

# TM 11-6625-522-15/1

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

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**OPERATOR, ORGANIZATIONAL,  
DIRECT AND GENERAL SUPPORT,  
AND DEPOT MAINTENANCE MANUAL,  
TEST OSCILLATORS  
BC-376-L AND BC-376-M**

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*HEADQUARTERS, DEPARTMENT OF THE ARMY*

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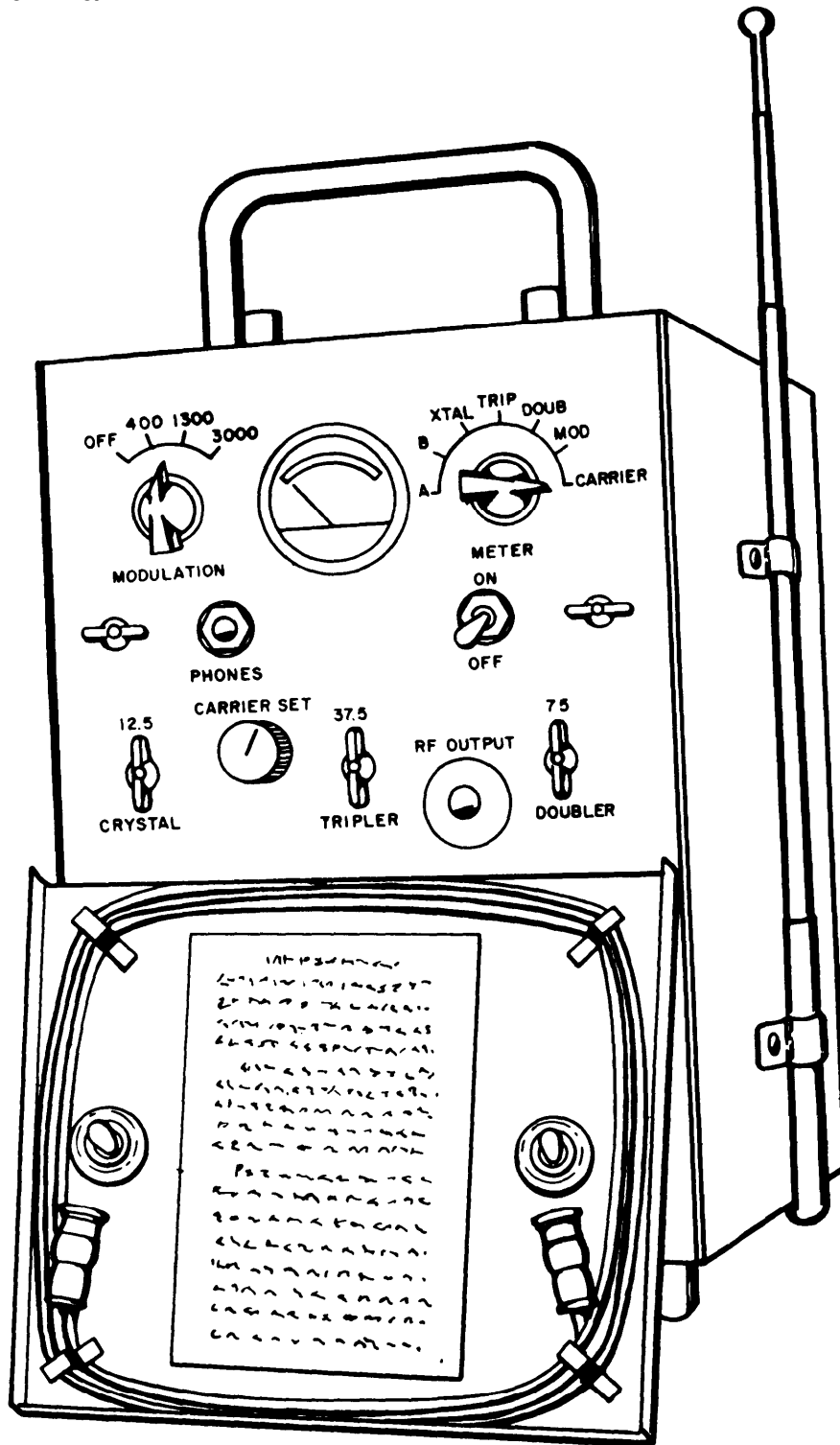
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Figure 1-1. Test Oscillator BC-376-L.

SECTION A

GENERAL

A-1. Index of Equipment Publications

Refer to the latest issue of DA Pam 310-4 to determine whether there are new editions, Changes, or additional publications pertaining to this equipment. Department of the Army Pamphlet No. 310-4 is an index of technical manuals, technical bulletins, supply manuals (type 4, 6, 7, 8, and 9), supply bulletins, lubrication orders, and modification work orders available through publications supply channels. The index lists the individual parts (-10, -20, -35P, etc) and the latest changes to and revisions of each equipment publication.

