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ARMY AIR FORCES
TECHNICAL ORDER No. 08-10-107

PART OF TEST EQUIPMENT IE-46A
INSTRUCTION BOOK

FOR

OPERATION and MAINTENANCE

OF

FREQUENCY METER BC-906-C
(PART OF TEST EQUIPMENT FOR IE-46-A)

MANUFACTURED BY
PHILCO CORPORATION
PHILADELPHIA, PA.

ORDER No. 3348-WF-43



RESTRICTED

PUBLISHED BY AUTHORITY
OF
THE CHIEF SIGNAL OFFICER

NOVEMBER 25, 1942

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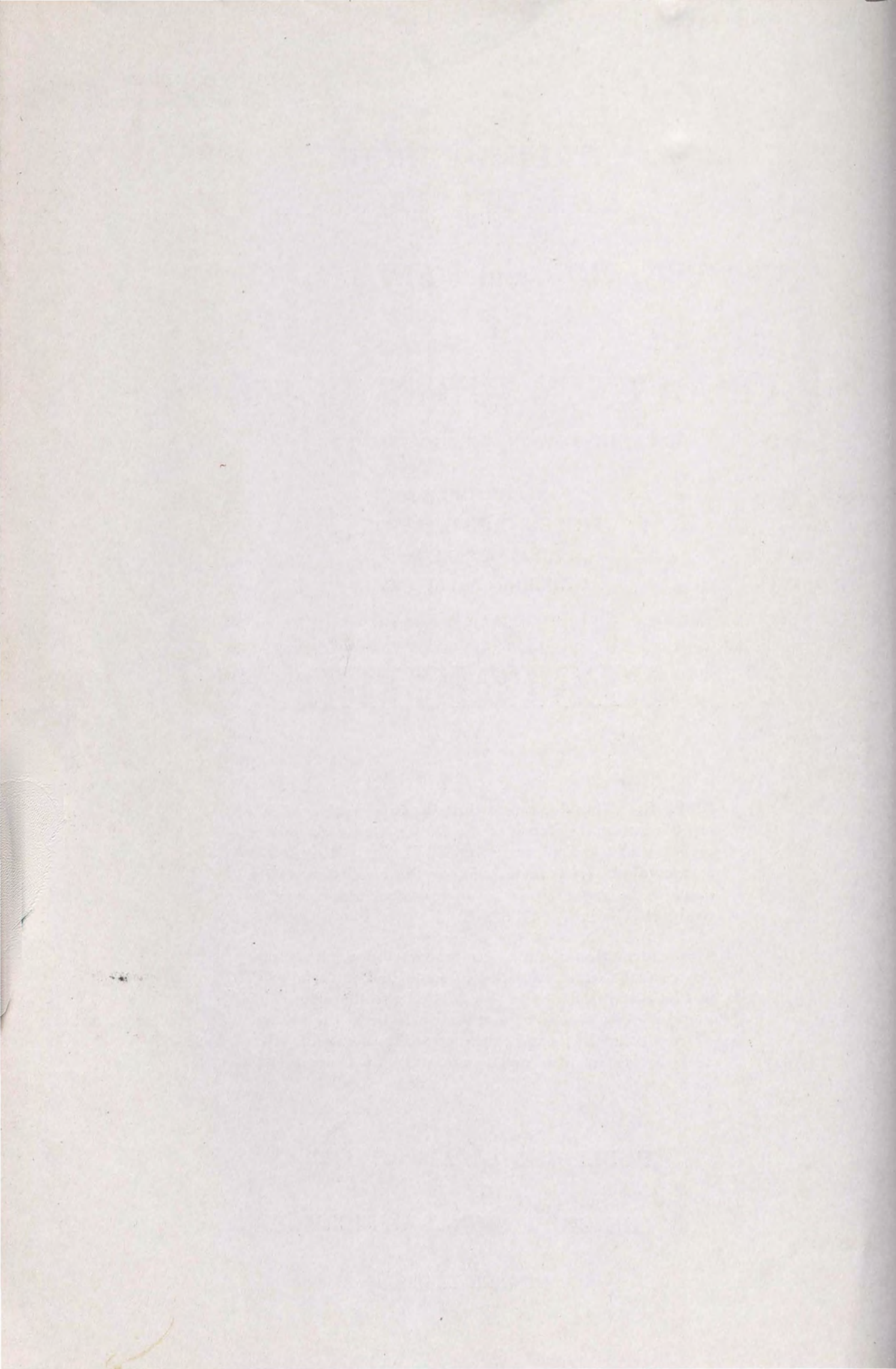
RESTRICTED

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REPORT OF MAJOR FAILURE

In the event of major failure of any of the component units of this equipment a report shall be submitted in the form indicated below. Copies of this report shall be forwarded to the Chief, Signal Section, Air Service Command, Patterson Field, Fairfield, Ohio, and to the Director, Signal Corps Aircraft Signal Service, Wright Field, Ohio.

1. Contract or order number
2. Organization and station
3. Nomenclature of equipment
4. Nomenclature of component unit
5. Date and nature of failure
6. Type of airplane in which installed



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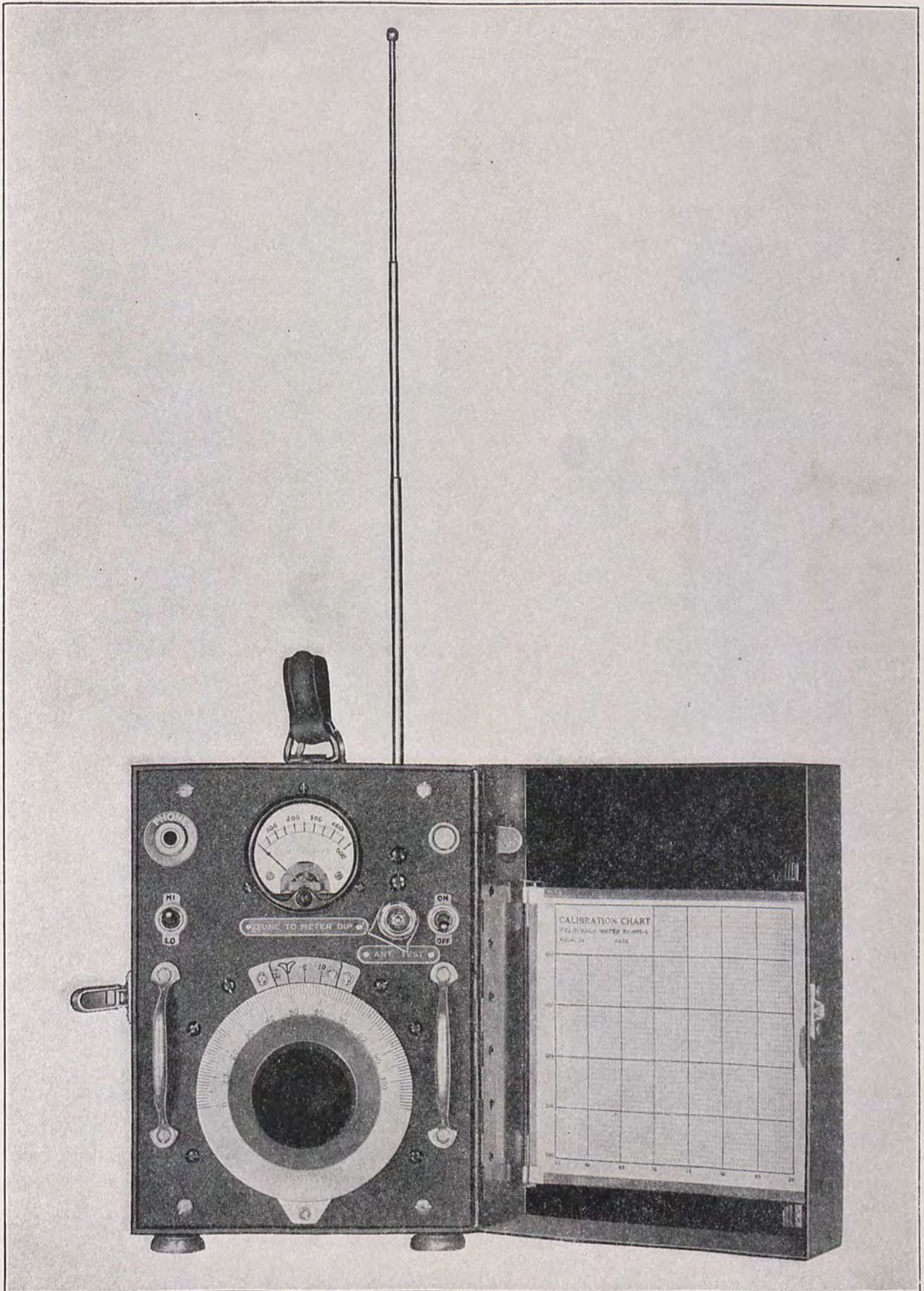


FIGURE 1—FREQUENCY METER BC-906-C, FRONT VIEW, DOOR OPEN AND ANTENNA IN PLACE

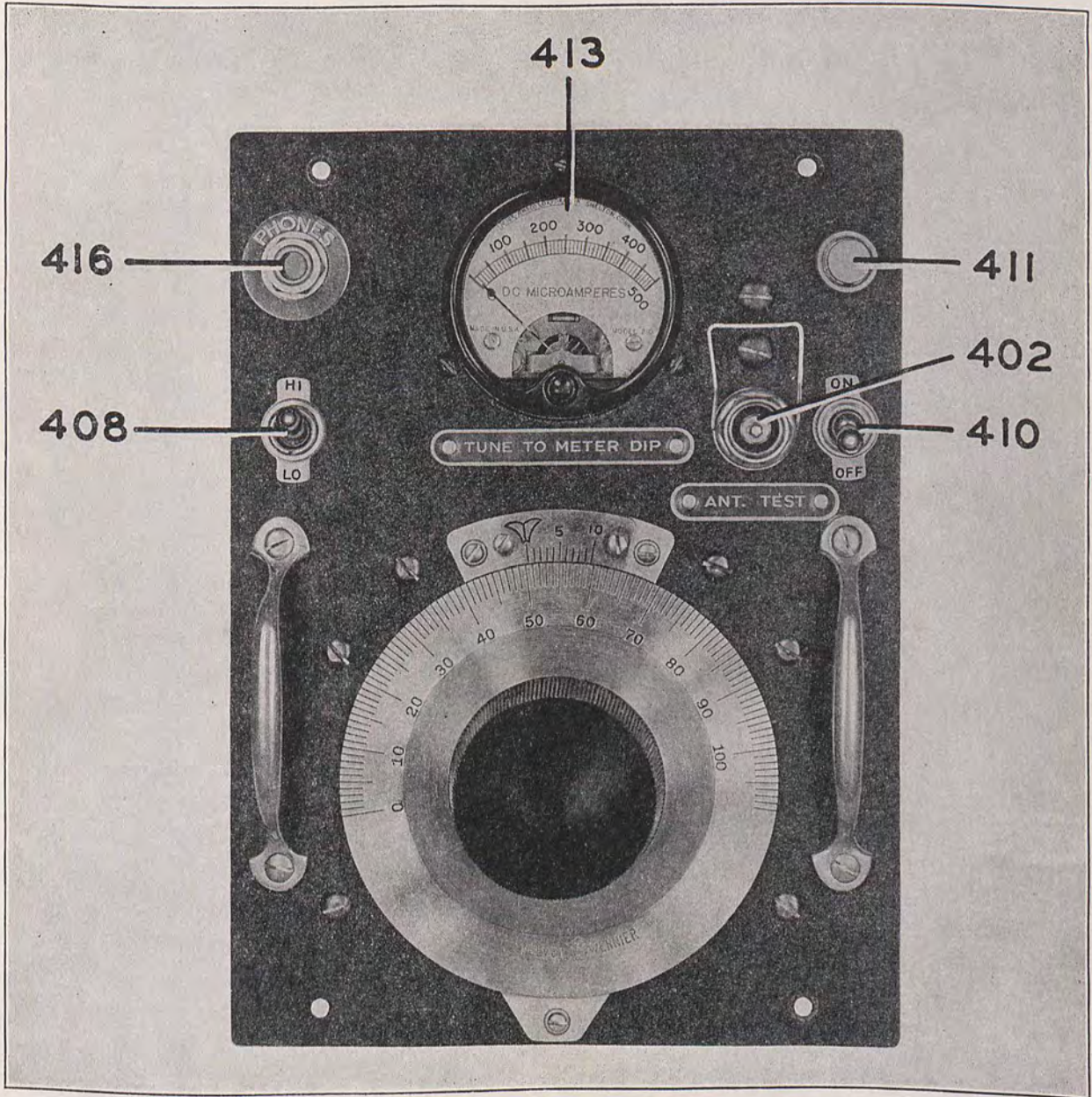


FIGURE 2—FREQUENCY METER BC-906-C, PANEL VIEW, CASE REMOVED

SECTION I

GENERAL DESCRIPTION OF FREQUENCY METER BC-906-C

1. Use

Frequency Meter BC-906-C is an absorption-type frequency meter intended for use with Radio Receiver BC-1066-A. It may be used either to determine the frequency of an oscillating receiver or a signal generator, or it may be used to tune a signal generator or an oscillating receiver to a desired frequency.

