

# **RA-1486-B OSCILLATOR**

**TECHNICAL INFORMATION BULLETIN**

***Westrex***

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# RA-1486-B OSCILLATOR

## CONTENTS

	<i>Page</i>
1.0 Use . . . . .	1
2.0 Illustrations . . . . .	1
3.0 General Data . . . . .	1
4.0 Description . . . . .	1
5.0 Maintenance . . . . .	2

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# Westrex Corporation

HOLLYWOOD DIVISION

SUCCESSOR TO E. R. P. DIVISION

*Western Electric Company*  
INCORPORATED

## TECHNICAL INFORMATION BULLETIN OPERATING AND MAINTENANCE INSTRUCTIONS FOR RA-1486-B OSCILLATOR

### 1.0 Use

The RA-1486-B Oscillator supplies 60-kc bias and erase signal with a low harmonic content for erasing and recording in a single-track magnetic recording system. It may also be used to supply bias signal through a suitable isolating network to three or four magnetic recording heads in a multichannel recording system.

### 2.0 Illustrations

Figure 1 Schematic Circuit of RA-1486-B Oscillator

Figure 2 Wiring Diagram of RA-1486-B Oscillator

### 3.0 General Data

#### 3.1 Electrical Characteristics

Signal Frequency: 60 kc

Signal Output: Adjustable, approximately 150 ma. maximum into RA-1481 Type Erase Head plus 35 ma. maximum into RA-1480-A Record Head, or not less than 35 ma. into each of the three heads in the RA-1508-A Record Head Assembly, and not less than 30 ma. into each of four heads in the RA-1526 type Record Head Assembly, through suitable isolating networks.

Harmonic Distortion: Not over 0.1% second harmonic.

Power Requirements: 0.6 amperes at 12.6 volts dc.

35 to 70 milliamperes at 275 volts, dc.

#### 3.2 Mechanical Characteristics

Dimensions:  $4\frac{3}{4}$ " wide  $\times$   $6\frac{15}{16}$ " high  $\times$   $4\frac{1}{2}$ " deep.

Mounting: Horizontal or vertical. Suitable for mounting on a 7" high equipment cabinet mounting plate.

#### 4.0 Description

The RA-1486-B Oscillator is of the L-C, tuned-grid type, operating at 60 kc. Plate and filament power are obtained from an external power supply.

Referring to Figure 1, P-1, which is mounted on the amplifier chassis, is an internal, continuously-variable control of the output. Condenser C3 is variable and is used to adjust the operating frequency of the oscillator to 60 kc. The harmonic-rejection filter at the output of the transformer T-1, has a series arm which must be tuned to 60 kc in association with the intended load, by selecting the appropriate terminal on the retard coil L2 to give the maximum output. The filter is also supplied with a shunt arm tuned to 120 kc. When shipped as a separate unit, the lead to L2 is wrapped around terminal 3, *but is not soldered*. The proper terminal should be determined for the intended load, and the lead should be soldered to it.

## RA-1486-B OSCILLATOR

### 4.0 Description (Continued)

Terminals 2 and 7 of TS-1 are across R3 and must be strapped before oscillation can occur. This provides a means for using a remote switch to disable the oscillator.

In any installation of the oscillator, terminal 1 of TS-1 goes to the grounded side of the speech circuit. The chassis should be grounded at terminal 6 of TS-1.

### 5.0 Maintenance

Figure 2 shows the wiring diagram of the oscillator. Condenser C3 should be checked occasionally to determine that the oscillator and the output filter are tuned for the same fre-

quency, as evidenced by a maximum output signal.

