

RA-1486-A OSCILLATOR

TECHNICAL INFORMATION BULLETIN

Westrex

RA-1486-A OSCILLATOR

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Westrex Corporation

HOLLYWOOD DIVISION

SUCCESSOR TO E. R. P. DIVISION

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INCORPORATED

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

1.0 Use

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

2.0 Illustrations

Figure 1. Circuit Schematic of RA-1486-A Oscillator.

Figure 2. Wiring Diagram of RA-1486-A 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 three heads in the RA-1508-A Record-Head Assembly through a suitable isolating network.

Harmonic Distortion: Not over 0.1% second harmonic.

Power

Requirements: 0.3 amperes at 115 volt, 50-60 cycles, single phase.

3.2 Mechanical Characteristics

Dimensions: 7" wide \times 6 $\frac{15}{16}$ " high \times 6" deep.

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

Weight: 11 $\frac{1}{2}$ lbs.

4.0 Description

The RA-1486-A Oscillator is of the L-C, tuned-grid type, operating at 60 kc. It contains its own power rectifier for operation from a 115-volt, single-phase, a-c source. The a-c line circuit is provided with an AGS-1 Buss fuse. Figure 1 shows a circuit schematic and Figure 2 shows the wiring diagram of the oscillator.

Referring to Figure 1, P-1, which is mounted on the amplifier chassis, is an internal, continuously variable control of the output. The harmonic-rejection filter at the output of the transformer, T-1, has a series arm which is tuned to 60 kc, and a shunt arm tuned to 120 kc. Condenser C3 adjusts the frequency of the oscillator and should be set for maximum output. This condition exists when the resonant frequency of the series arm of the filter and the oscillator frequency are alike.

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4.0 Description (Continued)

Terminals 1 and 2 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. When used with a single channel recorder, terminals 1 and 3 are used for the bias circuit and terminals 1 and 4 are used for the erase circuit. When used with a triple-channel recorder, terminals 1 and 4 are used for the bias circuits.

In any installation of the oscillator, the common side of the output, terminal 1, should be grounded at one point only and the chassis should be grounded.

5.0 Maintenance

Condenser C3 should be checked occasionally to

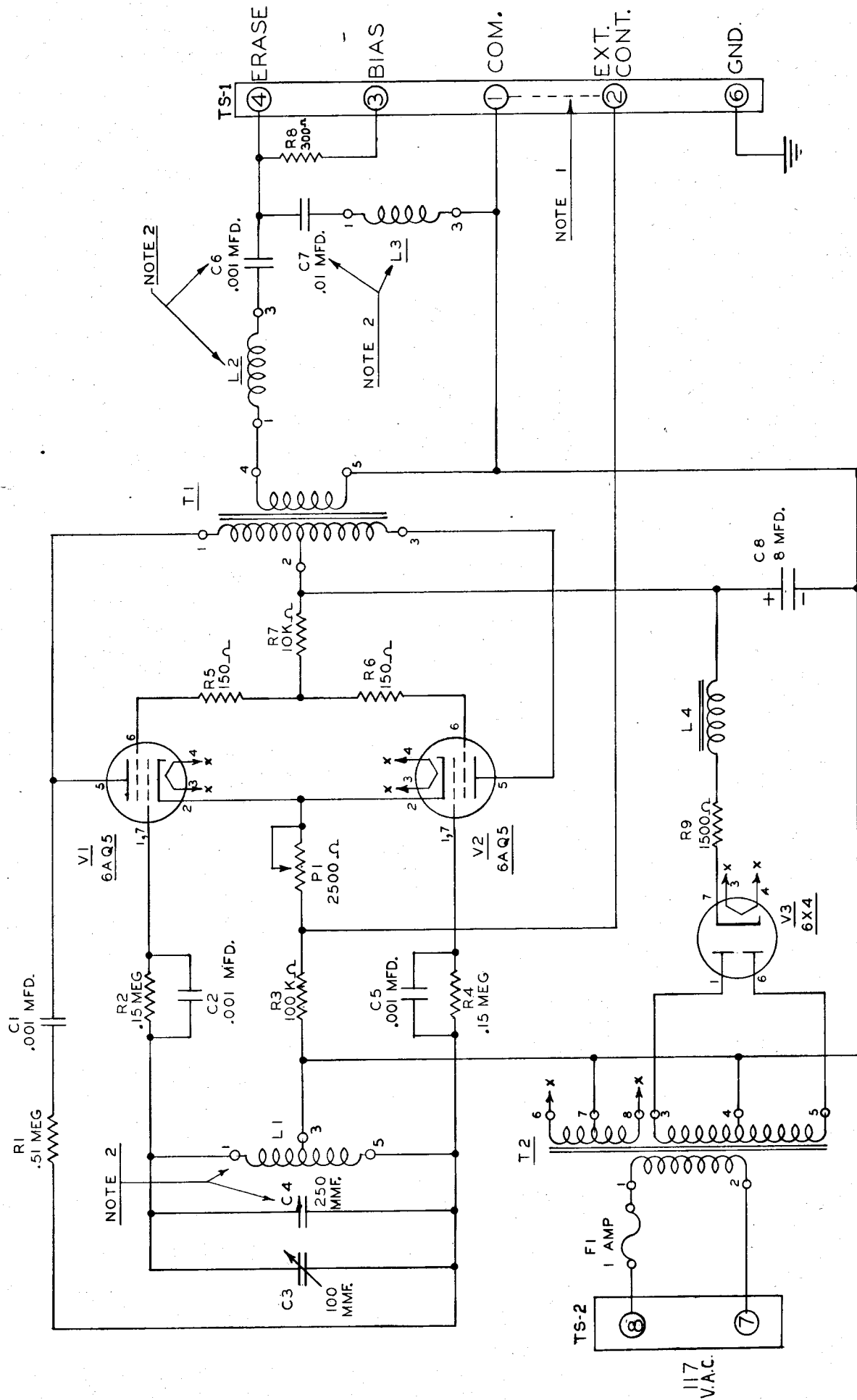
insure that it is set for maximum output.