2. Case

The instrument is housed in a black, wrinkle-finished metal cabinet fitted with a door. When closed, this door not only protects the dial, meter, etc., which are mounted on the panel, but through the action of an automatic push-button switch, assures the operator that the power is turned off.

3. Antenna

Mounted inside the door is a calibration chart and the extendible type ANTENNA, which is used with Frequency Meter BC-906-C. When the frequency meter is being operated, the antenna is plugged into its socket through a hole in the top of the instrument case. It may be extended to its entire length or it may be used only partially extended. The sensitivity of this meter varies with antenna length. If necessary adjust the length of the antenna for maximum sensitivity.

4. Panel

Mounted on the panel is a friction, vernier-drive DIAL, which is equipped with a vernier attachment enabling the scale to be read in tenths of a division. Also mounted on the panel are: a microammeter which shows a minimum reading when the instrument is at resonance with a source of radio-frequency energy; a SOCKET for a co-axial connector (Terminal TM-201), which is wired in parallel with the antenna socket mentioned above; an "OFF" "ON" switch; and a "HI" "LO" switch, used to vary the sensitivity of the frequency meter.

5. Batteries

Frequency Meter BC-906-C is completely self-contained, for the batteries used in the operation of the instrument are contained in a battery compartment located within the meter. Two batteries are required: one 1½ volt "A" battery (Battery BA-35) and one 45-volt "B" battery (Battery BA-53-A).

6. Installation of Batteries

These batteries are installed in the battery box as follows:

- a. Loosen the DZUS fastener at the rear of the meter housing.
- b. Remove the four screws at the four corners of the panel.
- c. Slide the frequency meter out of its case.

NOTE: THE ANTENNA MUST BE REMOVED FROM ITS SOCKET ON THE TOP OF THE FREQUENCY METER BEFORE THE CASE CAN BE REMOVED.

- d. Remove the cover of the battery box (the black box located on the top of the instrument).
- e. Connect the green "+1.5" volt lead to the "+" terminal on Battery BA-35, and the blue "-1.5" volt lead to the "-" terminal on Battery BA-35.

Pars. 6-8

- f. Insert Battery BA-35 into the battery box with the terminals toward the front of the meter as shown in Figure 4.
- g. Connect the **red** "+45" volt lead to the "+45" terminal on Battery BA-53-A.
- h. Connect the **yellow** "-45" volt lead to the **negative** terminal on Battery BA-53-A.
- i. Slide Battery BA-53-A edgewise into the battery box (in the position shown in Figure 4). Do not force. If it is necessary to force Battery BA-53-A into place, then Battery BA-35 has not been correctly installed.
- j. Replace the top of the battery box.
- k. Replace Frequency Meter BC-906-C in its cabinet.
- l. Fasten the DZUS fastener at the rear of the cabinet and replace the four screws through the panel.
- m. Be sure to get the meter right-side up in its cabinet so that the antenna socket will be on top.

7. Weight

The weight of Frequency Meter BC-906-C, complete, is 17.8 pounds.

8. Components

Principal components of Frequency Meter BC-906-C include the following:

- Extendible type antenna
- Tube VT-172 (IS5)
- Battery BA-35
- Battery BA-53-A
- Calibration Chart

SECTION II

PREPARATION FOR USE

9. Procedure

In attempting to operate this equipment, the following instructions should be followed:

- a. Open the door to Frequency Meter BC-906-C.
- b. Remove the extendible-type antenna from its clip just inside the door, extend it to its full length and insert it through the hole in the top. Be sure that the base of the antenna is firmly in the socket.
- c. Throw the "OFF" "ON" switch to the "ON" position.
- d. For use with low-power signal generators and oscillating receivers, set the "HI" "LO" switch on "HI."
- e. Check the meter deflection; it should be around 400 to 450 divisions on the microammeter scale. If deflection is not well above 250 on the meter scale, check the battery voltages with a 1,000 ohms-per-volt voltmeter in accordance with paragraph 10 of SECTION III. If the microammeter reads low, but the battery voltage is satisfactory, the tube should be replaced in accordance with paragraph 11 of SECTION III.

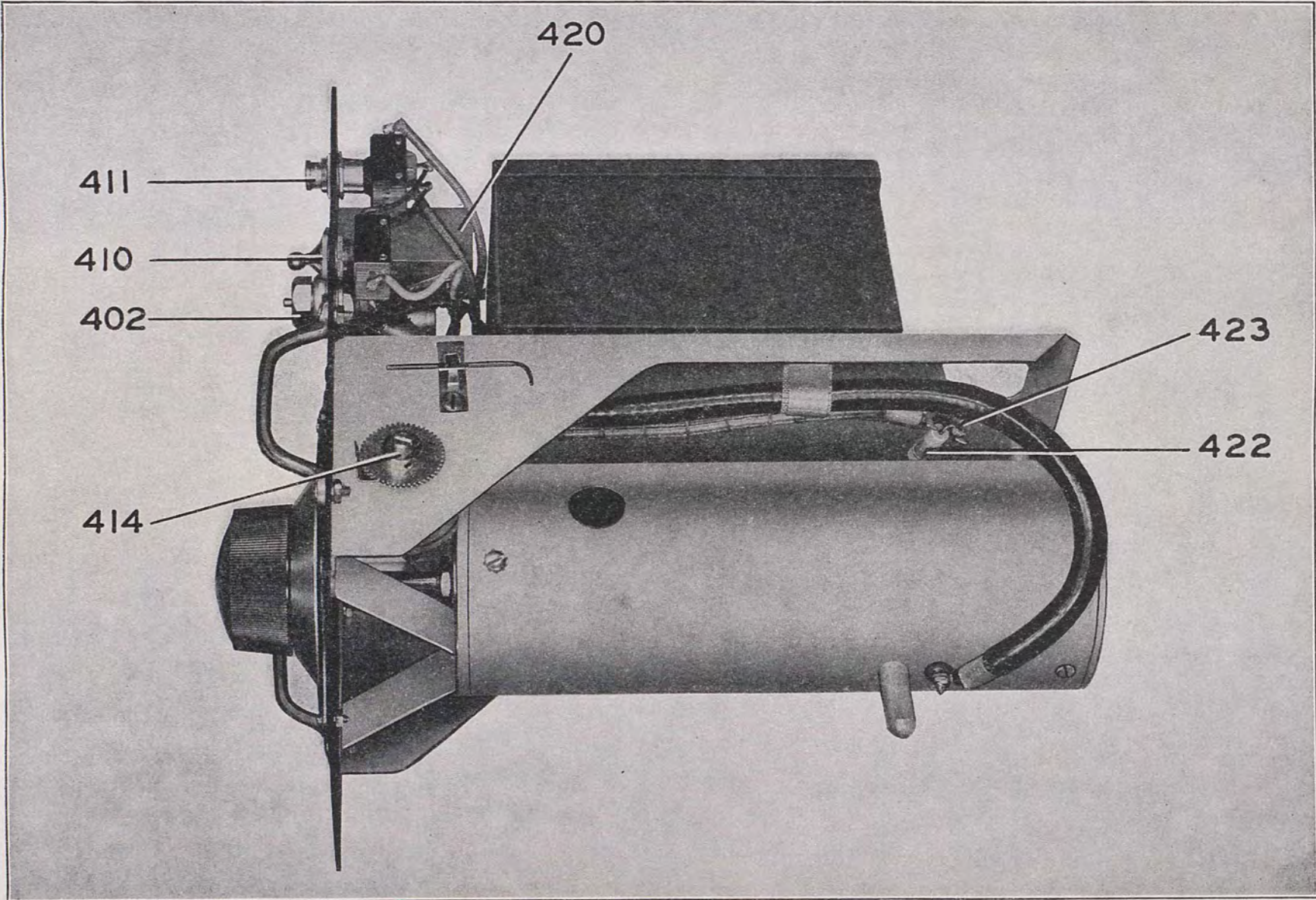


FIGURE 3—FREQUENCY METER BC-906-C, RIGHT-SIDE VIEW, CASE REMOVED

SECTION III MAINTENANCE

10. Checking Batteries

The battery voltages should be checked as follows:

- a. The frequency meter should be turned on 5 or 10 minutes before carrying out the subsequent procedure.
- b. Remove the frequency meter from its case (see a, b, c, of paragraph 6, SECTION I).
- c. Note switch terminals in upper right-hand corner behind panel. The red-coded lead is connected to "+45" terminal of the "B" battery; the green-coded lead is connected to "+1.5" terminal of the "A" battery.
- d. A prod from a voltmeter may be touched to these terminals and the circuit completed to the panel for measuring the battery voltages. The "A" battery voltage should not be less than 1.2 volts; the "B" battery voltage should not be less than 40 volts. If voltages are lower than these values, the battery should be replaced in accordance with SECTION I, paragraph 6.

11. Replacing the Tube

- a. Replace the questionable tube by one known to be good.
- b. Note Item 414 of Figure 3, a rheostat used as a shunt for the meter. This rheostat has a screw for screw driver adjustment. When the frequency meter is removed from its case, this adjusting screw can be seen by looking at the side of the frequency meter. With the frequency meter turned on, and with no signal input to the frequency meter, this screw should be adjusted so that a deflection of 450 is obtained on the meter.

