

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

**OPERATOR, ORGANIZATIONAL, FIELD,
AND DEPOT MAINTENANCE MANUAL
ANTENNA GROUP AN/GRA-50**

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

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WARNING

DANGEROUS VOLTAGES EXIST ON THE ANTENNA WHEN IN OPERATION

Before working on any part of the antenna, be sure that all equipment has been disconnected from the power source.

DON'T TAKE CHANCES !

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1. Scope

This manual describes Antenna Group AN/GRA-50 (fig. 1) and covers installation, maintenance, and theory of operation.

2. Forms and Records

a. Unsatisfactory Equipment Report.

- (1) Fill out and forward DA Form 468 (Unsatisfactory Equipment Report) to Commanding Officer, U. S. Army Signal Materiel Support Agency, ATTN: SIGMS-ML, Fort Monmouth, N. J., as prescribed in AR 700-38.
- (2) Fill out and forward AF TO Form 29 (Unsatisfactory Report) to the Commander, Air Materiel Command, Wright-Patterson Air Force Base, Ohio, as prescribed in AF TO 00-35D-54.

b. Report of Damaged or Improper Shipment. Fill out and forward DD Form 6

(Report of Damaged or Improper shipment as prescribed in AR 700-58 (Army), Navy Shipping Guide, Article 1850-4 (Navy), and AFR 71-4 (Air Force).

c. Preventive Maintenance Form. Prepare DA Form 11-238 (fig. 8 and 9) (Maintenance Check List for Signal Equipment (Sound Equipment, Radio, Direction Finding, Radar, Carrier, Radiosonde and Television)), in accordance with the instructions on the form.

d. Parts List Form. Forward DA Form 2028 (Recommended Changes to DA Technical Manual Parts Lists or Supply Manual 7, 8, or 9) direct to the Commanding Officer, U. S. Army Signal Materiel Support Agency, ATTN: SIGMS-ML, Fort Monmouth, N. J., with comments on appendixes II and III.

e. Comments on Manual. Forward all other comments on this publication direct to the Commanding Officer, U. S. Army Signal Materiel Support Agency, ATTN: SIGMS-PA2d, Fort Monmouth, N. J.

Section II. DESCRIPTION AND DATA

3. Purpose and Use

a. Purpose. Antenna Group AN/GRA-50 (fig. 1) is a doublet antenna assembly used for the transmission and reception of radio signals between 1.5 and 20 megacycles (mc).

b. Use. Antenna Group AN/GRA-50 is used primarily with Radio Set AN/GRC-19 for greater range and reliability than the standard 15-foot whip antenna provides. It can be used with any radio set that has the

proper frequency range and a transmitter power output of less than 100 watts at an output impedance of approximately 50 ohms.

4. Technical Characteristics

Antenna type Half way doublet.
Frequency range 1.5 to 20 mc.

Power handling capability 100 watts (maximum).

Weight 11.75 lb.

5. Components
(fig. 2)

Quantity	Component	Height (in.)	Depth (in.)	Width	Unit weight (lb)
1	Cable Assembly RF CG-678/U			75 ft 3 in. (lg)	2.4
1	Insulator IL-4/GRA-4	2	3-1/2	3-1/2 in.	0.6
2	Reeling Machine, Cable, Hand RC-432/G	2-3/4	4-1/2	12 in.	1
2	Wire Assembly, Antenna CX-7303/G			160 ft (lg)	0.6
1	Bag BG-175	9	8-1/2	9-1/2 in.	2
2	Halyard MX-2706/G		1/8 dia.	75 ft (lg)	1.1
1	Tape, measuring (nonconducting), 156 ft	1-1/4	7	7 in.	2.1
2	Technical Manual TM 11-5820-467- 15				

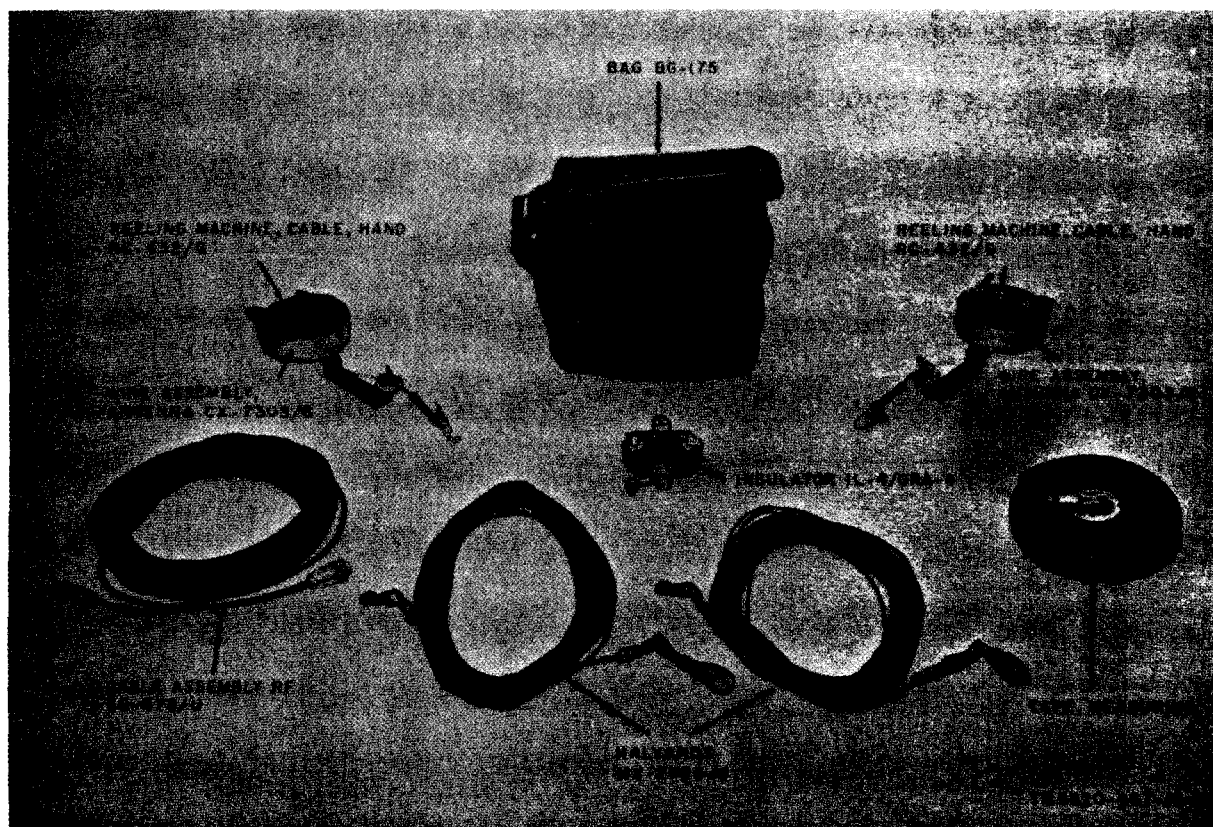


Figure 2. Antenna Group AN/GRA-50, components.