TM 9-4940-509-14&P

TECHNICAL MANUAL

OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS LIST

FOR

HALOGEN LEAK DETECTOR HH300 (RICCA-REDDINGTON INSTRUMENTS, INC.) (NSN 4940-00-531-0362)

HEADQUARTERS, DEPARTMENT OF THE ARMY

APRIL 1981

Technical Manual
No. 9-4940-509-14&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, *10 April 1981*

Operator's, Organizational, Direct Support and General Support Maintenance Manual Including Repair Parts List For HALOGEN LEAK DETECTOR HH300 (RICCA-REDDINGTON INSTRUMENTS, INC.) (NSN 4940-00-531-0362)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2, located in the back of this manual direct to: Commander, US Army Armament Materiel Readiness Command, ATTN: DRSAR-MAS, Rock Island, IL 61299. A reply will be furnished directly to you.

NOTE

This manual is published for the purpose of identifying an authorized commercial manual for the use of the personnel to whom this halogen leak detector is issued.

Manufactured by: Ricca-Reddington Instruments, Inc.
1400 G N.W. 65th Avenue
Plantation, FLA 33313

Procured under Contract No. DAAA09-78-C-4314

This technical manual is an authentication of the manufacturers' commercial literature and does not conform with the format and content specified in AR 310-3, Military Publications. This technical manual does, however, contain available information that is essential to the operation and maintenance of the equipment.

INSTRUCTIONS FOR REQUISITIONING PARTS

NOT IDENTIFIED BY NSN

When requisitioning parts not identified by National Stock Number, it is mandatory that the following information be furnished the supply officer.

1 - Manufacturer’s Federal Supply Code Number - 58705

2 - Manufacturer’s Part Number exactly as listed herein.

3 - Nomenclature exactly as listed herein, including dimensions, if necessary.

4 - Manufacturer’s Model Number - Model HH300

5 - Manufacturer’s Serial Number (End Item)

6 - Any other information such as Type, Frame Number, and Electrical Characteristics, if applicable.

7 - If DD Form 1348 is used, fill in all blocks except 4, 5, 6, and Remarks field in accordance with AR 725-50.

Complete Form as Follows:

(a) In blocks 4,5,6, list manufacturer’s Federal Supply Code Number - 58705 followed by a colon and manufacturer’s Part Number for the repair part.

(b) Complete Remarks field as follows:

Noun: (nomenclature of repair part)
For: NSN: 4940-00-531-0362
Manufacturer: Ri cca-Reddington Instruments, Inc.

Model: HH300
Serial : (of end item)

Any other pertinent information such as Frame Number, Type, Dimensions, etc.

WARNING
Always turn the instrument off before removing back cover.

1. To install batteries, remove the back case on the instrument. Be sure to install batteries as indicated in the battery compartment.

2. Batteries affect performance. When your leak detector is turned on, the red battery indicator should be lit. If the red light is not on, install fresh and/or size AA alkaline batteries. Remember, cold temperatures will affect battery strength.

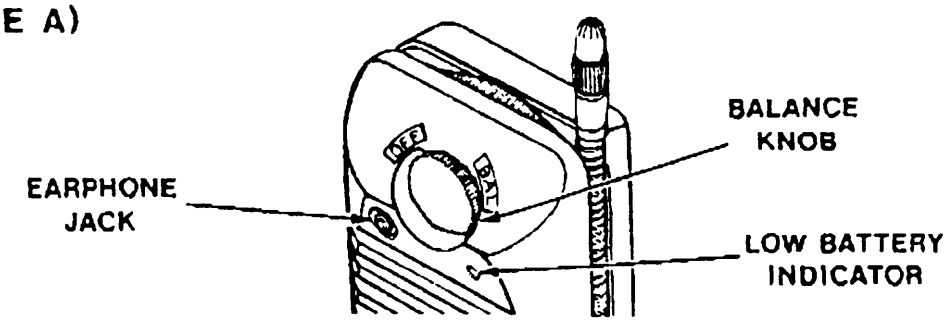
3. If the light is on and the unit fails to operate properly, turn instrument off and replace the sensing tip. If the unit still does not function correctly, return it to the factory for repairs.