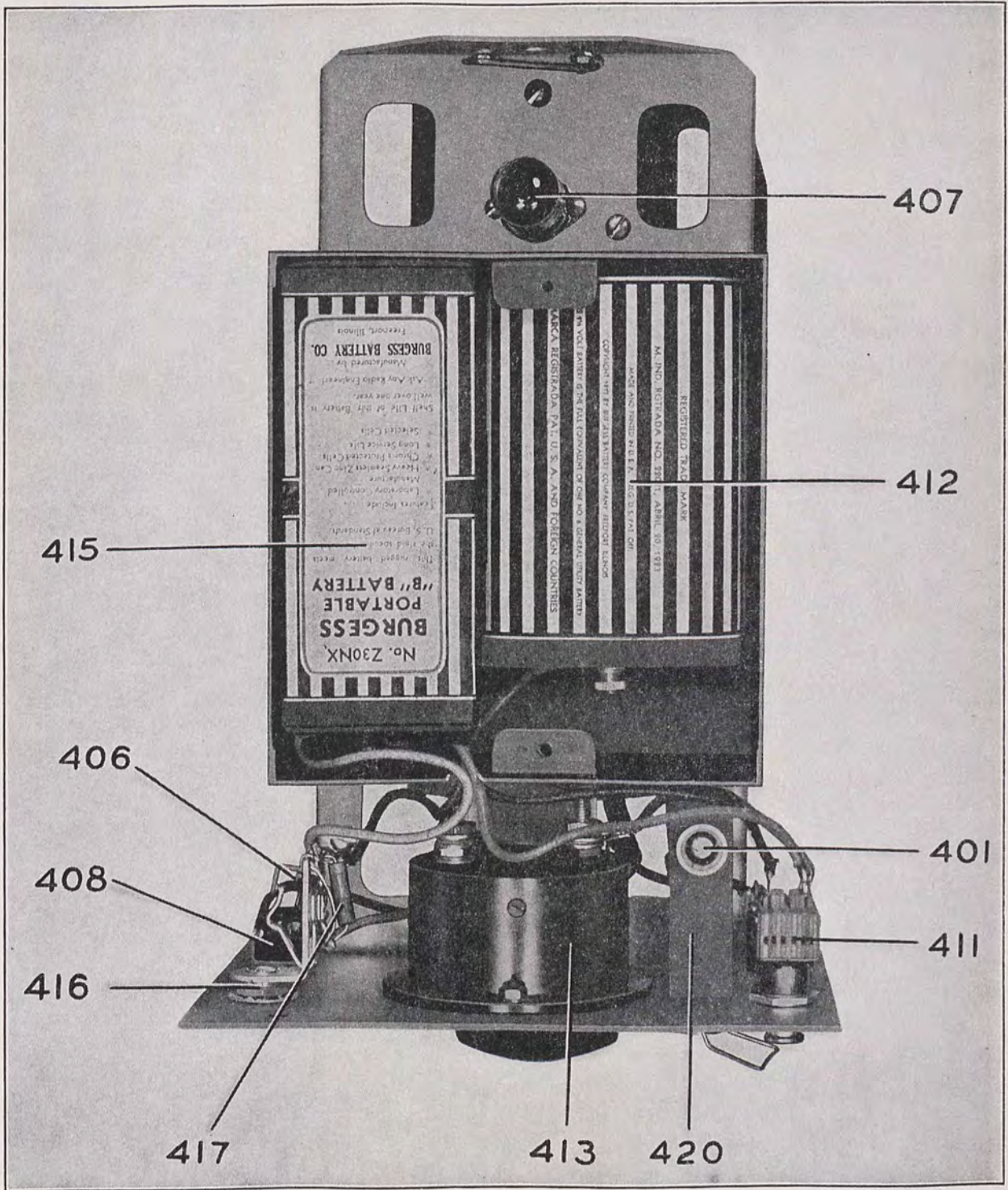


FIGURE 4—FREQUENCY METER BC-906-C, TOP VIEW, CASE REMOVED

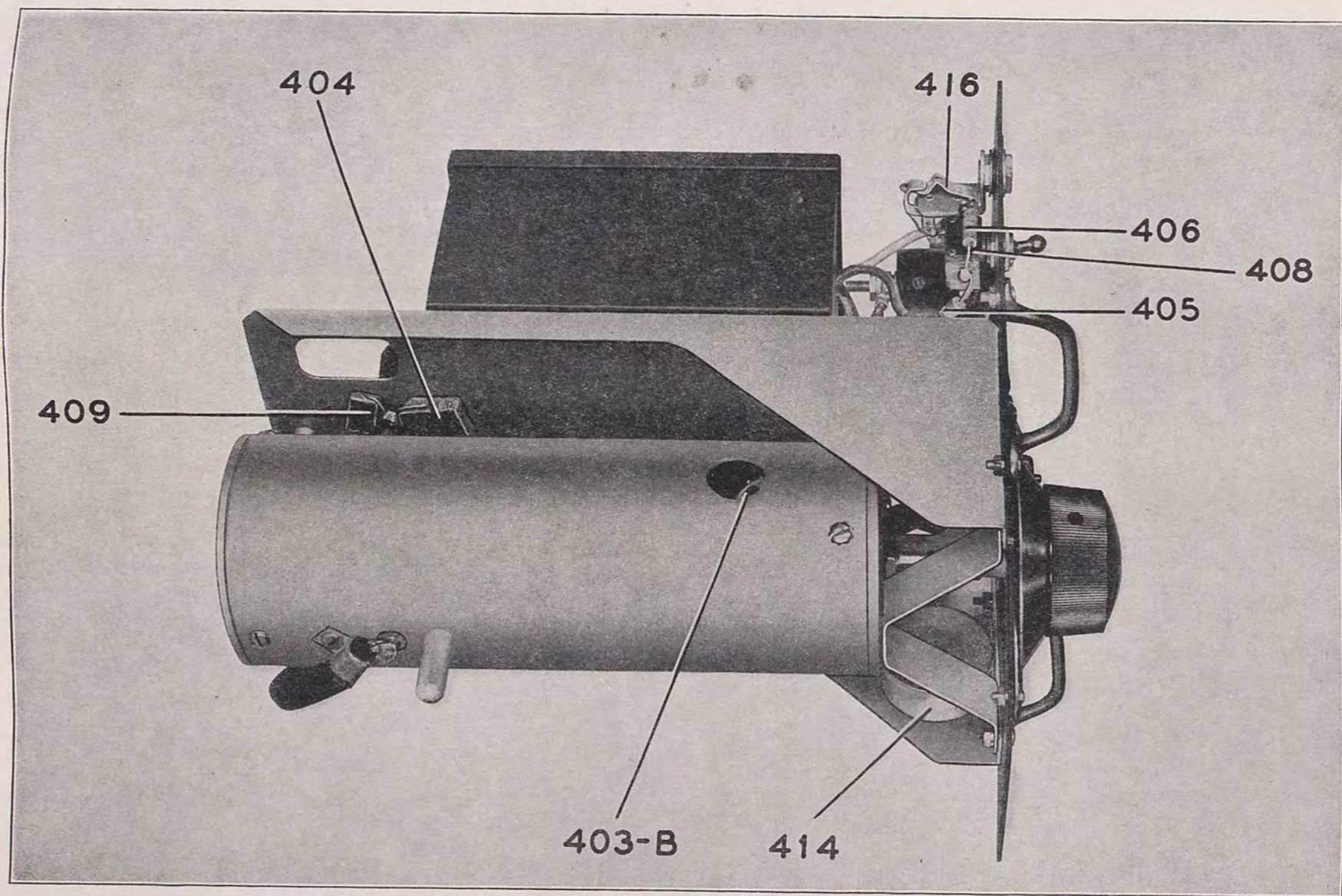


FIGURE 5—FREQUENCY METER BC-906-C, LEFT SIDE VIEW, CASE REMOVED

SECTION IV

SUPPLEMENTARY DATA

12. Tube Characteristics

TUBE VT-172 (Commercial Type IS5) (Pentode Unit)

Filament voltage	1.4
Filament current (amps.)	0.05
Plate voltage (max.)	90
Screen voltage (max.)	90
Grid voltage	0
Plate current (ma)	1.2 (with 45 volts plate supply)
Screen current (ma)	0.3 (with 45 volts screen supply)
Plate resistance (ohms)	500,000 (approximate)
Transconductance (micromhos)	525 (with plate and screen supplies at 45 volts)

NOTE: The diode is located at the negative end of the filament and is independent of the pentode unit except for the common filament.

BASING: Looking at the bottom of the tube—(pins are numbered in the following beginning with Pin No. 1, the first in a clockwise direction from the blank space, and continuing about the base in a clockwise direction).

Pin No. 1	Filament -
Pin No. 2	No Connection
Pin No. 3	Diode Plate
Pin No. 4	Pentode Screen
Pin No. 5	Pentode Plate
Pin No. 6	Pentode Grid
Pin No. 7	Filament +

TABLE OF REPLACEABLE PARTS

Ref. No.	Signal Corps Stock No.	Name of Part	Description	Function	Supplier	Drawing Numbers		
						Supplier	Philco	Signal Corps
FREQUENCY METER BC-906-C								
401		Antenna Socket	Threaded-mounting; single spring contact. Spring, beryllium copper; shank, brass; nickel plated. 4-36 threads for $\frac{7}{16}$ "; spring, $2\frac{5}{32}$ ". Spring when compressed to fit 0.169" diameter hole. (Ucinite Type 152063, or equal.)	Attach extendible type antenna	UCIN	152063	258-6190	
402		Terminal TM-201	Co-axial socket. For Coupling MC-320, or Coupling MC-277 (British Type 10H/528) panel mounting.	For attachment of external antenna	AMPH		358-1615	
403-A		Capacitor, variable	4-plate; 2 stationary; 2 rotary, soldered to rotor shaft, silver plated, ceramic end plates. Single hole mounting, $\frac{3}{8}$ "-32 thread, $1\frac{3}{16}$ " long. Hex. nut, $\frac{1}{4}$ " shaft, with 0.094" hole, 1.437" from mounting base. Length of shaft and mounting to front plate, $1\frac{3}{4}$ ". Connection lugs at rear. Capacity 4.3 mmf. minimum; effective maximum 13.6 mmf. ± 0.5 mmf.; absolute maximum 17.9 mmf. Philco Part No. 351-1039. $2\frac{3}{4}$ " x $1\frac{7}{64}$ " x $1\frac{3}{64}$ " overall.	Tuning resonant circuit	OAK	676-S7	Part of 358-2770	
403-B		Capacitor, variable	1.5 mmf. minimum, 7 mmf. maximum. Trimmer Type NP (Erie Resistor Corp. Style TS-2-A); $\frac{4}{64}$ " x $\frac{5}{64}$ " x $\frac{3}{8}$ " ceramic. Philco Part No. 351-1033.	Calibration of 403-A	ERIE	NPO-TS2A	Part of 358-2770	
404		Capacitor,	Mica, 5000 mmf. $\pm 10\%$; XM262 bakelite molded case; pigtail terminals. Approx. dimensions, $\frac{3}{4}$ " x $\frac{3}{4}$ " x $\frac{1}{4}$ ". 300 v d-c wo. v	Diode load by-pass	MCAM ELMO	WXM 502L	60-250634	
405		Resistor	1.5 megohms $\pm 10\%$; $\frac{1}{2}$ watt carbon, insulated; pigtail terminals. Approx. dimensions, $\frac{5}{8}$ " x $\frac{3}{16}$ ".	Diode load	STAC IRC	MB- $\frac{1}{2}$	66-5153340	

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Ref. No.	Signal Corps Stock No.	Name of Part	Description	Function	Supplier	Drawing Numbers		
						Supplier	Philco	Signal Corps
FREQUENCY METER BC-906-C—Continued								
406		Resistor	0.47 megohms $\pm 10\%$; $\frac{1}{2}$ watt carbon, insulated; pigtail terminals. Approx. dimensions, $\frac{5}{8}$ " x $\frac{3}{16}$ "	Diode load	STAC IRC	MB- $\frac{1}{2}$	66-4473340	
407		Tube VT-172	Diode-pentode "button" base (IS5)	Rectifier, amplifier	KENR SYLV TUNG	IS5 IS5 IS5	453-1368	
408		Sensitivity switch	Toggle switch, SPDT. similar to Arrow-Hart & Hegeman Elec. Co. Type 21349, except threaded mounting bushing to be $\frac{1}{32}$ " long. To be supplied with hex. nut and knurled ring nut. (As made by The Arrow-Hart & Hegeman Electric Co., Hartford, Conn. or equal)	Vary sensitivity of instrument	AH & H	21349	452-1045	
409		Capacitor	Mica, 50 mmf. $\pm 10\%$; XM262 bakelite molded case; pigtail terminals. Approx. dimensions, $\frac{7}{16}$ " x $\frac{11}{16}$ " x $\frac{3}{16}$ ". 300 v d-c wo. v	Filament r-f by-pass	MCAM		60-050637	
410		Switch	Toggle, DPST. Similar to Arrow-Hart & Hegeman Electric Co. Type 20902, except threaded mounting bushing to be $\frac{1}{32}$ " long. To be supplied with hex. nut and knurled ring nut. (As made by Arrow-Hart & Hegeman Electric Co., Hartford, Conn., or equal) $\frac{1}{2}$ " single hole mounting, $\frac{1}{16}$ " x $\frac{15}{8}$ " x $\frac{15}{16}$ " overall.	"OFF" "ON" switch	AH & H	20902	452-1035	
411		Switch	"Push-to-break" DPST; both circuits normally on. To be supplied with hex. nut, one knurled ring nut, and one lockwasher. (The Arrow-Hart & Hegeman Electric Co., Type 20908 or equal). $\frac{1}{2}$ " single hole mounting. $\frac{15}{16}$ " x $\frac{5}{8}$ " x $1\frac{11}{16}$ " overall	Automatic switch (opens battery circuit when door is closed)	AH & H	20908	452-1036	

