DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL, DS, GS, AND DEPOT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOL LISTS

WIND MEASURING SET AN/PMQ-3A (NSN 6660-515-4339)

This copy is a reprint which includes current pages from Changes 1 through 3.

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TECHNICAL MANUAL

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Operator, Organizational, Direct Support, General Support, and Depot Maintenance Manual

WIND MEASURING SET AN/PMQ-3A
(NSN 6660-00-515-4339)

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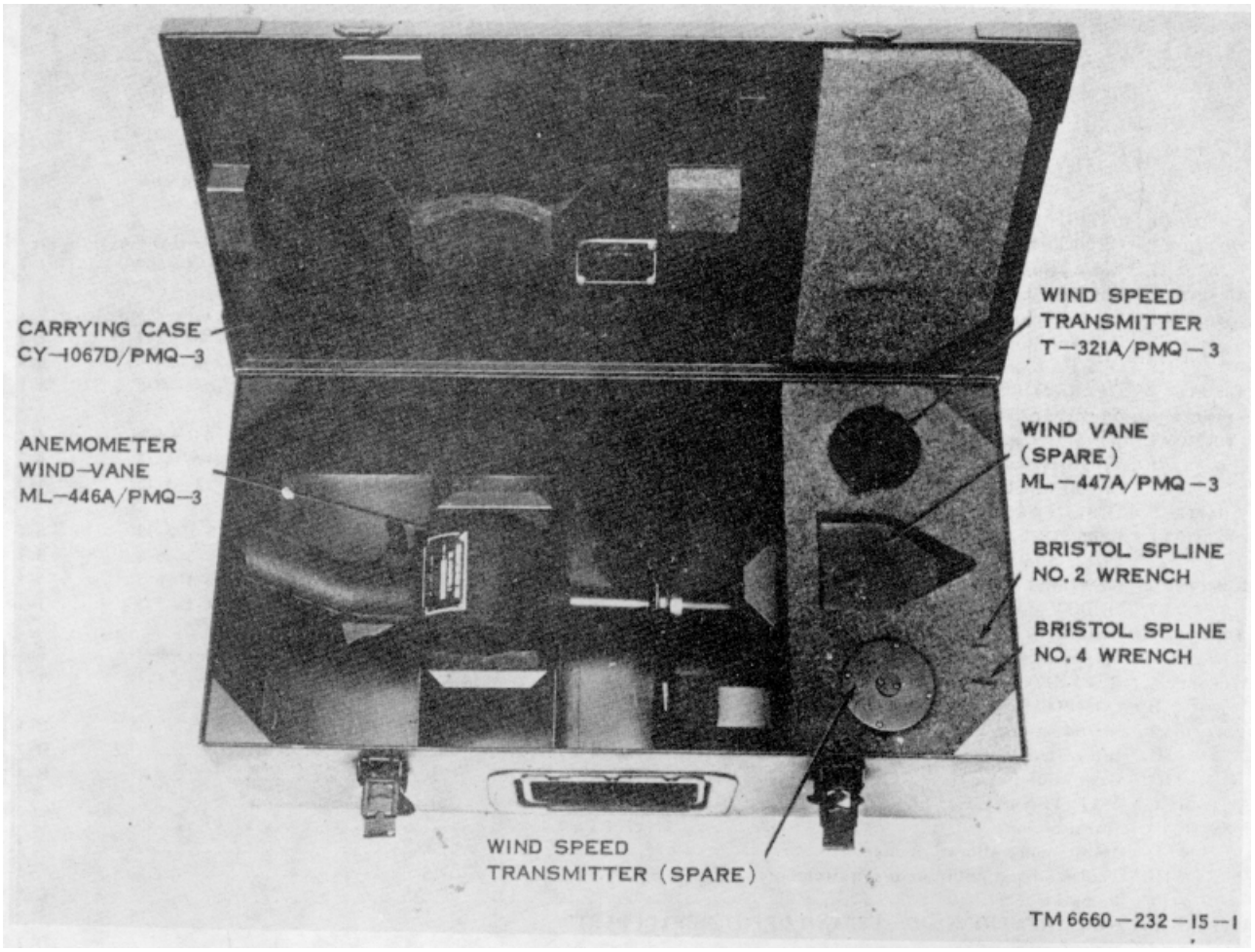

Figure 1-1. Wind Measuring Set AN/PMQ-3, with components.

CHAPTER 1
INTRODUCTION

Section I. GENERAL

1-1. Scope

a. This manual describes Wind Measuring Set AN/PMQ-3A (fig. 1-1) and provides instructions for operation and installation, including operator, organizational, direct support, general support, and depot maintenance. Instructions are provided for installation, operation, preventive maintenance, lubrication, and replacement of parts. Circuit functioning is included at the organizational category, also included are instructions for troubleshooting, testing, adjustment, alignment, and repair of the equipment.

b. Appendix A contains a list of current references, including supply catalogs, technical manuals, and other publications applicable to the equipment.

c. Appendix B contains the components of end item list (COEIL) and basic issue items list (BII).

d. Appendix C contains the maintenance allocation chart.

e. Appendix D contains the repair parts and special tools lists.

1-2. Consolidated Index of Army Publications and Blank Forms

Refer to the latest issue of DA Pam 310-1 to determine whether there are new editions, changes, or additional publications pertaining to the equipment.

1-3. Maintenance Forms, Records, and Reports

a. Reports of Maintenance and Unsatisfactory Equipment. Department of the .Army forms and procedures used for equipment maintenance will he those prescribed by DA Pam 738-750 as contained in Maintenance Management Update.

b. Report of Packaging and Handling Deficiencies. Fill out and forward SF 364 (Report of Discrepancy ROD)) as prescribed in AR 735-11-2/DLAR 4140.55/ NAVMATINST 4355.73A/AFR 400-54, MCO 4430.3F.

c. Discrepancy in Shipment Report e DISREP) (SF 161). Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38/ NAVSUPINST 4610.33 C/,AFR 75-18, MCO P4610.19D/ DLAR 4500.15.