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

Reference: Figure 1

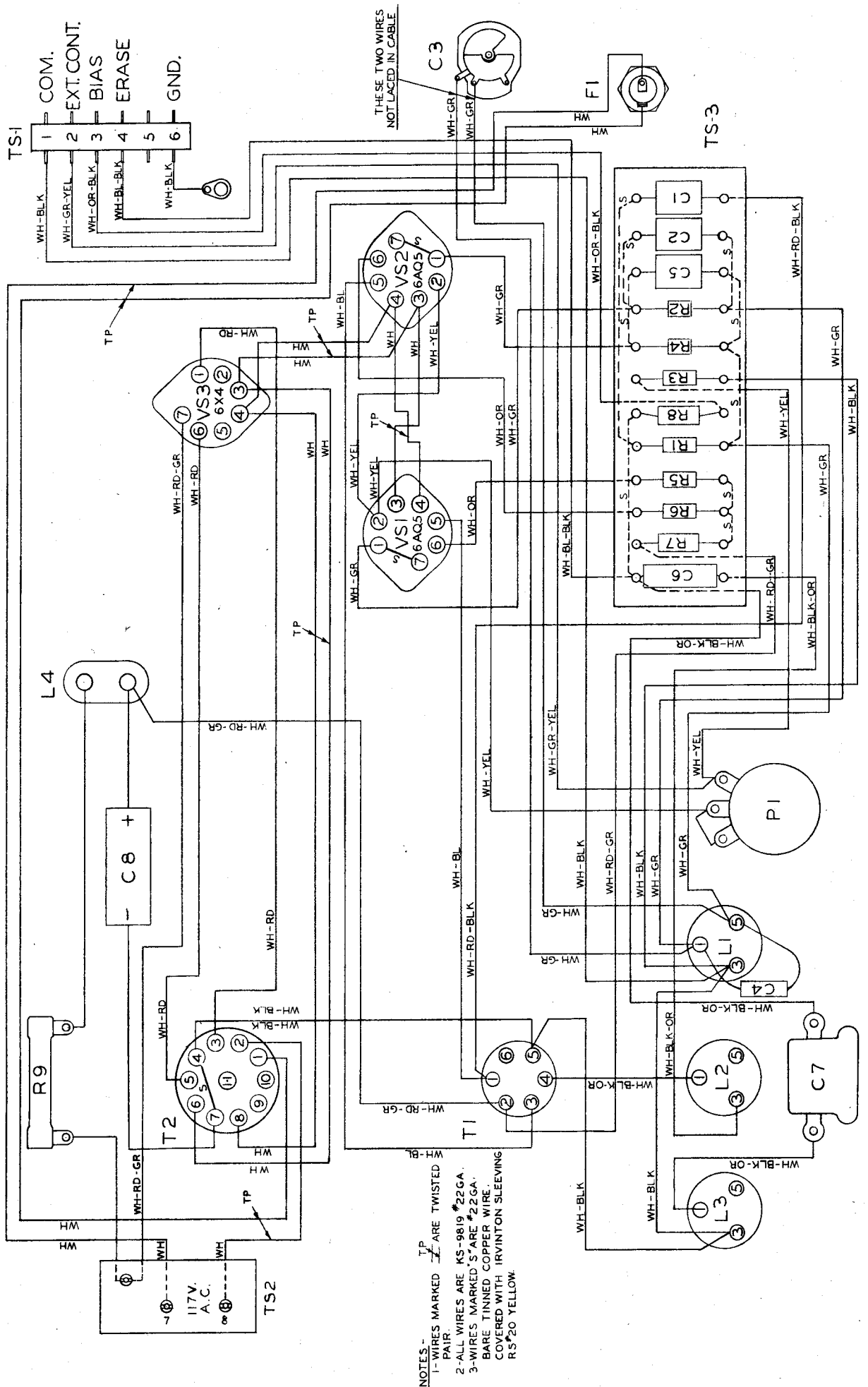
Load: 100 milliamperes

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



- NOTES:
1. TERM. 2 (EXT. CONT.) MUST BE CONNECTED TO TERM. 1 (COM.) FOR OPERATION.
 2. L1 & C4 ARE MATCHED SUB-ASSEMBLY.
 - L2 & C6 " " "
 - L3 & C7 " " "

Figure 1. Circuit Schematic of RA-1486-A Oscillator



THESE TWO WIRES
NOT LACED IN CABLE
C3

NOTES -
1 - WIRES MARKED ARE TWISTED PAIR.
2 - ALL WIRES ARE KS-9819 #22 GA.
3 - WIRES MARKED 'S' ARE #22 GA. BARE TINNED COPPER WIRE. COVERED WITH IRVINGTON SLEEVING RS720 YELLOW.

Figure 2. Wiring Diagram of RA-1486-A Oscillator