Ref. No.	Signal Corps Stock No.	Name of Part	Description	Function	Supplier	Drawing Numbers		
						Supplier	Philco	Signal Corps
FREQUENCY METER BC-906-C—Continued								
412		Battery BA-35	1½ volt dry cell Burgess 4 FH or equivalent	Heat filament	BURG GEND	4FH	461-1001	
413		Meter	0 to 500 microammeter; 2¼" round flush bakelite case; 1 ³¹ / ₃₂ " scale length. Terminals to be 2 ³ / ₃₂ " in length. De Jur Type 210. (As made by De Jur Amsco Corp., Sheldon, Conn., or equal.) 2¾" x 2⅛" overall. 60 degree mounting holes, one on vertical axis at top, ⅛" in from edge	Show resonance point	DEJA	210	455-1015	
414		Rheostat, gear and detent assembly	500 ohms +30% -10%, carbon, linear. 280 degrees rotation. ¼" slotted shaft. Length of shaft and mounting, 1 ³ / ₁₆ ". Single hole mounting 3/8"-32 thread. 3/8" long, 1 ¹³ / ₁₆ " length x 1 ⁹ / ₃₂ " diameter. (Philco Part No. 353-5069.) Rheostat and detent mounted together as one item	Vary meter reading	PC		358-2769	
415		Battery BA-53-A	45 volt dry cell Burgess Z-30-N or approved equivalent	Supply plate voltage	BURG GEND	Z-30-N	461-1002	
416		Phone jack	Mallory Midget Type A-2, or equal; to fit Plug PL-55; 1" x 1 ¹⁹ / ₃₂ "; 3/8-32 thread mounting 5/16" long, equipped with hex. nut. Single contact break, contact insulated	Phone connection	MALLO CHIT	A-2	358-1195	
417		Resistor	2200 ohms ±10%; ½ watt; carbon, insulated, pigtail terminals. Approx. dimensions 5/8" x 3/16"	Load across output	IRC STAC	MB-½	66-2223340	
418		Tube socket	Miniature (for "button" base tube) mica filled bakelite with riveting plate. Mounting holes 7/8" between centers; 5/8" hole for mounting. Amphenol Type 64-7PT (as made by The American Phenolic Corp., 1250 W. Van Buren St., Chicago, or equal). 1⅛" x 3/4" x 3/4" overall	Hold Tube VT-172	CINCH AMPH	64-7PT	257-6038	

Ref. No.	Signal Corps Stock No.	Name of Part	Description	Function	Supplier	Drawing Numbers		
						Supplier	Philco	Signal Corps
FREQUENCY METER BC-906-C—Continued								
419		Antenna	Extendible type; 8 $\frac{3}{8}$ " collapsed, 20" extended. Base hole 0.171" dia., 1 $\frac{3}{16}$ " deep. Mounting 0.375" dia., 1 $\frac{1}{8}$ " long. 1st section 7 $\frac{5}{8}$ " long; 0.218" diameter; 1/4" diameter ball on top of third section. Brass; copper nickel chromium bright finish. Telescopic sections to be smooth sliding	Pick up radiations	BSNY		358-1667	
420		Antenna socket support	Laminated phenolic Grade C or L; length 1 $\frac{3}{16}$ "; Width, 5/8"; depth, 1". Hole for mounting antenna socket 3/4" deep in one end, 0.377" diameter. Mounting holes 0.5" apart in one end threaded 8-32 for 3/8". All cut edges to be coated with bakelite varnish	Hold antenna socket	SYNTH		257-7342	
421		Handle	Black leather with 3/4" nickel plated rings; 7" long. Gralnick Bros., Inc., Type 415. (As made by Gralnick Bros., Inc., 10th & Diamond Sts., Philadelphia, or equal.)	Carry instrument	GRAL		358-2017	
422		R-F choke	25 turns #34 DSC copper wire, 68 turns per inch. Ceramic form 0.250" x 1 $\frac{3}{16}$ ". Pigtail terminals 1.25" long. Wax impregnated and dipped. Using standard test jig, capacity difference between 6 and 12 megacycles is 223.25 mmf. $\pm 5\%$. 1000 cycle inductance is 2.66 mh.	R-f isolating impedance	PC		352-1042	
423		Wiring panel	2-lug, 1 ground and mounting. Lugs plated, and riveted to insulating strip, which is 3/32" XXX bakelite or A.S.T.M. Grade 5 canvas bakelite, or equal, 7/8" long, 3/8" wide. 1/2" between lugs.	Wiring r-f choke	CINCH		358-2622	

LIST OF SUPPLIERS

Supplier Code	Supplier's Name and Address	Supplier Code	Supplier's Name and Address
AMPH	American Phenolic Corp., 1830 S. 54th St., Chicago, Ill.	IRC	International Resistance Co., 401 N. Broad St., Philadelphia, Pa.
AROV	Aerovox Corp., New Bedford, Mass.	KENR	Ken-Rad Tube and Lamp Corp., Owensboro, Ky.
AH&H	Arrow-Hart and Hegeman Electric Co., Hartford, Conn.	KURK	Kurz Kasch Corp., Dayton, Ohio
BSNY	Ben Snyder Corp., Noble and Darien Sts., Philadelphia, Pa.	MALLO	P. R. Mallory & Co., Inc., 3029 E. Washington St., Indianapolis, Ind.
BURG	Burgess Battery Co., Freeport, Ill.	MASM	Massachusetts Machine Shop, 817 Albany St., Boston, Mass.
CINCH	Cinch Manufacturing Corp., 2335 W. Van Buren St., Chicago, Ill.	MCAM	Micamold Radio Corp., 1087 Flushing Ave., Brooklyn, N. Y.
CHIT	Chicago Telephone Supply Co., Elkhart, Ind.	NATC	National Co., Inc., Malden, Mass.
CORDU	Cornell Dubilier Electric Corp., Hamilton Blvd., South Plainfield, N. J.	OAK	Oak Manufacturing Co., 1260 Claybourn Ave., Chicago, Ill.
CH	Cutler-Hammer, Inc., 1333 W. St. Paul Ave., Milwaukee, Wis.	PC	Philco Corporation, C and Tioga Sts., Philadelphia, Pa.
DEJA	De Jur Amsco Corp., Sheldon, Conn.	SPRA	Sprague Specialties Co., North Adams, Mass.
DRAKE	Drake Manufacturing Co., 1713 W. Hubbard St., Chicago, Ill.	STAC	Stackpole Carbon Co., St. Marys, Pa.
ELUT	Electric Utilities, 2900 S. Michigan Ave., Chicago, Ill.	STWS	Stewart Stamping Co., 621 E. 216th St., New York, N. Y.
ELMO	Electric Motive Co., Willimantic, Conn.	SYLV	Sylvania Electric Products, Inc., Emporium, Pa.
ERIE	Erie Resistor Co., Erie, Pa.	SYNTH	Synthane Corporation, Oaks, Pa.
GEND	General Dry Battery, 13000 Athens Ave., Cleveland, Ohio	TELR	Teleradio Engineering Co., 484 Broome St., New York, N. Y.
GE	General Electric Co., Bridgeport, Conn.	TUNG	Tungsol Lamp Works, 95 Eighth Ave., Newark, N. J.
GENR	General Radio Co., 30 State St., Cambridge A, Mass.	UCIN	Ucinite Manufacturing Co., 459 Watertown St., Newtonville, Mass.
GRAL	Gralnick Bros., Inc., 10th and Diamond Sts., Philadelphia, Pa.	WILM	Wilmington Fibre Co., Box #1028, Wilmington, Del.
HAML	Hammerlund Manufacturing Co., 424 W. 33rd St., New York, N. Y.		

