

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

FIELD AND DEPOT

MAINTENANCE MANUAL

RADIO RECEIVER R-390A/URR

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

HEADQUARTERS DEPARTMENT OF THE ARMY

8 December 1961

Technical Manual
No. 11-5820-358-35

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 8 December 1961

RADIO RECEIVER R-390A/URR

			Paragraph	Page
CHAPTER	1.	THEORY		
Section	I.	Introduction	1, 2	3, 4
	II.	Simplified theory of receiver	3, 4	4-6
	III.	Stage analysis	5-28	6-45
	IV.	Analysis of mechanical tuning system	29-31	46-50
CHAPTER	2.	THIRD ECHELON MAINTENANCE		
Section	I.	General troubleshooting techniques	32-34	51, 52
	II.	Troubleshooting receiver	35-56	52-99
	III.	Repairs	57-65	99-108
	IV.	Alignment and adjustment procedures	66-83	108-120
CHAPTER	3.	FOURTH ECHELON TROUBLESHOOTING AND TESTING PROCEDURES		
Section	I.	Fourth echelon troubleshooting	84, 85	121
	II.	Fourth echelon testing procedures	86-98	121-149
CHAPTER	4.	FIFTH ECHELON MAINTENANCE	99-103	150-159
CHAPTER	5.	DEPOT INSPECTION PROCEDURES		
Section	I.	Preparation	104-106	160, 161
	II.	Tests	107-123	161-182
APPENDIX		REFERENCES		183
INDEX				184

*This manual together with TM 11-5820-358-10, 16 January 1961, and TM 11-5820-358-20, 10 February 1961, supersedes TM 11--856A, 20 January 1956; including C1, 19 March 1956; C2, 17 May 19 56; C3, 23 November 1956; C4, 7 June 1957; C5, 23 July 1958; and C6, 13 November 1958.

CHAPTER 1 THEORY

Section I. INTRODUCTION

1. Scope

a. This manual covers field and depot maintenance for Radio Receiver R-390A/ URR. It includes instructions appropriate to third, fourth, and fifth echelons for troubleshooting, testing, aligning, and repairing the receiver and replacing maintenance parts. It also lists tools, materials, and test equipment for third, fourth, and fifth echelon maintenance. Detailed functions of the equipment are covered in the theory section.

b. The complete technical manual for this equipment includes four other publications: TM 11-5820-358-10, TM 11-5820358-20, TM 11-5820-358-20P, and TM115820-358-35P.

c. Forward comments concerning this manual to the Commanding Officer, U. S. Army Signal Materiel Support Agency, ATTN: SIGMS-PA2d, Fort Monmouth, N.J.

Note: For applicable forms and records, see paragraph 2, TM 11-5820-358-10.

d. Refer to DA Pamphlet 310-4 to determine what changes to or revisions of this publication are current.

2. Internal Differences in Models

During production of the receiver, several changes were made in the equipment.

Each of these changes is shown on the receiver by means of a modification (MOD) number stamped on the affected subchassis. These MOD numbers are used in this manual to indicate equipment revisions.

a. *Use of MOD Numbers.* Equipment modifications listed in c (below) show the modified subchassis or part and the MOD number used on various order numbers.

A MOD number higher than 1 indicates that all earlier modifications have also been performed.

b. *MOD Numbers on Parts.* Some receivers may have a MOD number stamped on a part rather than on a subchassis. For example, a MOD number is stamped on the shielding cans of tuned-circuit assemblies Z201-1 and Z201-2 in some receivers. This indicates that a modification has been made to the part; it is not a subchassis modification.

c. *Equipment Modification Chart.*

Modifications	Subchassis or part bearing MOD No.	MOD numbers	
		Orders No. 14214-Phila-51, 375-Phila-54, and 08719-Phila-55	Order No. 363-Phila-54
Pin 7, V201, connected to ground instead of to pin 2.	RF	2	1
C275 changed from 5,000 uuf to 3,300uuf.	Rf	2	1
C612, 68 uuf, added in parallel with R601.	RF	1	1
C257, 47 uuf, added in parallel with C227.	Af	4	2
Series network of C256, 0.1 uf, and R235, 47 ohms, inserted between terminal 1 of HR202 and ground.	Rf	3	2
C232-1 and C232-2 changed from 2,400 uuf to 1,500 uuf.	Z201-1, Z201-2	1	3
Suppressor E213 added between contact 9 of S204 front and junction of E208, R233, and C255.	Rf	5	2
C507 and C516 changed from selected value to 51 uuf.	If.		1