4. If the ticking signal is erratic or a continuous siren is heard, the sensing tip should be replaced.

5. Minimize tip contamination from dust and grease by utilizing the tip protector and filter cloth.

6. To change the sensing tip, turn the tip counterclockwise. Attach a new tip by turning clockwise on the connector. Do not operate your leak detector until the sensing tip is screwed on finger tight. Use care not to catch perspiration or grease, such as hand cleaner, in the slots while attaching the tip.

(FIGURE A)



MAINTENANCE KIT CONTAINS:

3 Sensing Tips	
3 Sensing Tip Protectors	
12 Filter Cloths (1 package)	
1 Reference Leak	
Earphone	Part #HH305
Carrying Case	Part #HH306

PARTS LIST:

Sensing Tip	Part #HH301
Sensing Tip Protector	Part #HH302
Filter Cloths	Part #HH303
Maintenance Kit	Part #HH304

SPECIFICATIONS:

1. **Power Supply:** Four size AA alkaline batteries.
2. **Sensitivity:** Better than ½ ounce per year.
3. **Operating Temperature Range:** 33° to 100°F
4. **Battery Life:** Approximately 40 hours, normal use. (Battery performance is affected by cold weather.)
5. **Duty Cycle:** Continuous, no limitation.
6. **Response Time:** Instantaneous.
7. **Recovery Time:** Instantaneous.
8. **Warm-up Time:** Instantaneous.
9. **Weight:** 24 ounces (with batteries). 680.4 grams (with batteries).
10. **Dimensions:** 8 x 3 x 1¾ inches. (17.8 x 7.6 x 4.5 cm.)
11. **Probe Length:** 19 in. (48.3 cm.)

By Order of the Secretary of the Army:

E. C. MEYER
General, United States Army
Chief of Staff

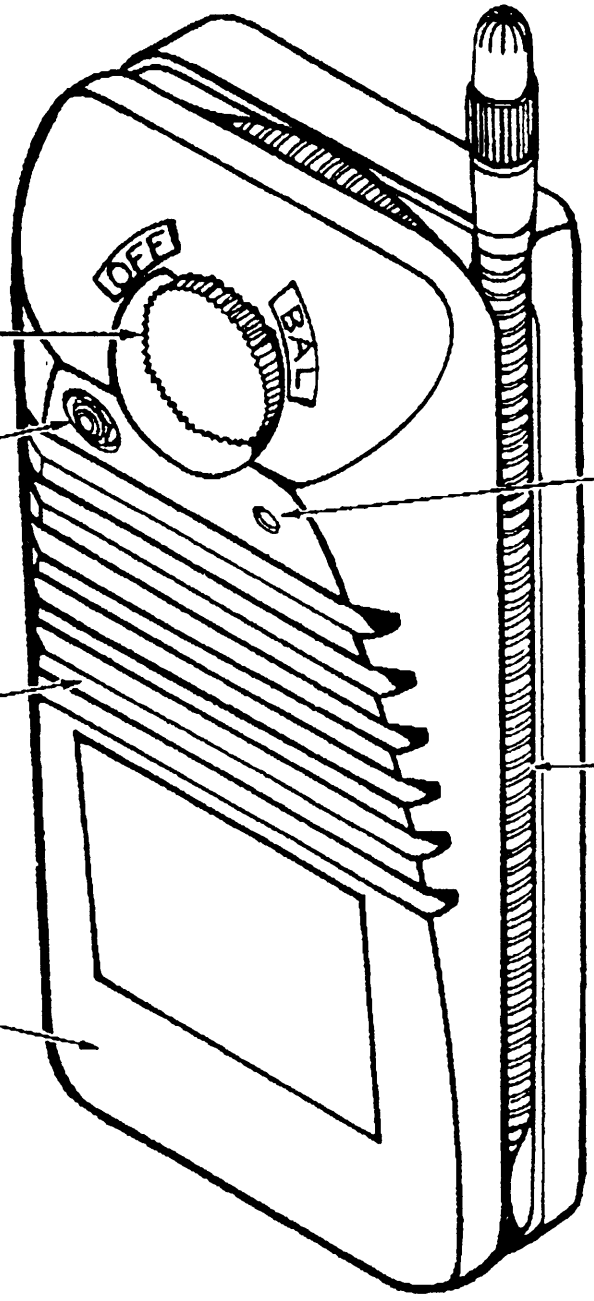
Official:

J.C.BENNINGTON
Major General, United States Army
The Adjutant General

*US GOVERNMENT OFFICE 1981 7650035/781

HALOGEN LEAK DETECTOR

. . . An all new erratic free halogen leak detector.



A single control knob turns the instrument on and adjusts for sensitivity.

Jack to accommodate earphone accessory.

pped with a new variable Frequency Alarm Signal.

Rugged, high impact ABS plastic case.

Low battery indicator.

Self-storing 19" flexible probe.

(ACTUAL SIZE)

—FEATURES—

- Completely portable. battery operated
- Variable Frequency Alarm Signal HOMES IN ON LEAKS eliminating the "too sensitive" problem
- Adjustable sensitivity
- Low battery indicator
- No warm-up time needed
- Sensing element cannot be contaminated by high concentrations of halogen gas

GENERAL DESCRIPTION:

The HH 300 is a portable, battery-operated, electronic halogen gas detector. It is capable of finding leaks as small as ½ ounce per year, as well as large leaks in areas where background contamination may be present.

The instrument features a Variable Frequency Alarm signal which gives an indication of the concentration of halogen gases (size of leak), while permitting the operator to "HOME IN" on the leak source without continually readjusting the instrument for the changing ambient or background contamination.

The sensing tip is not adversely affected by large amounts of refrigerants as are vacuum-type halogen gas detectors. Recovery time after the probe is removed from a contaminated area is virtually instantaneous.

Requiring no warm-up period, the instrument is ready to use following a simple balancing procedure. It is equipped with a dual length flexible probe which can be bent to permit the sensing tip at the end of the probe to reach normally inaccessible leaks.

A low battery indicator light is also provided so that your leak detector is kept in top working condition at all times. In areas where background noise is a problem, a jack is provided on the front of the instrument so that the earphone accessory can be used with the HH 300.

WARNING

Always be sure your instrument is off when changing tips. The battery voltage is amplified in the sensing tip. Failure to turn the instrument off when changing tips can result in a mild shock.

OPERATION

The instrument becomes operational when the balance control knob is turned clockwise. The red LED will light indicating the unit is on and the batteries are good. The HH 300 is balanced by continuing to turn the control knob until a slow steady ticking signal is heard. If the balance knob is turned too far, a siten sound will be heard. The operator merely needs to turn the balance knob counterclockwise to the position of a slow steady ticking signal. The instrument is now ready for leak searching.

When a very small amount of halogen gas enters the sensing tip, the ticking signal will speed up to a very low hum. As more gas enters the tip the hum will change to a low siren. As the concentration of halogen gas continues to build, the alarm signal will continue to increase in frequency until a very high pitch siren is heard. The higher the alarm signal pitch, the heavier the concentration of halogen gas.

In areas of high background contamination and/or large leaks if the siren alarm sounds before the leak source can be located, the leak detector can be desensitized by turning the balance knob counterclockwise slowly until the siren alarm returns to a ticking signal. Now a large leak can be located despite background contamination which moght be present.

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 9-4940-509-14&P	10 Apr 81	Halogen Leak Detector HH300

BE EXACT PIN-POINT WHERE IT IS

PAGE NO.	PARA-GRAPH	FIGURE NO	TABLE NO

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

SIGN HERE:

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.—IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

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