The following table of point-to-ground voltage measurements will be useful in isolating the cause of circuit difficulties:

Reference: Figure 1

Load for test: 100 milliamperes

	<i>Voltage Measured</i>	<i>Location</i>	<i>Approx. Volts</i>	<i>Meter Scale</i>
V-1 and V-2				
Plate		VS-5	250	1000
Screen		VS-6	225	250
Cathode		VS-2	30	50

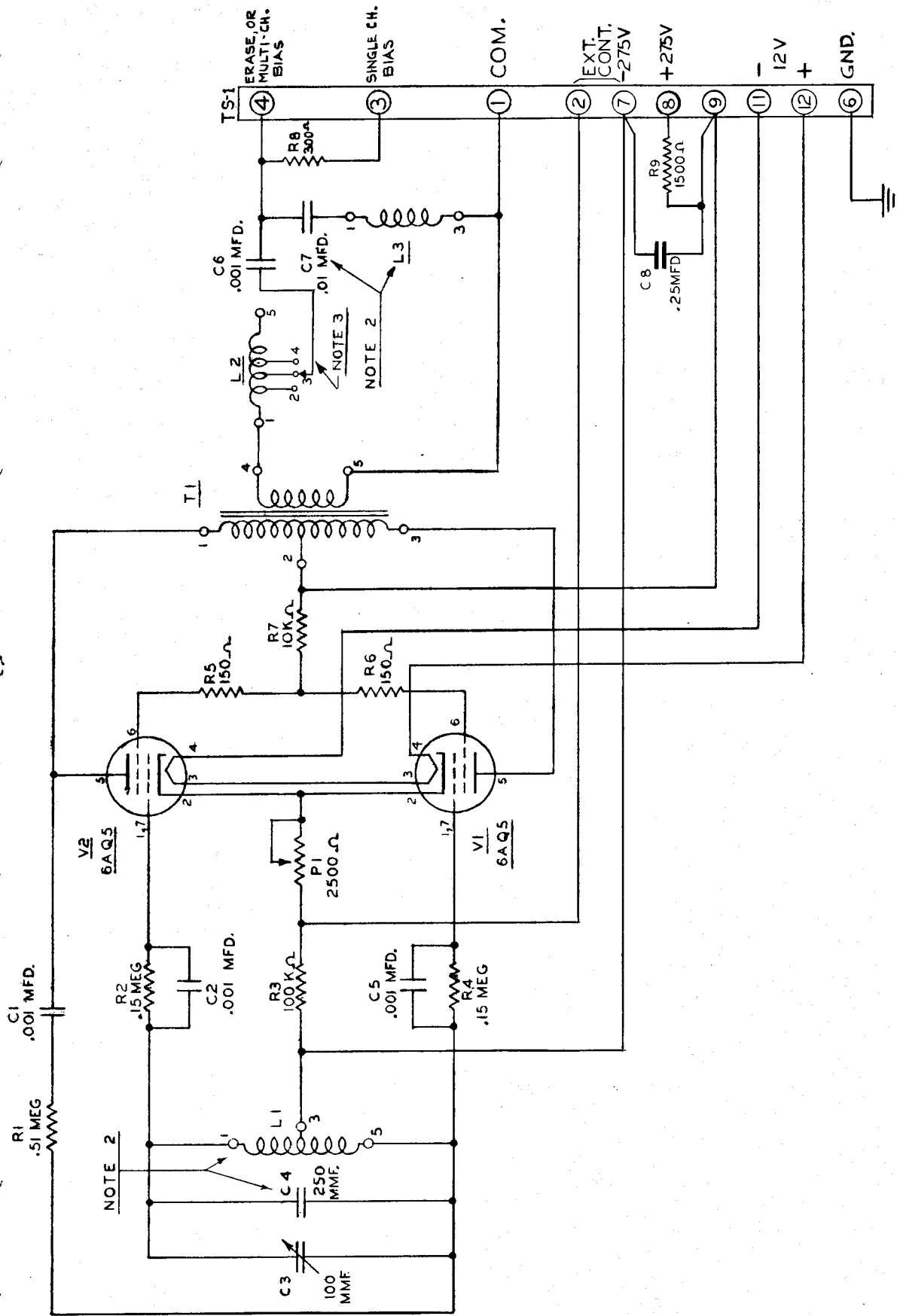


Figure 1 Schematic Circuit of RA-1486-B Oscillator