1-3.1. Reporting Errors and Recommending Improvements

you can help improve this manual. If you find any mistake or if you know of a way to improve the procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN.: DRSEL-ME-MP, Fort Monmouth, New Jersey 07703-5007. In either case, a reply will be furnished direct to you.

1-3.2 Reporting Equipment Improvement Recommendations (EIR)

If your Wind Measuring Set AN/PMQ-3A needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Put it on an SF 368 (Quality Deficiency Report). Mail it to Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN.: DRSEL-ME-MP, Fort Monmouth, New Jersey 07703-5007. We'll send you a reply.

1-3.3. Hand Receipt

This manual has a companion document with a TM number followed by "-HR" (which stands for Hand Receipt). The TM 11.6660-232-15-HR consists of preprinted hand receipts (DA Form 2062) that list end item related equipment (i.e., COEI, Bll, and AAL) you must account for. As an aid to property accountability, additional -HR manuals may be requisitioned from the LS Army Adjutant General Publications Center, Baltimore, Md., in accordance with the procedures in Chapter 3, AR 310-2, and DA Pam 310-10-2.

1-3.4. Destruction of Army Electronics Materiel

Destruction of Arm! electronics materiel to prevent enemy use shall be in accordance with TM 750-244-2.

Section II. DESCRIPTION AND DATA

1-4. Purpose and Use

a. Wind Measuring Set AN/PMQ-3A is a complete, portable wind measuring system which gives visual indications of wind direction through 3600 and windspeed readings from 0 to 60 knots. The measuring instrument is designed to be hand-held during operation.

b. The equipment is used by field units when making visual observations of the atmosphere in support of artillery units or meteorological forecasts. The information obtained by these observations are used to prepare wind data for atmospheric effects on artillery firings and information for surface observations in support of forecasts for field operations.

1-5. Technical Characteristics

a. General.

Windspeed .....60 knots maximum.
Wind direction.....0-3600 in azimuth.

b. Transmitter.

Turbine generator.....Rotor generator with voltage output proportional to windspeed.
Generator output .....4.46 vac ±0.06 at rotor speed of 120 Hz (40 knots).

c. Indicator.

Windspeed:
- Inner scale.....0-15 knots.
- Outer scale.....0-60 knots.
- Range toggle switch normal.....0-60 scale.
- Range toggle switch operated.....0-15 scale.

Accuracy.....±1/2 knot from 0-7;
.....±1 knot from 10-40,
.....±2 knots from 41 to 60 knots.

Wind direction:
- Trigger switch engaged.....Free movement from 0-360°.
- Trigger switch released.....Locking brake for wind vane pointer direction reading.

Accuracy.....±2° in a 5-knot wind.

1-6. Components and Dimensions

(fig. 1-1)

Dimensions of Major Components.

Qty	Item	Dimensions (in.)			Unit wt (lb)
		Height	Length	Width	
1	Case, Carrying CY-1067D/PMQ-3.	7 3/4	22	11	15
1	Anemometer, Wind Vane ML-446A/ PMQ-3	15	15	3½	3 1/2
2	Wind Speed Transmitter T-321A, PMQ-3.	5 3/4	5 3/4	25/8	1 1/2
2	Wind Vane ML-447A/PMQ-3.	2 3/4	3 3/4	5 1/2	

1-6.1. Items Comprising Operable Wind Measuring Set AN/PMQ3A

FSN	QTY	Nomenclature,. part No., and mfr code	Fig. No.
6360-515-4339		Wind Measuring Set AN/PMQ-3A; AN/PMQ-3A; SMD-367358, 80063, Consisting of:	1-1
6660-515-4341	1	Anemometer Wind Vane ML-446A/PMQ3	1-3
6660-323-2262	1	Wind Vane MIL--447A/PMQ3	2-3
6660-515-4342	1	Wind Speed Transmitter T-312A/PMQ-3	2-2
		NOTE **The part number is followed by the applicable 5-digit Federal supply code for manufacturers (FSCM) identified in SB 708-42 and used to identify manufacturer, distributor, or Government agency, etc.**	

1-7. Common Names

A list of nomenclature assignments for the components of Wind Measuring Set AN/PMQ3A is given below. A common name is indicated after each item.

Nomenclature	*Common name*
Wind Measuring Set AN/ PMQ-3A.	Wind measuring set
Transmitter, Wind Speed T-321A/PMQ-3.	Transmitter
Anemometer, Wind Vane ML-446A/PMQ3.	Anemometer wind vane
Wind Vane ML-447A/PMQ-3	Wind vane
Case, Carrying CY-1067D/	Carrying case PMQ-S.

1-8. Description of Wind Measuring Set AN / PMQ-3A

(fig. 1-1)

a. The wind measuring set has four major components, Wind Speed Transmitter T321A/ PMQ-3 (fig. 2-2), Anemometer, Wind Vane ML-446A/PMQ-3 (fig. 1-3), Wind Vane ML447A/PMQ-3A (fig. 2-3) and Carrying Case CY-1067D/PMQ-3 (fig. 1-1).

b. The windspeed section consists of the transmitter, windspeed indicator (voltmeter), and a range selector trigger. The wind direction section consists of a wind vane, graduated direction dial, vane lock trigger mechanism, and a direction sight.

1-9. Description of Components

a. Wind Speed Transmitter T-321A/PMQ3 (fig. 2-2). The windspeed transmitter consists