DAG, DAG–1, AND DAG–2 RADIO DIRECTION-FINDING EQUIPMENTS

Use.—Portable—field.

Frequency range.—Three bands: 1.6–18.2 mc.

Bearing indications.—Aural null.

Signal reception.—CW, MCW.

Antenna collector system.—Plug-in rotatable plain loop and plug-in sense antenna.

Power—*Supply required*—Any reasonably pure D. C. of 90 volts at 15 ma., 1.5 volts at 450 ma., and 7.5 volts of "C" bias supply.

Supply provided—Self-contained batteries, type CBR–19045 "A" and "B" packs and one type CBR–19011 "C" battery. An optional power supply utilizing a vibrator power pack and storage cell, to be contained in the regular battery compartment, is under procurement. Provision has been made to charge the storage cell from either 6 volts D. C. or 110 volts A. C.

Battery life—Approximately 2 weeks when subjected to intermittent use with a net operating time of 8 hours per day.

Description.—The Models DAG, DAG–1, and DAG–2 are identical high frequency portable direction finders suitable for taking bearings on, or locating radio transmitters of unknown location, or inversely, may be used to determine the location of the direction finder with respect to transmitters, by triangulation. As a communications receiver it may be used for the reception of both CW and amplitude modulated signals.

The equipment, with accessories necessary for operation, is enclosed in an aluminum alloy carrying case with a hinged front cover. Openings, protected by chained caps when not in use, are provided on the top of the case for connection of the plug-in loop and sense antenna. For stowage the antennas are contained on the interior of the cover by means of spring clips. The receiver, constructed on an aluminum alloy chassis, occupies the entire upper section of the case, is secured by means of thumbscrews, and is removable for servicing purposes. The battery power supply is located in the lower left section of the case and is accessible by removal of a panel held in place by thumbscrews. An accessory compartment is provided in the lower right section to contain the phones, magnetic compass, and ground wire with stake. A clip is provided on the loop antenna for mounting the (CXD–10210) compass. The only external connection required is to the ground post located on the front panel.

TECHNICAL FEATURES

Tube complement

Function	Number of tubes	Type
Amplifier	1	1T4
Mixer	1	1R5
Oscillator	1	1T4
First I. F. amplifier	1	1T4
Second I. F. amplifier	1	1T4
Second detector	1	1R5
Audio power amplifier	1	1S4
B. F. O.	1	1T4
Total	8	

Frequency bands:

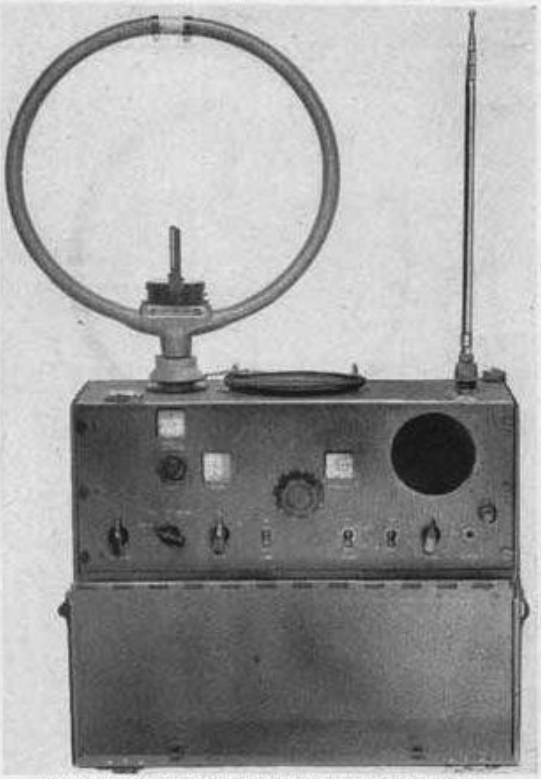
Band (1): 1.6–3.6 mc.
Band (2): 3.6–8.1 mc.
Band (3): 8.1–18.2 mc.

Type of receiver circuit.—Superheterodyne.

Receiver intermediate frequency.—465 kc.

Audio power output.—6 mw (into self-contained permanent magnet dynamic speaker or 600 ohm headphones).

Operating control.—Local.



Model DAG–1 portable radio direction-finding equipment.

Dimensions and weights of equipment units included in contract

Unit	Height	Width	Depth	Weight
	Inches	*Inches*	*Inches*	*Pounds*
Equipment contained in carrying case (handle up)	13½	16½	7¼	32
Equipment set up:				
Sense antenna retracted	26½	16½	7¼	32
Sense antenna extended	69½	16½	7¼	32
Sense antenna (detached):				
Retracted	14¾	⅜ maximum diameter.		0.2
Extended	57¾	⅜ maximum diameter.		0.2
Antenna loop (detached)	15	11⅜ outside diameter.		0.6
Spare parts box	6	9	12	22

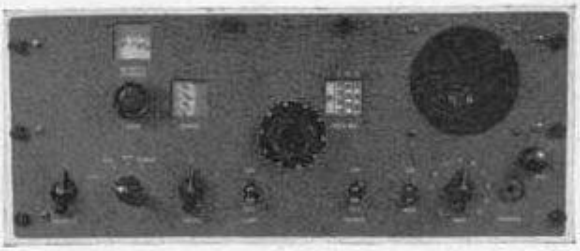
Accessories not supplied by contractor.—Headphones (600 ohms impedance).

Type numbers of units of the DAG equipment:

Unit:	*Type No.*
Receiver in carrying case	CIA–46174.
Sense antenna	CRF–66054.
Loop antenna	CIA–69077.
A and B battery packs	CBR–19045.
C battery	CBR–19011.

Shipping weights and dimensions

Contents	Size	Gross weight	Volume
Complete equipment and spare parts box	*Inches* 13⅜ x 18¼ x 31 1/16	*Pounds* 100	*Cubic feet* 4.2



Receiver panel for the Model DAG-1 portable direction-finding equipment.

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