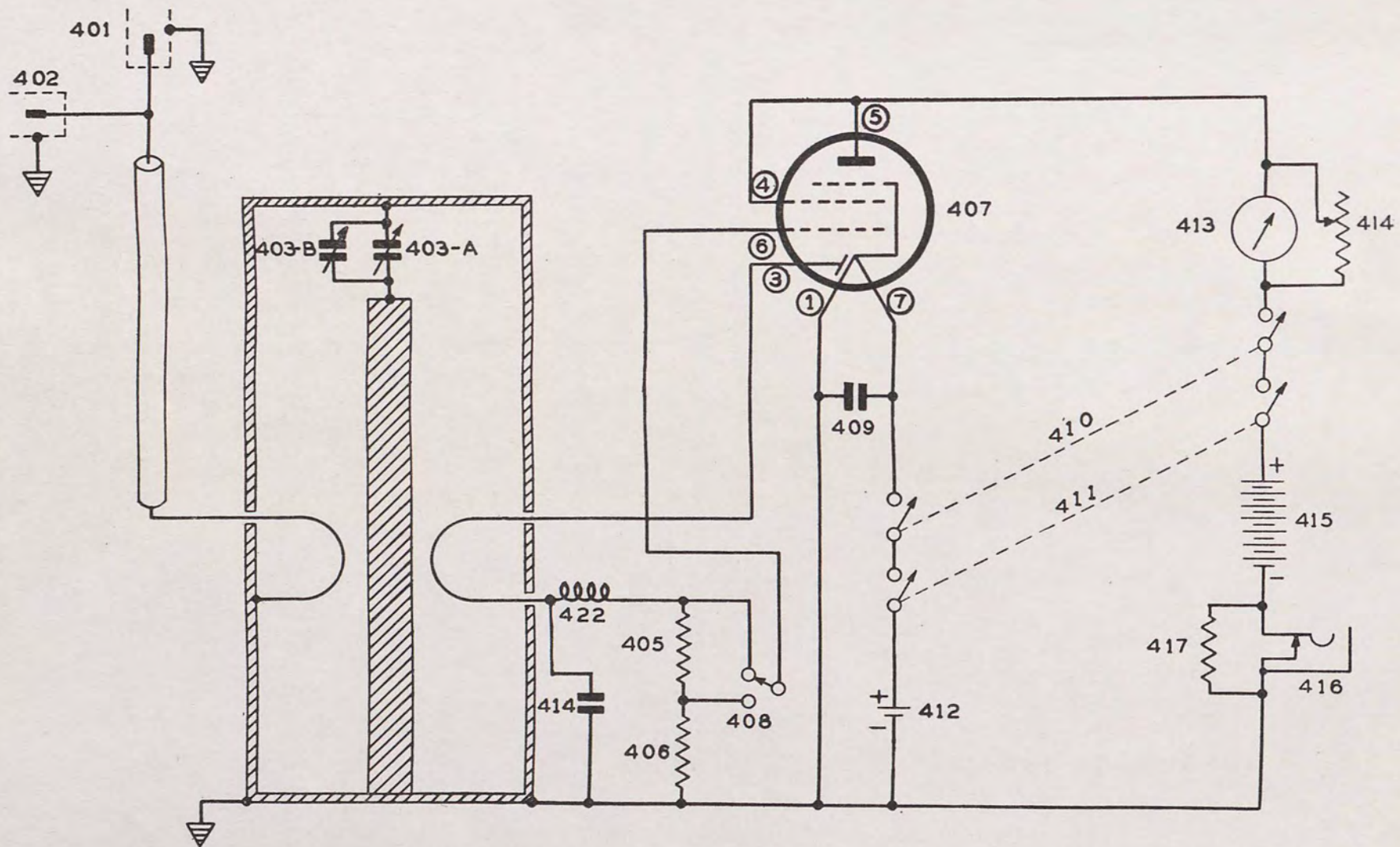


FIGURE 6—FREQUENCY METER BC-906-C, SCHEMATIC DIAGRAM

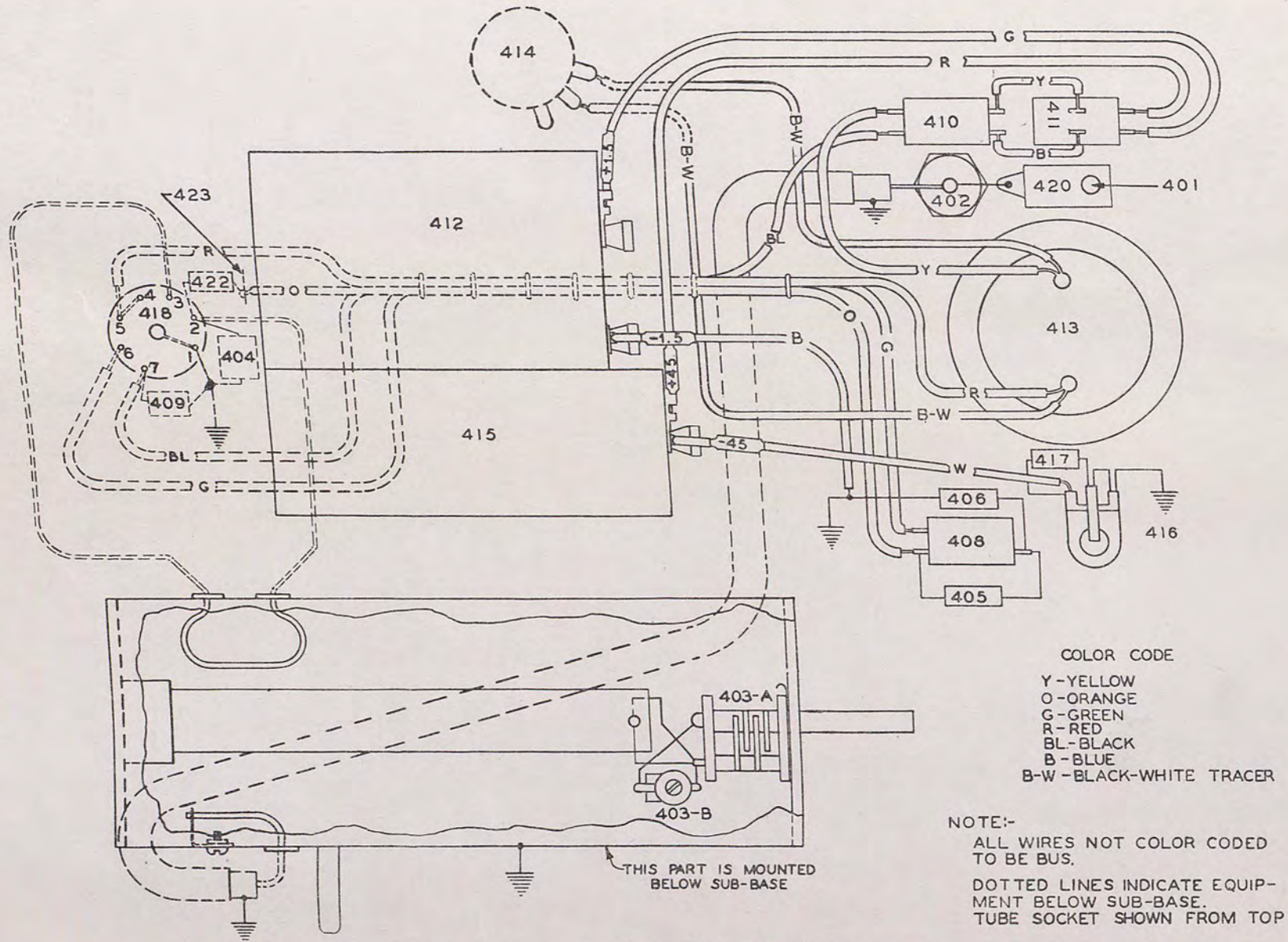


FIGURE 7—FREQUENCY METER BC-906-C, WIRING DIAGRAM

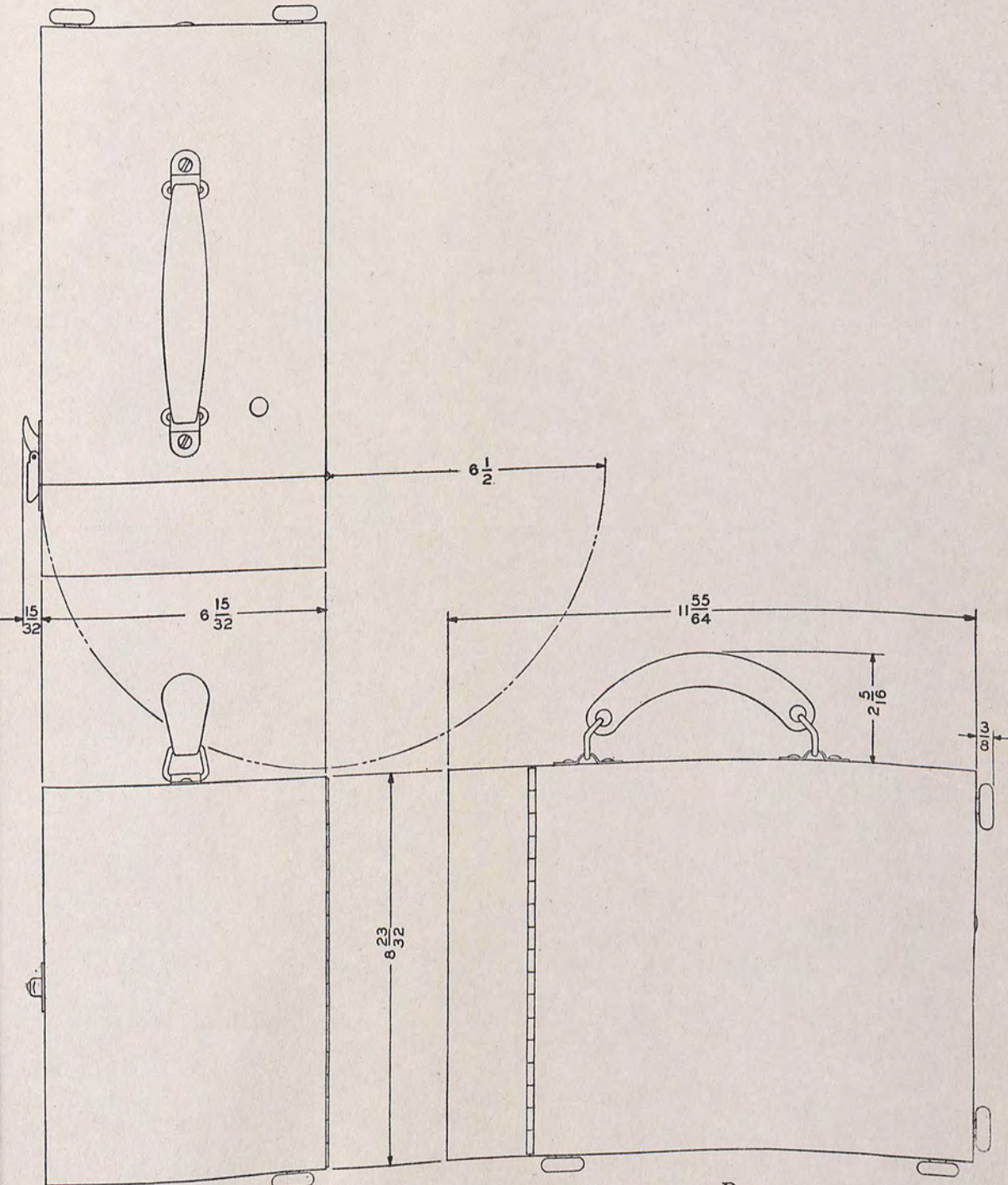
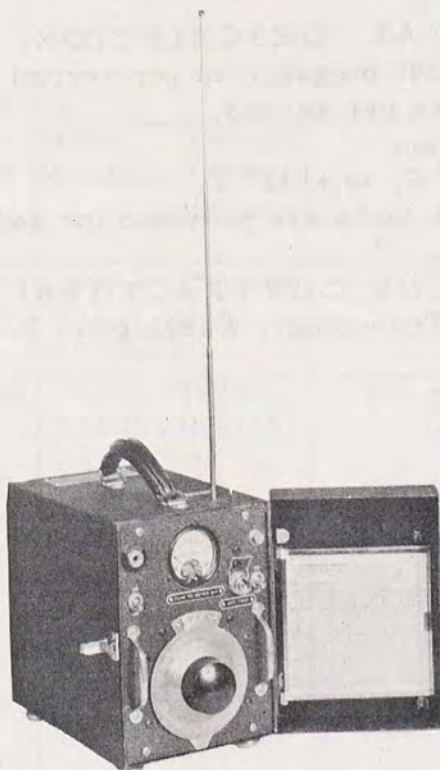


FIGURE 8—FREQUENCY METER BC-906-C, DIMENSIONAL DIAGRAM

FREQUENCY METER BC-906-A
(WAVEMETER, BC-906-A)

R-1



FUNCTIONAL DESCRIPTION:

A portable, general purpose, self-contained absorption-type meter used to determine the frequency of continuous wave, modulated carrier wave or pulsed radar transmitters and local oscillators. Also used to calibrate, check sensitivity and align receivers operating in the proper frequency range.

Resonance is indicated by a dip of the microammeter reading and frequency is determined by the dial setting and the associated calibration charts.

RELATIONSHIP TO OTHER EQUIPMENT:

Model A is replaced by Model B.

Provision is made for external use of the microammeter only in Model E.

ELECTROMECHANICAL DESCRIPTION:

Power Supply: One 45 volt Battery BA-53-A; one 1.5 volt Battery BA-35-A.

Type of Reception: Continuous Wave, Modulated Carrier Wave, Pulse.

(Continued)

	AIR FORCE	NAVY	ARMY
TYPE CLASS.			
STOCK NOS.	1690-212508000	ASO-R16-1-2135	2C1546A
PROCUREMENT INFO.:	USAF Exhibit No. ARL-93		
PROCUREMENT COG.:	USAF	DESIGN COG.: USAF, ARL	
F.I.I.N.:	RDB IDENT. NO.:		2.2.3
16 September 1954	- Electronics Test Equipment -		BC-906-A

FREQUENCY METER BC-906-A
(WAVEMETER, BC-906-A)

ELECTROMECHANICAL DESCRIPTION: (Continued)

Frequency Range: 160 to 200 megacycles per second.

Accuracy: ± 0.5 megacycles per second.

Input: Marconi-Type Antenna.

Temperature Range: -13° F. to $+122^{\circ}$ F.

Auxiliary Features: Phone jacks are provided for audio monitoring on all models.

MANUFACTURERS' OR CONTRACTORS' DATA:

Washington Institute of Technology, Washington, D. C.; Approximate Cost, \$75.00.

TUBE COMPLEMENT:

1 JAN-1S5.

REFERENCE DATA AND LITERATURE:

TO 16-55-348 (Spare Parts List).

SHIPPING DATA:

No. of Boxes	Contents & Identification	Volume (Cu. Ft.)	Over-all Dimensions (inches)			Weight Packed (Lbs.)
			H	W	D	
1	Frequency Meter BC-906-A and accessories. (Domestic Packed)	1.91	14.5	12	19	40
BC-906-A - Electronics Test Equipment - 16 September 1954						

FREQUENCY METER BC-906-A
(WAVEMETER, BC-906-A)

R-1

EQUIPMENT SUPPLIED:

Quant. Per Eq'pt	Name and Nomenclature	Case Mat'l	Stock (USAF) Numbers (Navy) (Army)	Over-all Dimensions (inches)			Weight (Lbs.)
				H	W	D	
1	Frequency Meter BC-906-A (Complete)	Metal	1690-212508000 R16-1-2135 2C1546A	6-1/2	9-1/4	12-3/8	17.8
1	Antenna AN-108-A (Extendable type)	Brass	7CAC-045900 R16-PH-358-1667 2A275-108	20	0.218		
1	Calibration Chart			5-5/8	5-1/2		
1	Tube JAN-1S5		3300-234155000 2J1S5	2-1/8	3/4		
1	Transportation Case	Wood		14	17-3/4	10	15.2
1	Instruction Book AN0840BC906-2		2C154C/B1				
						Total:	33.0

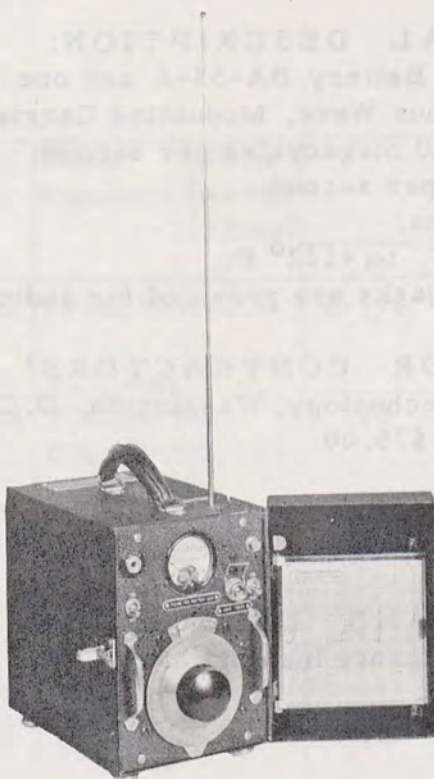
16 September 1954

- Electronics Test Equipment -

BC-906-A

FREQUENCY METER BC-906-B
(WAVEMETER BC-906-B)

R-1



FUNCTIONAL DESCRIPTION:

A portable, general purpose, self-contained absorption-type meter used to determine the frequency of continuous wave, modulated carrier wave or pulsed radar transmitters and local oscillators. It is also used to check sensitivity, calibrate and align receivers operating in its frequency range.

Resonance is indicated by a dip of the microammeter reading, and frequency is determined by the dial setting and the associated calibration charts.

RELATIONSHIP TO OTHER EQUIPMENT:

Part IE-56-A, and IE-56-B.

Model B is replaced by later models.

Provision is made for external use of the microammeter in Model E only.

