OPERATOR AND ORGANIZATIONAL
MAINTENANCE MANUAL

RADIOSONDE BASELINE CHECK
SETS AN/GMM-1 AND AN/GMM-1A

This copy is a reprint which includes current pages from Changes 1 through 6.

HEADQUARTERS    DEPARTMENT OF THE ARMY
20 JULY 1961
RADIOSONDE BASELINE CHECK SETS AN/GMM-1 AND AN/GMM-IA

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*This manual supersedes as much of TM 11-2440 with C1, 18 November 1953; C2, 15 July 1954; C3.5 January 1959; and C4, 20 April 1959, applicable to operations and organizational maintenance of the equipment.
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Figure 1. Radiosonde Baseline Check Set AN/GMM-1(*), less carrying case, cable assemblies, and running spares.
CHAPTER 1
INTRODUCTION

Section I. GENERAL

1. Scope
   a. This manual describes Radiosonde Baseline Check Sets AN/GMM-1 and AN/GMM-1A and covers their installation, operation, and organizational maintenance (first and second echelon). It includes operation under usual and unusual conditions, cleaning and inspection of the equipment, and replacing those parts available to first and second echelon maintenance personnel.
   b. Official nomenclature followed by (*) is used to indicate all models of the equipment item covered in this manual. Thus, Radiosonde Baseline Check Set AN/GMM-1(*) represents Radiosonde Baseline Check Sets AN/GMM-1 and AN/GMM-1A. Radiosonde AN/AMT-4(*) represents Radiosondes AN/AMT-4B, AN/AMT-4C, and Radiosonde Set AN/AMT-4D. Radiosonde Recorder AN/TMQ-5(*) represents Radiosonde Recorders AN/TMQ-5, AN/TMQ-5A, AN/TMQ-5B, and AN/TMQ-5C. Rawin Set AN/GMD-1(*) represents Rawin Sets AN/GMD-1, AN/GMD-1A, and AN/GMD-1B.

2. Forms and Records
   a. Unsatisfactory Equipment Reports.
      (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 00-35-D-54.
   c. Preventive Maintenance Forms (fig. 19-22). Prepare DA Form 11-238 (Maintenance Check List for Signal Equipment-Sound Equipment, Radio, Direction Finding, Radar, Carrier, Radiosonde and Television) in accordance with instructions on the form.
   e. Comment 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. Radiosonde Baseline Check Set AN/GMM-1(*) (fig. 1) provides a chamber with a known temperature and humidity that remain constant enough under controlled conditions for preflight testing of radiosondes.
   b. Use. The AN/GMM-1(*) is used to make a complete baseline check of temperature and humidity elements of Radiosonde AN/AMT-4(*) and Radiosonde Set AN/AMT-12 before their release for measurements aloft. The baseline check indicates whether or not the radiosonde being tested is operating properly in all respects. The check is made in conjunction with a Rawin Set AN/GMD-1(*) and Radiosonde Recorder AN/TMQ-5(*). Rawin Set AN/GMD-1(*) picks up the sig-
nals transmitted by the radiosonde and relays them to Radiosonde Recorder AN/TMQ-5(*), which records on graph paper temperature, humidity and reference readings transmitted by the radiosonde. Only radiosondes that give a satisfactory baseline check are released into the atmosphere to gather weather data.

4. Technical Characteristics

Power requirements . . . 110 to 115 vac, 60 cps, single phase.

Fan, centrifugal:
  Motor type . . . . . . . Capacitor-induction.
  Horsepower . . . . . . . 1/50.
  Speed . . . . . . . . . . . 3,300 rpm.
  Power requirements . . 115 vac, 60 cps, single phase, 15 watts.

Heater:
  Type . . . . . . . . . . . Resistance element, strip.

Power requirements . . 115 vac, 60 cps, single phase.

Fan, centrifugal:
  Motor type . . . . . . . Capacitor-induction.
  Horsepower . . . . . . . 1/50.
  Speed . . . . . . . . . . . 3,300 rpm.
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  Speed . . . . . . . . . . . 3,300 rpm.
  Power requirements . . 115 vac, 60 cps, single phase, 15 watts.

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  Speed . . . . . . . . . . . 3,300 rpm.
  Power requirements . . 115 vac, 60 cps, single phase, 15 watts.

Heater:
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  Horsepower . . . . . . . 1/50.
  Speed . . . . . . . . . . . 3,300 rpm.
  Power requirements . . 115 vac, 60 cps, single phase, 15 watts.

Heater:
  Type . . . . . . . . . . . Resistance element, strip.

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  Horsepower . . . . . . . 1/50.
  Speed . . . . . . . . . . . 3,300 rpm.
  Power requirements . . 115 vac, 60 cps, single phase, 15 watts.

Heater:
  Type . . . . . . . . . . . Resistance element, strip.

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Power requirements . . . 110 to 115 vac, 60 cps, single phase.

Fan, centrifugal:
  Motor type . . . . . . . Capacitor-induction.
  Horsepower . . . . . . . 1/50.
  Speed . . . . . . . . . . . 3,300 rpm.
  Power requirements . . 115 vac, 60 cps, single phase, 15 watts.

Heater:
  Type . . . . . . . . . . . Resistance element, strip.

5. Components

The components of Radiosonde Baseline Check Set AN/GMM-1(*) are listed in a below and the running spares in b below.

a. Components

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Item</th>
<th>Height (in.)</th>
<th>Depth (in.)</th>
<th>Length (in.)</th>
<th>Unit weight (ib)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Case, carrying (fig. 9)</td>
<td>17-1/8</td>
<td>22</td>
<td>35-3/4</td>
<td>65</td>
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<tr>
<td>1</td>
<td>Chamber, temperature-humidity (fig. 7)</td>
<td>6-1/8</td>
<td>6</td>
<td>19</td>
<td>20</td>
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<tr>
<td>1</td>
<td>Control-power supply</td>
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<td>15 ft</td>
<td></td>
<td></td>
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<td>1</td>
<td>Book, reference (1, fig. 5)</td>
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<td></td>
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<td>Cable assembly, power, electrical</td>
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<td></td>
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<tr>
<td>1</td>
<td>Reel, wire</td>
<td>3/8</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Post, supporting</td>
<td>1-1/2</td>
<td>1-1/2</td>
<td>22-3/4</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Post, supporting</td>
<td>1-3/4</td>
<td>1-1/2</td>
<td>22-3/4</td>
<td>15</td>
</tr>
<tr>
<td>1</td>
<td>Cup</td>
<td>1-1/8</td>
<td>1-5/6</td>
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</tr>
<tr>
<td>1</td>
<td>Tray, humidity</td>
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<tr>
<td>1</td>
<td>Wick</td>
<td></td>
<td>11-15/16</td>
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<td></td>
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<tr>
<td>1 set</td>
<td>Psychrometer ML-224 (with sling handle)</td>
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<td>6685-223-5084</td>
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b. Running Spares (fig. 2).

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Item</th>
<th>Federal stock No.</th>
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<tbody>
<tr>
<td>1</td>
<td>Psychrometer ML-224</td>
<td>6685-223-5084</td>
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<tr>
<td>3</td>
<td>Thermometer</td>
<td>7A 1324A/3</td>
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<tr>
<td>5</td>
<td>Fuse</td>
<td>5920-189-0846</td>
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<tr>
<td>6</td>
<td>Lamp LM-27</td>
<td>6240-057-2887</td>
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<tr>
<td>99</td>
<td>Wick</td>
<td>9390-284-6158</td>
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<tr>
<td>1</td>
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<td>6635-408-4818</td>
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