A-2. Forms and Records

a. Reports of Maintenance and Unsatisfactory Equipment. Use equipment forms and records in accordance with instructions in TM 38-750.

b. Report of Damaged or Improper Shipment. Fill out and forward DD Form 6 (Report of Damaged or Improper Shipment) as prescribed in AR 700-58 (Army), HAVSANDA Publication 378 (Navy), and AFR 71-4 (Air Force).

c. Reporting of Equipment Manual Improvements. The direct reporting by the individual user of errors, omissions, and recommendations for improving this equipment manual is authorized and encouraged. DA Form 2028 will be used for reporting these improvements. This form may be completed using pencil, pen, or typewriter. DA Form 2028 will be completed in triplicate and forwarded by the individual using the manual. The original and one copy will be forwarded direct to: Commanding Officer, U. S. Army Electronics Materiel Support Agency, ATTN: SELMS-MP, Fort Monmouth, New Jersey 07703. One information copy will be furnished to the individual's immediate supervisor (officer, noncommissioned officer, supervisor, etc).

## SECTION I

## INTRODUCTION AND DESCRIPTION

## 1-1. INTRODUCTION.

## 1-2. GENERAL.

1-3. This handbook contains operating and service instructions for Test Oscillator BC-376-L (figure 1-1) and Test Oscillator BC-376-M, which are identical except for the specific difference noted in paragraph 1-23. These test oscillators are portable, low-power, high-frequency oscillators used to adjust and tune marker beacon receivers and transmitters. The oscillator is a component part of Test Set I-76.

1-4. Test Oscillator BC-376-L may function as a low-power transmitter, a signal generator or a heterodyne frequency meter. As a low-power transmitter, it radiates a horizontally polarized reference signal, optionally modulated, to which beacon receivers can be aligned. As a signal generator, it provides a calibrated output signal, optionally modulated, to beacon receivers under test. As a frequency meter, it mixes its local frequency with a beacon transmitter output to produce an aural tuning indication.

## 1-5. CAPABILITIES AND LIMITATIONS.

1-6. Test Oscillator BC-376-L operates on a crystal-controlled frequency of 75 megacycles  $\pm$  .02% which may be audio modulated at 400, 1300, or 3000 cps. When used as a transmitter, the *effective* operating range of the equipment is approximately 10 to 20 feet. When used as a frequency meter, the sensitivity of the equipment requires its placement between three and ten feet of the beacon antenna. When used as a signal generator, the limits of its calibrated output are from 25 uv to 100K uv. The test oscillator has been designed for operation with Marker Beacon Transmitter BC-302, Marker Beacon Projector A1, and equivalent equipment.

1-7. The test oscillator, when used as a low-power transmitter, requires the use of an output meter such as Test Indicator BE-67 or BE-67-A; when used as a frequency meter, it requires the use of a headset, HS-23, or equivalent.

## 1-8. EQUIPMENT SUPPLIED.

1-9. The complement of the test oscillator, as supplied, is listed in table I.

TABLE I. EQUIPMENT SUPPLIED

Quantity per Equipment	Name of Unit	Designation	Overall Dimensions (inches)	Weight (pounds)
1	Test Oscillator including complete tube complement	BC-376-L	8-7/8 wide x 7-3/4 deep x 13-1/8 high	21.25
1	R-F Cable Assembly (W104)	CG-409A/U	5 feet	

## 1-10. EQUIPMENT REQUIRED BUT NOT SUPPLIED.

1-11. Equipment required, but not supplied with the test oscillator is listed in table II.

TABLE II. EQUIPMENT REQUIRED BUT NOT SUPPLIED

Quantity	Name	Designation
2	Battery	BA-36
2	Battery	BA-35
1	Cord	CD-316
1	Cord	CD-307 or CD-307A
1	Headset	HS-23 or equivalent
1	Headset Adapter	MC-385-B
1	Test Indicator	BE-67 or BE-67-A

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## 1-12. DESCRIPTION.

## 1-13. PHYSICAL DESCRIPTION.

1-14. Test Oscillator BC-376-L and its power pack is contained within two compartments of a single carrying case the upper compartment houses the oscillator chassis; the lower compartment houses the batteries. The front panel, enclosed by a hinged cover, mounts the monitoring devices, and the operating and adjustment controls. A collapsed telescopic antenna is stored vertically in a dummy socket and bracket at the right side of the case. An entry hole and hole cover spring at the right side provide entry for the antenna to the horizontal antenna output contact. A mechanical battery interlock is provided on the hinged cover. The interlock automatically sets the "ON-OFF" control panel switch at "OFF" when the hinged panel is closed.