	AIR FORCE	NAVY	ARMY
TYPE CLASS.			
STOCK NOS.	1690-212518000		2C1546B
PROCUREMENT INFO.:	USAF Exhibit No. ARL-93		
PROCUREMENT COG.:	USAF	DESIGN COG.:	USAF, ARL
F.I.I.N.:		RDB IDENT. NO.:	2.2.3
11 October 1954	- Electronics Test Equipment -		BC-906-B

FREQUENCY METER BC-906-B
(WAVEMETER BC-906-B)

ELECTROMECHANICAL DESCRIPTION:

Power Supply: One 45 volt Battery BA-53-A and one 1.5 volt Battery BA-35-A.
 Type of Reception: Continuous Wave, Modulated Carrier Wave, Pulse.
 Frequency Range: 160 to 220 megacycles per second.
 Accuracy: ± 0.5 megacycle per second.
 Input: Marconi-Type Antenna.
 Temperature Range: -13° F. to $+122^{\circ}$ F.
 Auxiliary Features: Phone jacks are provided for audio monitoring on all models.

MANUFACTURERS' OR CONTRACTORS' DATA:

Washington Institute of Technology, Washington, D. C.; Order No. 1200-WF-42;
 Approximate Cost per Unit, \$75.00.

TUBE COMPLEMENT:

1 JAN-1S5.

REFERENCE DATA AND LITERATURE:

TO 16-40BC906-2 (Maintenance Instructions).

SHIPPING DATA:

No. of Boxes	Contents & Identification	Volume (Cu. Ft.)	Over-all Dimensions (inches)			Weight Packed (Lbs.)
			H	W	D	
1	Frequency Meter BC-906-B and Accessories (Domestic Packed)	1.91	14-1/2	12	19	40
BC-906-B - Electronics Test Equipment - 11 October 1954						

FREQUENCY METER BC-906-B
(WAVEMETER BC-906-B)

R-1

EQUIPMENT SUPPLIED:

Quant. Per Eq'pt	Name and Nomenclature	Case Mat'l	Stock (USAF) Numbers (Navy) (Army)	Over-all Dimensions (inches)			Weight (Lbs.)
				H	W	D	
1	Frequency Me- ter BC-906-B	Metal	1690-212518000 2C1546B	6-1/2	9-1/4	12-3/8	17.8
1	Antenna AN- 108-B (Extend- able type)	Brass	7CAC-045900 R16-PH-358-1667 2A275-108	20	0.218		
1	Calibration Chart			5-5/8	5-1/2		
1	Tube JAN-1S5		3300-234155000 2J1S5	2-1/8	3/4		
1	Transportation Case	Wood		14	17-3/4	10	15.2
1	Instruction Book TO 16- 40BC906-2		2C154C/B1				
						Total:	33.0

11 October 1954

- Electronics Test Equipment -

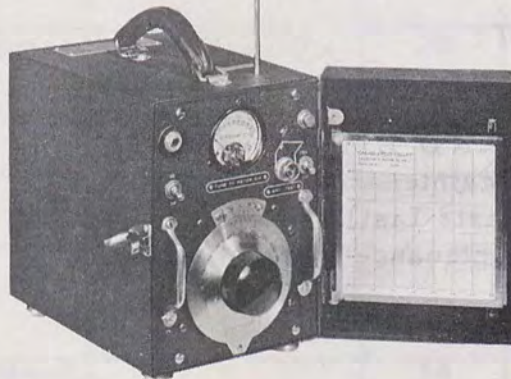
BC-906-B

EQUIPMENT SUPPLEMENT

Quant Per Ed'Pr	Name and Nomenclature	Case Stock Mat'l Numbers (Army)	Over-all Dimensions (Inches)	Weight (Lbs.)	Dimensions	
					H	W
1	Frequency Me- ter BC-908-B	Metal 100-212115000 3C1524B	7-1/4 12 3/8	17.8		
1	Antenna Ad- aptor (Extend- ible type)	Brass KAC-042200 RIF 911-22-1081 1A275-108	0.218			
1	Calibration Chart		2-1/2			
1	Test VAN-102	300-23415000 31152	2-1/8			
1	Transportation Case	Wood	17-3/4	10		12.5
1	Instruction Book TO 16- 441/100-4	3C1524/B1				
	Total:			33.0		

FREQUENCY METER BC-906-C
(WAVEMETER, BC-906-C)

R-1



FUNCTIONAL DESCRIPTION:

A portable, general purpose, self-contained absorption-type meter used to determine the frequency of continuous wave, modulated carrier wave or pulsed radar transmitters and local oscillators. Also used to calibrate, check sensitivity and align receivers operating in the proper frequency range.

Resonance is indicated by a dip of the microammeter reading and frequency is determined by the dial setting and the associated calibration charts.

RELATIONSHIP TO OTHER EQUIPMENT:

Model C is replaced by Model D.

Provision is made for external use of the microammeter only in Model E.

ELECTROMECHANICAL DESCRIPTION:

Power Supply: One 45 volt Battery BA-53-A; one 1.5 volt Battery BA-35-A.

Type of Reception: Continuous Wave, Modulated Carrier Wave and Pulse.

(Continued)

	AIR FORCE	NAVY	ARMY
TYPE CLASS.			
STOCK NOS.	1690-212520000	R16-1-2135	2C1546C
PROCUREMENT INFO.:	USAF Dwg. No. ES-C-4448, USAF Exhibit No. ARL-93.		
PROCUREMENT COG.:	USAF	DESIGN COG.: USAF, C&N	
F.I.I.N.:	RDB IDENT.NO.: 2.2.3		
16 September 1954	- Electronics Test Equipment -		BC-906-C

FREQUENCY METER BC-906-C
(WAVEMETER, BC-906-C)

ELECTROMECHANICAL DESCRIPTION: (Continued)

Frequency Range: 150 to 225 megacycles per second.

Accuracy: ± 0.5 megacycles per second.

Input: Marconi-type Antenna.

Temperature Range: -13° F. to $+122^{\circ}$ F.

Auxiliary Features: Phone jacks are provided for audio monitoring on all models.

MANUFACTURERS' OR CONTRACTORS' DATA:

Philco Corporation, Philadelphia, Pennsylvania; Order Nos. 811-WF-42 and 3348-WF-43; Approximate Cost, \$75.00.

TUBE COMPLEMENT:

1 JAN-1S5.

REFERENCE DATA AND LITERATURE:

CO-AN08-40BC906-2 (Maintenance Instructions).

TO 16-55-348 (Spare Parts List).

TO 16-40 BC906-2 (Maintenance Instructions).

SHIPPING DATA:

No. of Boxes	Contents & Identification	Volume (Cu. Ft.)	Over-all Dimensions (inches)			Weight Packed (Lbs.)
			H	W	D	
1	Frequency Meter BC-906-C and accessories. (Domestic Packed)	1.91	14.5	12	19	40

BC-906-C

- Electronics Test Equipment -

16 September 1954

FREQUENCY METER BC-906-C
(WAVEMETER, BC-906-C)

R-1

EQUIPMENT SUPPLIED:

Quant. Per Eq't	Name and Nomenclature	Case Mat'l	Stock (USAF) Numbers (Navy) (Army)	Over-all Dimensions (inches)			Weight (Lbs.)
				H	W	D	
1	Frequency Meter BC-906-C (Complete)	Metal	1690-212520000 R16-1-2135 2C1546C	6-1/2	9-1/4	12-3/8	17.8
1	Antenna AN-108-C (Extendable Type)	Brass	7CAC-045900 R16-PH-358-1667 2A275-108	20	0.218		
1	Calibration Chart			5-5/8	5-1/2		
1	Tube JAN-1S5		3300-234155000 2J1S5	2-1/8	3/4		
1	Transportation Case	Wood		14	17-3/4	10	15.2
1	Instruction Book AN0840BC906-2		2C154C/B1				
						Total;	33.0

16 September 1954

- Electronics Test Equipment -

BC-906-C

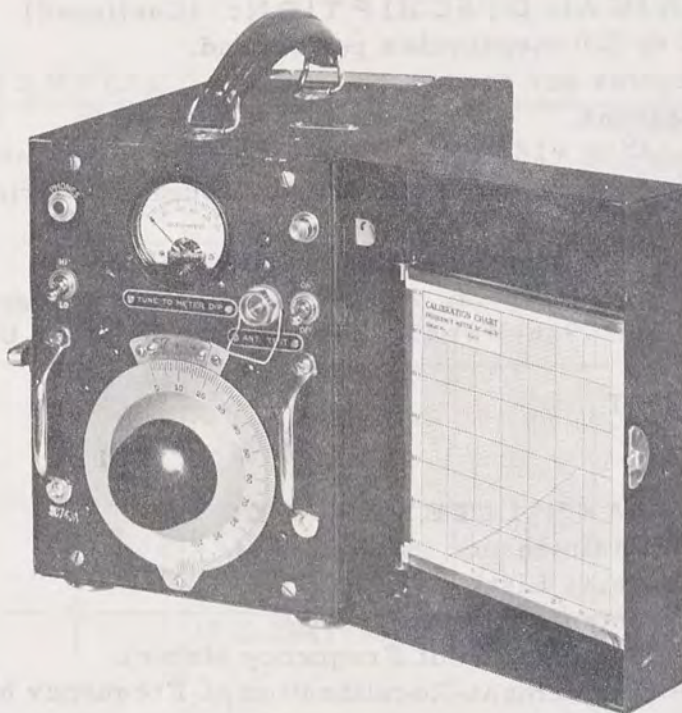
FREQUENCY METER BC-900-C
(WAVELENGTH, BC-900-C)

EQUIPMENT SUPPLIED:

Count Part No.	Name and Description	Case Material (Area)	Block Number (Area)	Dimensions (Inches)			Weight (Lbs.)
				H	W	D	
1	Frequency Meter BC-900-C (Complete)	Metal	148-2125000 H16-1-212 30144C	8-1/2	9-1/4	13-3/8	11.5
1	Antenna AN-108-C (Expendable Type)	Brass	ANAC-08900 H16-108-107 24275-108	20	0.218		
1	Calibration Chart			8-2/8	2-1/2		
1	Tube 1AN-125		300-23412000 21128	2-1/8	3/4		
1	Transmittation Card	Wood		18	17-3/4	19	18.1
1	Instruction Book		20154C B1				
							Total: 33.0

FREQUENCY METER BC-906-D
(WAVEMETER BC-906-D)

R-1



FUNCTIONAL DESCRIPTION:

A portable, general purpose, self-contained, absorption-type meter used to determine the frequency of continuous wave, modulated carrier wave or pulsed radar transmitters and local oscillators. Also used to calibrate, check sensitivity and align receivers operating in the proper frequency range.

Resonance is indicated by a dip of the microammeter reading and frequency is determined by the dial setting and the associated calibration charts.

RELATIONSHIP TO OTHER EQUIPMENT:

Model D is replaced by Model E.

Provision is made for external use of the microammeter only in Model E.

ELECTROMECHANICAL DESCRIPTION:

Power Supply: One 45 volt Battery BA-53-A; one 1.5 volt Battery BA-35-A.

Type of Reception: Continuous Wave, Modulated Carrier Wave and Pulse.

(Continued)

	AIR FORCE	NAVY	ARMY
TYPE CLASS.	Standard		
STOCK NOS.	7CAC-318208-55	ASO-R16-W-2121	2C1546D
PROCUREMENT INFO.:	USAF Dwg. No. ES-C-4448, USAF Spec. No. 271-1789-A		
PROCUREMENT COG.:	USAF	DESIGN COG.:	USAF, C&N
F.I.I.N.:	FUNCTIONAL CLASS. NO.:		2.2.3
16 September 1954	- Electronics Test Equipment -		BC-906-D

FREQUENCY METER BC-906-D
(WAVEMETER BC-906-D)

ELECTROMECHANICAL DESCRIPTION: (Continued)

Frequency Range: 160 to 220 megacycles per second.

Accuracy: ± 0.5 megacycles per second.

Input: Marconi-type Antenna.

Temperature Range: -13° to $+122^{\circ}$ F.

Auxiliary Features: Phone jacks are provided for audio monitoring on all models.

MANUFACTURERS' OR CONTRACTORS' DATA:

Philco Corporation, Philadelphia, Pennsylvania; Order Nos. 811-WF-42 and 3348-WF-43; Contract No. 7916-WF-43; Approximate Cost per Unit, \$75.00.

TUBE COMPLEMENT:

1 JAN-1S5.

REFERENCE DATA AND LITERATURE:

CO AN08-40BC906-2 (Maintenance Instructions).

