

UNIQUE & QUALITY



**MODEL TE-16A
TRANSISTORIZED
TEST OSCILLATOR**

ITOKA PRODUCTS CORP.

TOKYO, JAPAN.

PRINTED IN JAPAN

SPECIFICATION

Frequency Range :	Band 1. 400 - 550 KC Band 2. 550 - 1,600 KC Band 3. 1.6 - 4.5 MC Band 4. 4.5 - 13 MC Band 5. 12 - 30 MC
Wave :	A1, A2.
Modulated Frequency :	800 c/s Sine Wave
Modulation :	30% (approx.)
Output impedance :	Low impedance
Output Control :	Band 1 0 - 2V 2 0 - 2V 3 0 - 0.4 4 0 - 0.4
Power Source :	9V Battery (BL006P)
Dimension and Weight :	5 $\frac{1}{8}$ " \times 5 $\frac{1}{8}$ " \times 3 $\frac{1}{8}$ " 1.5 Lbs.

PALACE MODEL TE-16A TRANSISTORIZED TEST OSCILLATOR

The PALACE TE-16A is a fully transistorized test oscillator of compact size and light weight. Having wide frequency range and self-contained dry battery power supply, it is very useful and indispensable instrument for servicemen, engineers, hobbyists, etc., for various purposes such as alignment or trouble shooting of TV, AM/FM radios, communication lum equipments, or as a marker for sweep generator, etc. No AC power required, it can be carried anywhere.

For examples, by inserting an RF signal into various points of a radio receiver set, the proper functioning of each stage and its associated coupling circuits can easily be determined, which procedure is known as the Signal Substitution or Signal Injection method by servicing.

FUNCTION OF CONTROLS

TUNING DIAL :

A precision vernier dial is provided. The dial scale is classified into five bands covering 400KC - 30MC.

The band number indicated at the left end of the scale and the unit frequency at the right.

BAND SELECTOR :

The rotary switch selects one of the five bands. (See Specifications). Setting the switch at the band where the desired frequency is included, then adjust the Tuning Dial to the actually desired frequency point on the band.

MODULATION SWITCH :

At ON position, the Signal (A2) modulated at 800 cps. is given to the Output Terminal, and at OFF position, the Carrier wave (A1) is given.

POWER SWITCH :

Setting at ON position, this Test Oscillator is instantaneously ready for use. No waiting for heat-up is necessary.

Do not leave it ON when not using, as battery power will be rapidly drained.

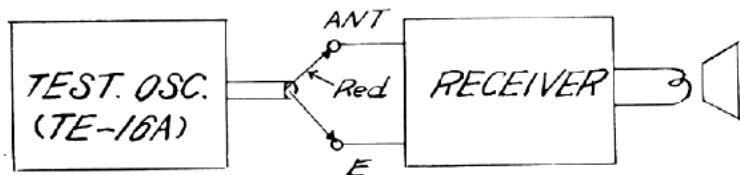
HOW TO USE

Various usages for this Test Oscillator are considered and the followings are several main applications it serves.

(EXAMPLE 1) RF Alignment and Dial Calibration :

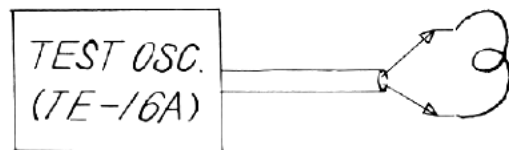
1. When the radio receiver has antenna and ground terminal, not incorporating ferrite loopstick, connect the test oscillator output directly to those antenna and ground terminals of the receiver. (See Fig. A)
(It is recommended that the test should be made at the lowest oscillator output level as possible.)

FIG. A



2. When the radio receiver has ferrite loopstick antenna incorporated and has no antenna terminal, make a loop wire coupling as shown in Fig. B.

FIG. B

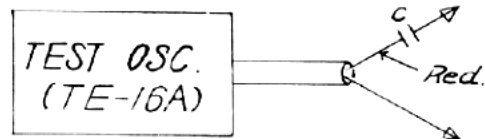


(EXAMPLE 2) IF and Ratio Detector Alignment : CAUTION

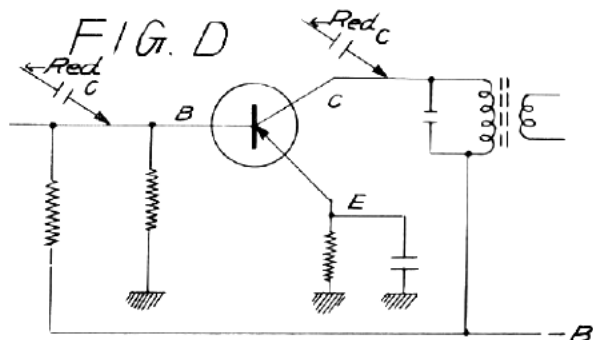
A 100 pf isolating capacitor should be inserted in series when connecting the test oscillator to any of those high impedance or DC voltage loaded circuit. Otherwise, the test oscillator may be damaged by direct current.

(See Fig. C)

FIG. C



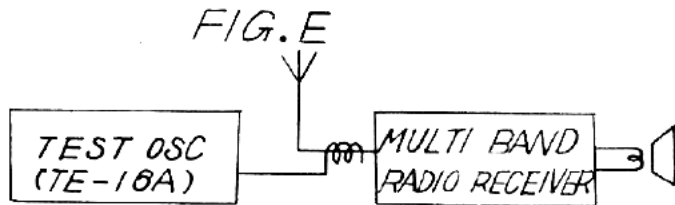
Once the capacitor is provided, proceed the alignment as shown in Fig. D.



(EXAMPLE 3) A-1 Signal Reception :

By making use of this test oscillator, any ordinary SW receiver can be converted into CW receiver. Set the frequency of the test oscillator near by that of receiver's IF, and couple the antenna, you can listen the code signal.

(See Fig. E)



ie: When the receiver's IF is of 455 KC, set the test oscillator at 454 or 456 KC, then the signal is modulated at 1 KC beat.

The procedure for aligning AM or FM receiver will vary from unit to unit. It is always recommended, therefore, that the manufacturers' service and alignment notes are referred to before attempting. These are usually containing specific instruction in the procedure to be followed for optimum results.

There are many other applications than the above-mentioned for this handy test oscillator, use as servicing or alignment of instruments for any RF components or other equipments.

REPLACEMENT OF BATTERY : Unscrew the screw fixing the lid for battery compartment on the bottom face of the test oscillator. Use 9V DC transistor dry battery. Japanese BL 006P, Eveready No. 216 or equivalent.

TEST OSCILLATOR TE-16A