTM-6 when the insulation resistance is tested between the cord conductors, between current-carrying parts of the switch, and between the switch frame and its current-carrying parts.

8. Handset H-60/PT Continuity Test

A continuity test of this handset may be made by using the lowest scale on Multimeter TS-352/U. With the red and green wires of the handset tied together, measure continuity between the orange and white wires. The press-to-talk switch must be depressed. The meter reading on the TS-352/U must be 7 ohms.

By Order of Secretary of the Army:

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Units org under fol TOE:
11-587 (2)
11-592 (2)
11-597 (2)

NG: **None.**
USAR: **None.**
For explanation of abbreviations used, AR 320-50.

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