TO 16-55-348 (Spare Parts List).

TO 16-40BC906-2 (Maintenance Instructions).

TC 16-40BC906-21 (Recalibration of Frequency Meter).

TO 16-40BC906-21A (Supplement-Recalibration of Frequency Meter).

SHIPPING DATA:

No. of Boxes	Contents & Identification	Volume (Cu. Ft.)	Over-all Dimensions (inches)			Weight Packed (Lbs.)
			H	W	D	
1	Frequency Meter BC-906-D with accessories. (Domestic packed)	1.91	14.5	12	19	40

BC-906-D

- Electronics Test Equipment -

16 September 1954

FREQUENCY METER BC-906-D
(WAVEMETER BC-906-D)

R-1

EQUIPMENT SUPPLIED:

Quant. Per Eq'pt	Name and Nomenclature	Case Mat'l	Stock (USAF) Numbers (Navy) (Army)	Over-all Dimensions (inches)			Weight (Lbs.)
				H	W	D	
1	Frequency Meter BC-906-D (Complete)	Metal	7CAC-318208-55 R16-W-2121 2C1546D	6-1/2	9-1/4	12-3/8	17.8
1	Antenna AN-108-D (Extendable Type)	Brass	7CAC-045900 R16-PH-358-1667 2A275-108				
1	Calibration Chart			5-5/8	5-1/2		
1	Tube JAN-1S5		3300-234155000 2J1S5	2-1/8	3/4		
1	Transportation Case	Wood		14	17-3/4	10	15.2
1	Instruction Book		2C154C/B1				
						Total:	33.0

16 September 1954

- Electronics Test Equipment -

BC-906-D

FRIGIDITY WATER BENCH (WATERMETER BC-108-D)

NOT FINISHED LAUNCH MEMORANDUM

Approved for release by the cognate activity on 02-01-61

Approved for release by the cognate activity on 02-01-61

EQUIPMENT SUPPLIED:

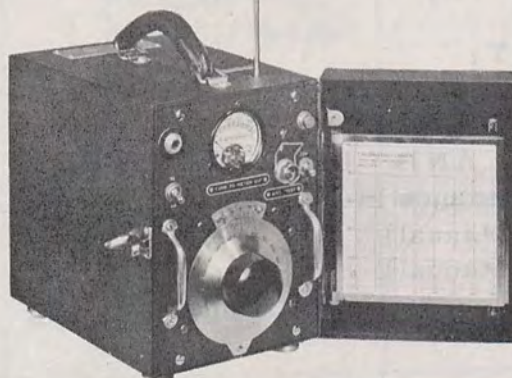
Quantity	Name and Part Nomenclature	Case Block (USAF)	Mail Numbers (Navy)	Dimensions (Inches)	Weight (Lbs)
				H W D	
1	Frequency Meter BC-108-D (Constant)	Mail TOAC-108-52	Mail W-108-52	5-1/2 9-1/4 12-3/8	17.8
1	Antenna AN-108-D (Extendable Type)	Brass TCA-C-02500	Mail PH-358-108		
1	Calibration Chart			5-1/8 3-1/2	
1	Tube JAN-155	3300-20425000		5-1/8	
1	Transportation Case	Wood		14 17-3/4 10	18.2
1	Instruction Book				
		TOTAL			36.0

SHIPPING DATA

Weight (Lbs)	Volume (Cu Ft)	Dimensions (Inches)	Remarks
36.0			

FREQUENCY METER BC-906-E
(WAVEMETER BC-906-E)

R-1



FUNCTIONAL DESCRIPTION:

A portable, general purpose, self-contained absorption-type meter used to determine the frequency of continuous wave, modulated carrier wave or pulsed radar transmitters and local oscillators. Also used to calibrate, check sensitivity and align receivers operating in the proper frequency range.

Resonance is indicated by a dip of the microammeter reading and frequency is determined by the dial setting and the associated calibration charts.

RELATIONSHIP TO OTHER EQUIPMENT:

Provision is made for external use of the microammeter only in Model E.

ELECTROMECHANICAL DESCRIPTION:

Power Supply: One 45 volt Battery BA-53-A; one 1.5 volt Battery BA-35-A.

Type of Reception: Continuous Wave, Modulated Carrier Wave and Pulse.

Frequency Range: 150 to 234 megacycles per second.

(Continued)

	AIR FORCE	NAVY	ARMY
TYPE CLASS.	Standard		
STOCK NOS.	7CAC-318208-545	ASO-R16-AYS-BC-906-E	2C1546E
PROCUREMENT INFO.:	USAF Dwg. No. ESC-4448, USAF Spec. No. 271-1789-A		
PROCUREMENT COG.:	USAF	DESIGN COG.: USAF, C&N	
F.I.I.N.:		RDB IDENT. NO.: 2.2.3	
17 September 1954	- Electronics Test Equipment -		BC-906-E

FREQUENCY METER BC-906-E
(WAVEMETER BC-906-E)

ELECTROMECHANICAL DESCRIPTION: (Continued)

Accuracy: ± 0.5 megacycles per second.

Input: Marconi-type Antenna.

Temperature Range: -13° F. to $+122^{\circ}$ F.

Auxiliary Features: Phone jacks are provided for audio monitoring on all models.

Microammeter Range: 0 to 500 microamperes.

MANUFACTURERS' OR CONTRACTORS' DATA:

Philco Corporation, Philadelphia, Pennsylvania; Contract No. W-3435-sc-13;
Order No. 19-MPD-43; Approximate Cost, \$75.00. Medco Company Mfg. Dwg.
No. A-1013.

TUBE COMPLEMENT:

1 JAN-1S5.

REFERENCE DATA AND LITERATURE:

AN08-40BC906-2 (Maintenance Instructions).

TM 11-2623 (Technical Manual).

TM 11-1200 (Technical Manual).

TO 16-40BC906-2 (Maintenance Instructions).

SHIPPING DATA:

No. of Boxes	Contents & Identification	Volume (Cu. Ft.)	Over-all Dimensions (inches)			Weight Packed (Lbs.)
			H	W	D	
1	Frequency Meter BC-906-E and accessories. (Domestic Packed)	1.91	14.5	12	19	40
BC-906-E - Electronics Test Equipment - 17 September 1954						

FREQUENCY METER BC-906-E
(WAVEMETER BC-906-E)

R-1

EQUIPMENT SUPPLIED:

Quant. Per Eq'pt	Name and Nomenclature	Case Mat'l	Stock (USAF) Numbers (Navy) (Army)	Over-all Dimensions (inches)			Weight (Lbs.)
				H	W	D	
1	Frequency Meter BC-906-E (Complete)		7CAC-318208-545 R16-AYS-BC-906-E 2C1546E	6-1/2	9-1/4	12-3/8	17.8
1	Antenna AN-108-E (Extendable type)		7CAC-045900 R16-PH-358-1667 2A275-108	20	0.218		
1	Calibration Chart			5-5/8	5-1/2		
1	Tube JAN-1S5		3300-234155000 2J1S5	2-1/2	3/4		
1	Transportation Case	Wood		14	17-3/4	10	15.2
1	Instruction Book AN08-40BC906-2		2C154C/B1				
Total							33.0

17 September 1954

- Electronics Test Equipment -

BC-906-E

FILE COPY
SIGNAL SUPPLY CATALOG

Higher Echelon Spare Parts for

**Frequency Meter
BC-906-A, B, C, D, & E**

GENERAL NOTES

1. The spare parts portion of the Signal Supply Catalog for signal equipment is published in two separate pamphlets as follows:

Section SIG 7, Organizational Spare Parts.

Section SIG 8, Higher Echelon Spare Parts.

2. These pamphlets are supplemental to Tables of Equipment, Tables of Basic Allowances, Tables of Allowances, and Tables of Organization. It is therefore essential that these pamphlets be in hands of all organizations and establishments concerned, including:

- a. All signal repair organizations higher than the second echelon charged with maintaining this equipment.
- b. All organizations or establishments charged with storing or issuing this equipment.

3. The spare parts lists included in the above pamphlets are for use as indicated below subject to provisions of Section IV, Circular No. 227, War Department, 7 June 1944, which indicates current policies for the issue of spare parts.

4. Section SIG 7, ORGANIZATIONAL SPARE PARTS, lists the authorized allowances of spare parts and major components to be kept on hand by first and second echelon organizations.

5. Section SIG 8, HIGHER ECHELON SPARE PARTS, provides as a guide, a basis for determination of initial issues of major components and spare parts to organizations responsible for third and higher echelons of maintenance or supply.

Headquarters, Army Service Forces 10 January 1945

- a. The quantities indicated in the Third and Fourth Echelon Stock columns provide a guide for the determination of initial issues of spare parts to Third and Fourth Echelon Maintenance organizations for the equipment maintained by each.
 - b. The quantities indicated in the Army Depot stock column provide a guide for the initial establishment of Army Depot Stock of spare parts for the types and quantities of items of equipment supported by such depots.
 - c. The quantities indicated in the Base Depot Stock column provide a guide for the initial establishment of base depot stocks of spare parts for the types and quantities of items of equipment supported by base depots.
 - d. After initial establishment or issue, each of the stocks of spare parts referred to in *a*, *b*, and *c* will be adjusted continually, to reflect usage as disclosed by issue data. Such adjustment will be carried out by requisition of individual items as additional parts are required.
6. Use of equipment item number.
- a. The equipment item number as extracted from the column so headed on maintenance lists should be included at the end of the nomenclature of each item requisitioned. Such information will aid in identification and verification of items desired.
 - b. When a stock number is not available, the equipment item number will identify a part for requisitioning.
7. Initial copies or additional copies of this pamphlet should be requisitioned through normal W. D. publication distribution channels, in accordance with paragraphs 3 and 4, AR 310-200.
8. Errors noted in this pamphlet should be reported promptly to the Chief Signal Officer. Attention: Maintenance Branch.
9. Comments and constructive criticism regarding these pamphlets are invited, and should be submitted to the address indicated in paragraph 8.

EXPENDABILITY NOTE

Expendability of individual items will be in accordance, with Signal Supply Catalog, Sig 5, which shows expendability of all items stored and issued by the Signal Corps.

SPECIAL NOTES

1. REFERENCE NUMBER. "Ref. No. TM 11-2623" as indicated in column 2 of this catalog, refers to the circuit symbol in the Technical Manual.
2. Since dry batteries have a limited shelf life, issue and resupply of dry batteries must be calculated for the shortest possible period of time to insure that batteries issued to troops will not be unreasonably exhausted.

HEADQUARTERS, ARMY SERVICE FORCES,
WASHINGTON 25, D. C., 10 JANUARY 1945

Army Service Forces Signal Supply Catalog, SIG 8-BC-906 Higher Echelon Spare Parts for Frequency Meter BC-906-A, B, C, D, & E has been prepared under the supervision of the Chief Signal Officer, and is published for the information and guidance of all concerned.

(SPX 461 (21 Dec 44).)

BY COMMAND OF LIEUTENANT GENERAL SOMERVELL:

OFFICIAL:

J. A. ULIO,
*Major General,
The Adjutant General.*

W. D. STYER,
*Lieutenant General, U.S.A.,
Chief of Staff.*

DISTRIBUTION:

AAF (Sig) (5); AGF (Sig) (5); ASF (Sig) (2); AAF C (2); Arm & Sv Bd (2); Def C (Sig) (2); S Div ASF (1); Dept (Sig) (5); Tech Sv (2); Sv C (Sig) (5); PC&S (2); PE (Sig) (10); ASF Dep (Sig Sec) (5); Dep, 11 (15); Pro Dist, 11 (5); Inspec Z, 11 (5); Gen & Sp Sv Sch (5); USMA (2); ROTC Lib (2); ROTC (2); Rep Sh, 11 (3); A (Sig) (5); CHQ (Sig) (5); D (2); AF (2); Two (2) copies to each of the following: T/O & E 1-1-1S; 1-10-1S; 1-13-1; 1-27; 1-37; 1-67; 1-100-1; 1-100-1S; 1-110-1; 1-117; 1-127; 1-137; 1-147; 1-167; 1-277S; 1-300-1; 1-317; 1-397S; 1-457T; 1-487S; 1-500-1; 1-618; 1-637; 1-637S; 1-758; 1-768; 1-777S; 1-800-1; 1-800-1S; 1-800-1S, RS; 1-801-1; 1-987; 1-1010-1; 1-1077; 11-237; 11-287, 11-357; 11-587.

