

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: Rikka-Reddington Instruments, Inc.

Model: HH300

Serial: (of end item)

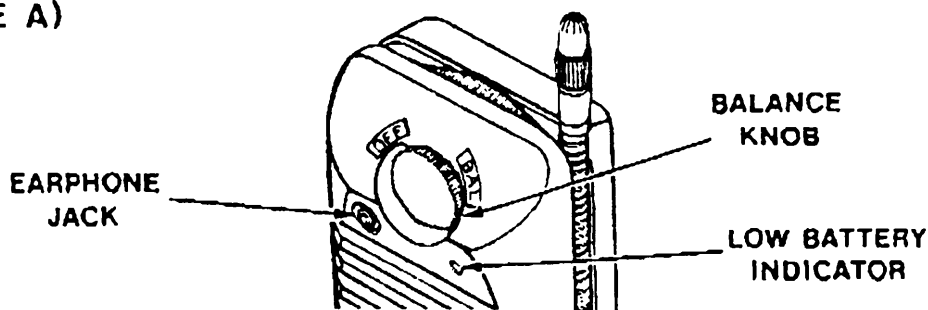
Any other pertinent information such as Frame Number, Type, Dimensions, etc.

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
 - Carrying Case
- Part #HH305
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 1/2 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 1 1/4 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:

Official:

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

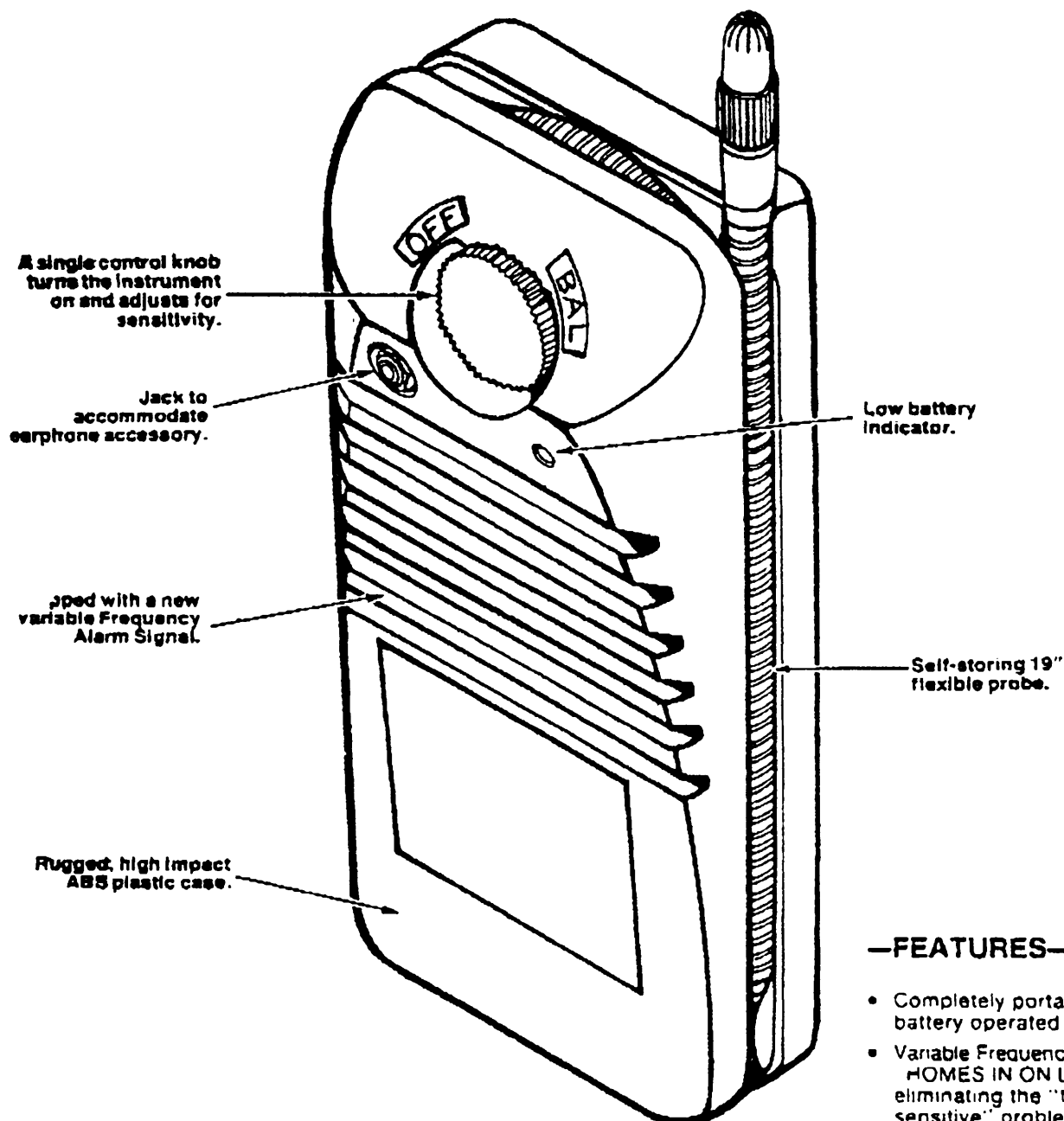
J. C. BENNINGTON
Major General, United States Army
The Adjutant General

*US GOVERNMENT OFFICE 1981 7650035/781

HALOGEN LEAK DETECTOR

TM 9-4940-509-14&P

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



(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 $\frac{1}{2}$ 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 siren 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 might be present.

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



THEN... JOT DOWN THE
DOPE ABOUT IT ON THIS
FORM. CAREFULLY TEAR IT
OUT. FOLD IT AND DROP IT
IN THE MAIL!

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER

TM 9-4940-509-14&P

PUBLICATION DATE

10 Apr 81

PUBLICATION TITLE

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:

TEAR ALONG PERFORATED LINE

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

SIGN HERE:

DA FORM 2028-2
1 JUL 79

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.

FILL IN YOUR
UNIT'S ADDRESS

FOLD BACK

DEPARTMENT OF THE ARMY

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300

POSTAGE AND FEES PAID
DEPARTMENT OF THE ARMY
DOD 314



Commander
US Army Armament Materiel Readiness Command
ATTN: DRSAR-MAS
Rock Island, IL 61299

TEAR ALONG PERFORATED LINE

TM 9-4940-509-14&P

HALOGEN LEAK DETECTOR HH300 — 1981

This fine document...

Was brought to you by me:



[Liberated Manuals -- free army and government manuals](#)

Why do I do it? I am tired of sleazy CD-ROM sellers, who take publicly available information, slap “watermarks” and other junk on it, and sell it. Those masters of search engine manipulation make sure that their sites that sell free information, come up first in search engines. They did not create it... They did not even scan it... Why should they get your money? Why are not letting you give those free manuals to your friends?

I am setting this document FREE. This document was made by the US Government and is NOT protected by Copyright. Feel free to share, republish, sell and so on.

I am not asking you for donations, fees or handouts. If you can, please provide a link to liberatedmanuals.com, so that free manuals come up first in search engines:

<A HREF=<http://www.liberatedmanuals.com/>>Free Military and Government Manuals

- Sincerely
Igor Chudov
<http://igor.chudov.com/>
- [Chicago Machinery Movers](#)