For explanation of symbols, see FM 21-6.

CONTENTS

Each item listed on the following pages has been assigned an equipment item number which appears in column so headed. The equipment item number identifies each item according to the equipment in which it is used and its numerical position in the list.

Reference No. TM 11-2623	Equipment Item No.	Stock No.	Nomenclature	Unit of Measure	Quantity per Equipment	Army Depot Stocks 3 to 6 Months			Base Depot Stocks 3 to 6 Months		
						1-6 Sets	7-13 Sets	14-25 Sets	1-13 Sets	14-25 Sets	26-54 Sets
202	BC906/1	2A294-1	ANTENNA: extendable; Philco #358-1667	ea	1	1	1	2	1	1	2
	BC906/2	3A35	BATTERY: BA-35 (See note 2, Special Notes)	ea	1	29	45	72	29	45	72
	BC906/3	3A53A	BATTERY: BA-53-A (See note 2, Special Notes)	ea	1	29	45	72	29	45	72
	BC906/4	1F4P1-4. 14. 6	CABLE ASSEMBLY: coaxial; cable 14 1/8" lg; cable support #20 VSS steel; Philco dwg. #358-2146.	ea	1	1	1	2	1	1	2
208	BC903/5	3D9050-59	CAPACITOR: 50 mmf $\pm 10\%$; Philco #60-00505407	ea	1	2	3	5	2	3	5
213	BC906/6	3DA3-29	CAPACITOR: fixed; ceramic; 3000 mmf $\pm 20\%$. 500 VDCW; Philco #305-1360.	ea	1	2	3	5	2	3	5
207	BC906/7	3D9008V-8	CAPACITOR: trimmer plate: variable brass plate: Philco #258-1201FA6.	ea	2	1	1	2	1	1	2
206	BC906/8	3D9004VA3	CAPACITOR: variable: 4.3 mmf min; effective max 13.6 mmf ± 5 mmf: abs max 17.9 mmf; Philco #351-1039.	ea	1	1	1	2	1	1	2
212	BC906/9	3C318-7	CHOKER: RF; Philco #352-1042	ea	1	1	1	2	1	1	2
	BC906/10	2Z3719-1	DIAL ASSEMBLY: counter-clock-wise rotation: No. 2 scale 0-100 divisions 180°; Philco #358-1669.	ea	1	1	1	2	1	1	2
	BC906/11	3G1821-24	INSULATOR: fibre glass sheet; harvel coated; Philco #257-7098	ea	2	2	3	5	2	3	5
	BC906/12	3G1770-160. 1	INSULATOR: fibre glass sheet; harvel coated; Philco #257-7451	ea	1	2	3	5	2	3	5
220	BC906/13	2Z5572-11	JACK: type #504B; Medco Mfg. Co. Item #105-1071 (used with BC-906-E only).	ea	1	1	1	2	1	1	2
219	BC906/14	2Z5594. 2	JACK: phone; to fit PL-55 plug; Philco #358-1195	ea	1	1	1	2	1	1	2
	BC906/15	6R57400-6	KEY: Allen hex; fits No. 6 cup paint set screw, Shortarm series; Philco #258-1632.	ea	1	1	1	2	1	1	2
204	BC906/16	3F875-2	METER: 0 to 500 microammeter; Philco #455-1015	ea	1	1	1	2	1	1	2
201	BC906/17	2A294-1/S1	RECEPTACLE: antenna socket; thd mtg; single spring contact; Philco #258-6190.	ea	1	1	1	2	1	1	2
218	BC906/18	3RC20BF222K	RESISTOR: carbon; 2200 ohms $\pm 10\%$; 1/2 W; Philco #66-2223340	ea	1	2	3	5	2	3	5
215	BC906/19	3RC21AE474K	RESISTOR: carbon; 470,000 ohms $\pm 10\%$; 1/2 W; Philco #66-4473340	ea	1	2	3	5	2	3	5
214	BC906/20	3RC21BE155K	RESISTOR: carbon; 1.5 megohm $\pm 10\%$; 1/2 W. Philco #66-5153340	ea	1	2	3	5	2	3	5
205	BC906/21	3Z7510	RHEOSTAT: gear & detent assy; 500 ohms $\pm 30\%$; Philco #358-2769	ea	1	1	1	2	1	1	2
203	BC906/22	2Z8669-6	SOCKET: tube; miniature button base; Philco #257-6038	ea	1	2	3	5	2	3	5
	BC906/23	2A294-1/S1/S1	SUPPORT: antenna socket; laminated phenolic grade o or h Philco #257-7342.	ea	1	1	1	2	1	1	2

216-----	BC906/24--	3Z9857.10-----	SWITCH: sensitivity; toggle: Philco #452-1045.....	ea--	1	1	1	2	1	1	2
210-----	BC906/25--	3Z9824-269-----	SWITCH: push to break; Philco #452-1036.....	ea--	1	1	1	2	1	1	2
209-----	BC906/26--	3Z9858-----	SWITCH: toggle; Philco #452-1035.....	ea--	1	1	1	2	1	1	2
203-----	BC906/27--	2J185-----	TUBE: 185 (VT-172); Philco #453-2361.....	ea--	1	10	15	24	10	15	24
-----	BC906/28--	6R55499-----	WRENCH: No. 4 Allen set screw Philco #258-2350.....	ea--	1	1	1	2	1	1	2

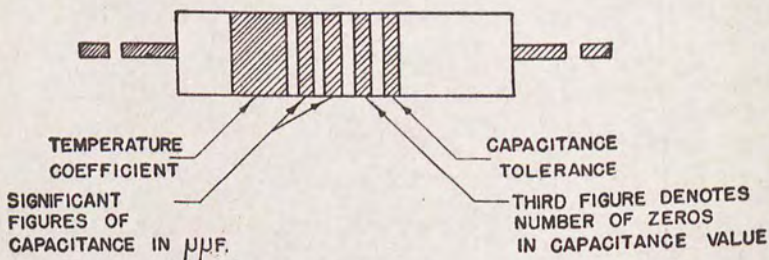


APPENDIX

Small resistors and capacitors are normally color coded to indicate capacitance, resistance and other characteristics in accordance with one of the following charts:

- Figure 1—Ceramic Capacitors.
- Figure 2—Molded Capacitors (6 dot system in accordance with specification JAN-C-5)
- Figure 3—Molded Capacitors (old 5 dot system in accordance with AWS specification C75.3-1943)
- Figure 4—Resistor Color Code

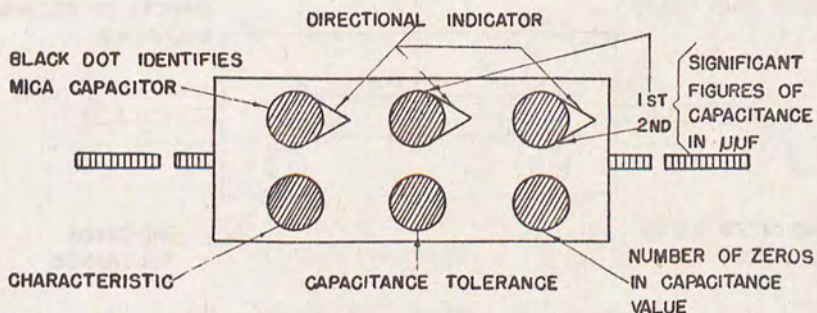
AMERICAN WAR STANDARDS COLOR CODE
FOR CERAMIC-DIELECTRIC CAPACITOR



COLOR	SIG. FIGURE	MULTIPLIER	CAPACITY TOLERANCE		TEMP COEFFICIENT IN PARTS/ 10^4 °C
			10 $\mu\mu\text{F}$ & UP	UNDER 10 $\mu\mu\text{F}$	
BLACK	0	1	20% (M)	2.0 $\mu\mu\text{F}$ (G)	0
BROWN	1	10	1% (F)	-	-30
RED	2	100	2% (G)	-	-80
ORANGE	3	1000	-	-	-150
YELLOW	4	-	-	-	-220
GREEN	5	-	5% (J)	0.5 $\mu\mu\text{F}$ (D)	-330
BLUE	6	-	-	-	-470
VIOLET	7	-	-	-	-750
GRAY	8	0.01	-	0.25 $\mu\mu\text{F}$ (C)	+30
WHITE	9	0.10	10% (K)	1.0 $\mu\mu\text{F}$ (F)	-330 +500

Figure 1

AMERICAN WAR STANDARDS COLOR CODE FOR MOLDED
MICA & PAPER DIELECTRIC CAPACITORS

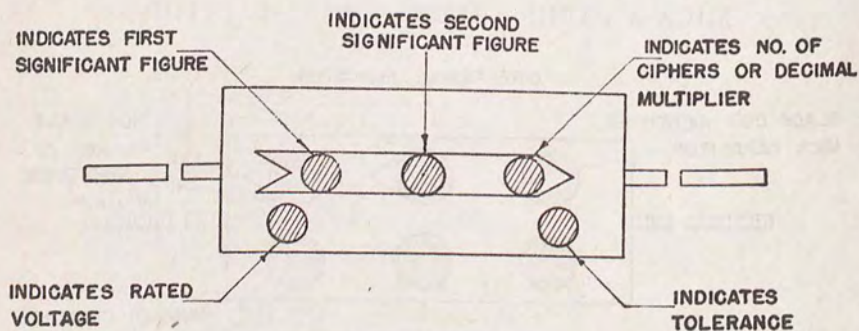


COLOR	SIG FIGURE	DECIMAL MULTIPLIER	TOLERANCE	CHARACTERISTIC
BLACK	0	1	-	
BROWN	1	10	-	
RED	2	100	2% (G)	
ORANGE	3	1000 .	-	
YELLOW	4	-	-	
GREEN	5	-	-	
BLUE	6	-	-	
VIOLET	7	-	-	
GRAY	8	-	-	
WHITE	9	-	-	
GOLD	-	0.10	5% (J)	
SILVER	-	0.01	10% (K)	
BLACK	-	-	20% (M)	

Figure 2

NOTE: This Color Code also applies to Molded Paper Dielectric Capacitors, except that this type is identified by a silver dot in the top row—left and the bottom row—center. Tolerance, in the case of Molded Paper Capacitors is +60 or -20%.

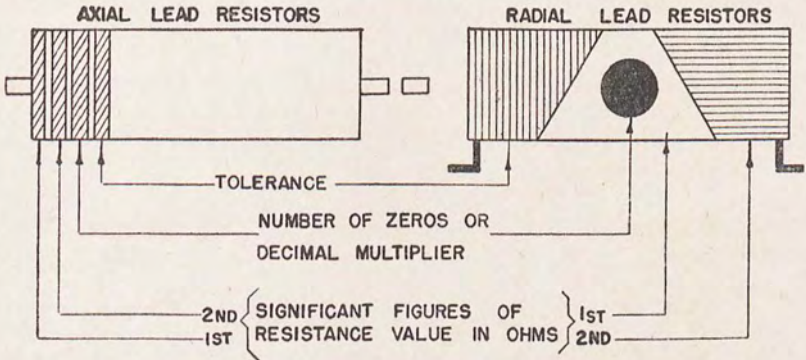
FIVE DOT CAPACITOR COLOR CODE SYSTEM



COLOR	SIG. FIGURE OR NO. OF ZEROS	DECIMAL MULTIPLIER	TOLERANCE %	VOLTAGE RATING (VOLTS)
BLACK	0	-	-	-
BROWN	1	-	1	100
RED	2	-	2	200
ORANGE	3	-	3	300
YELLOW	4	-	4	400
GREEN	5	-	5	500
BLUE	6	-	6	600
VIOLET	7	-	7	700
GRAY	8	-	8	800
WHITE	9	-	9	900
GOLD	-	0.10	5	1000
SILVER	-	0.01	10	2000
NO COLOR	-	-	20	500

Figure 3

AMERICAN WAR STANDARDS COLOR CODE FOR RESISTORS



COLOR	SIG. FIGURE	MULTIPLIER	TOLERANCE
BLACK	0	-	-
BROWN	1	-	-
RED	2	-	-
ORANGE	3	-	-
YELLOW	4	-	-
GREEN	5	-	-
BLUE	6	-	-
VIOLET	7	-	-
GRAY	8	-	-
WHITE	9	-	-
GOLD		0.10	± 5 % (J)
SILVER		0.01	± 10 % (K)
NO COLOR		-	± 20 % (M)

Figure 4