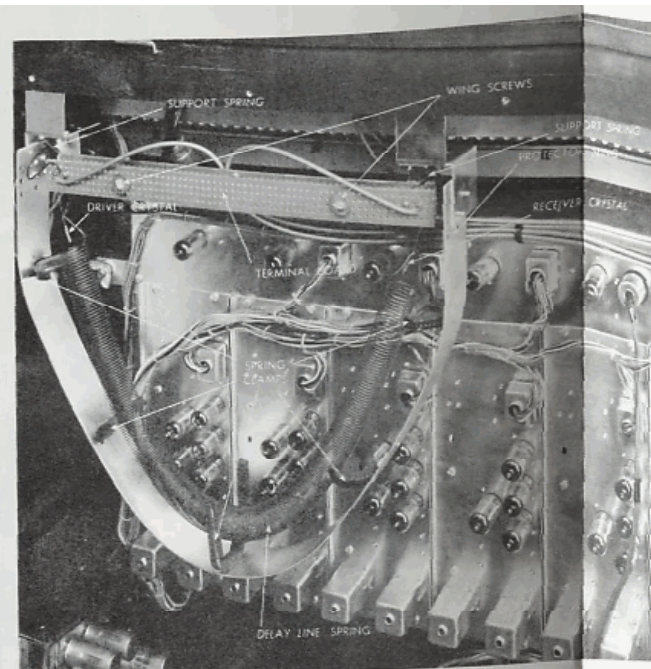
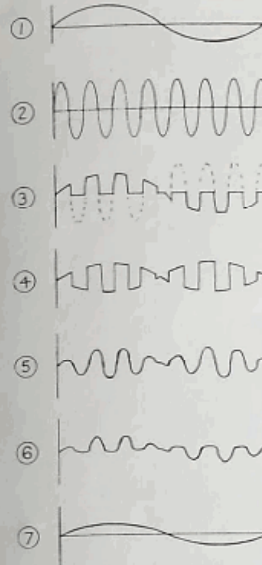


PANORAMIC TONE*

A method of creating a synthetic reverberation effect for Baldwin Organ tones. In this system, organ tones modulate an ultrasonic signal which excites one end of the reflecting delay line. Reflected output signal obtained from the opposite end of the delay line is demodulated and amplified. This reverberated signal is combined with a portion of the original signal and then introduced into the power amplification system.

Organ signal, after preamplification and expression, (Waveform #1) is fed to Pin #3 of the 6 Pin plug on the reverberation chassis cable. A portion of this signal is fed to Pin #2 of V2A (Audio Amplifier). The incoming signal is also presented to the input network of V1A (Driver Amplifier). This signal modulates the output of an ultrasonic oscillator (20 kc approx.) appearing across diodes E1 and E2 (Waveform #2). Only the sidebands of the modulated signal (Waveform #3) are utilized — the carrier being suppressed by the diode action of E1 and E2. These sidebands pass through driver amplifier V1A (Waveform #4) and tuned plate circuit coil L-1 to driver crystal attached to the reflecting delay line (Waveform #5). Reflected mechanical impulses initiated by the drive crystal are received by the pickup crystal, converted to electrical impulses, and applied to tuned circuit L-2. This reverberated signal is amplified by V2B and then demodulated by the diode action of E3 and E4 (Waveform #6). The demodulated signal is then routed to the reverberation control switch and thence to the balance (Volume) control. The reverberated signal is then fed through a low-pass filter to V2A (Audio Amplifier) where it is mixed with the original non-reverberated organ signal. The amplified output of V2A is then applied to pin #4, (Waveform #7) of the reverberation chassis cable plug, and then to the power amplifier and speaker system.

IDEALIZED WAVEFORMS
AT CIRCLED POINTS ON
SCHEMATIC DRAWING.

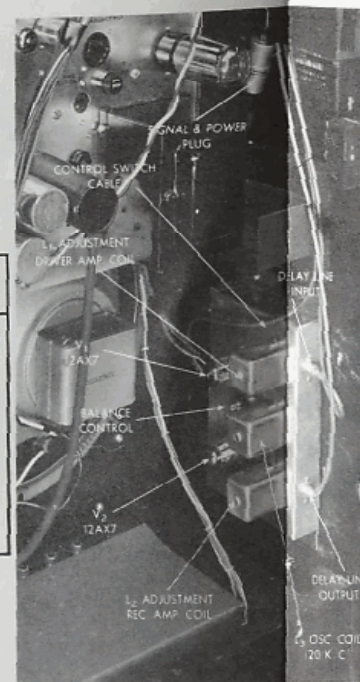


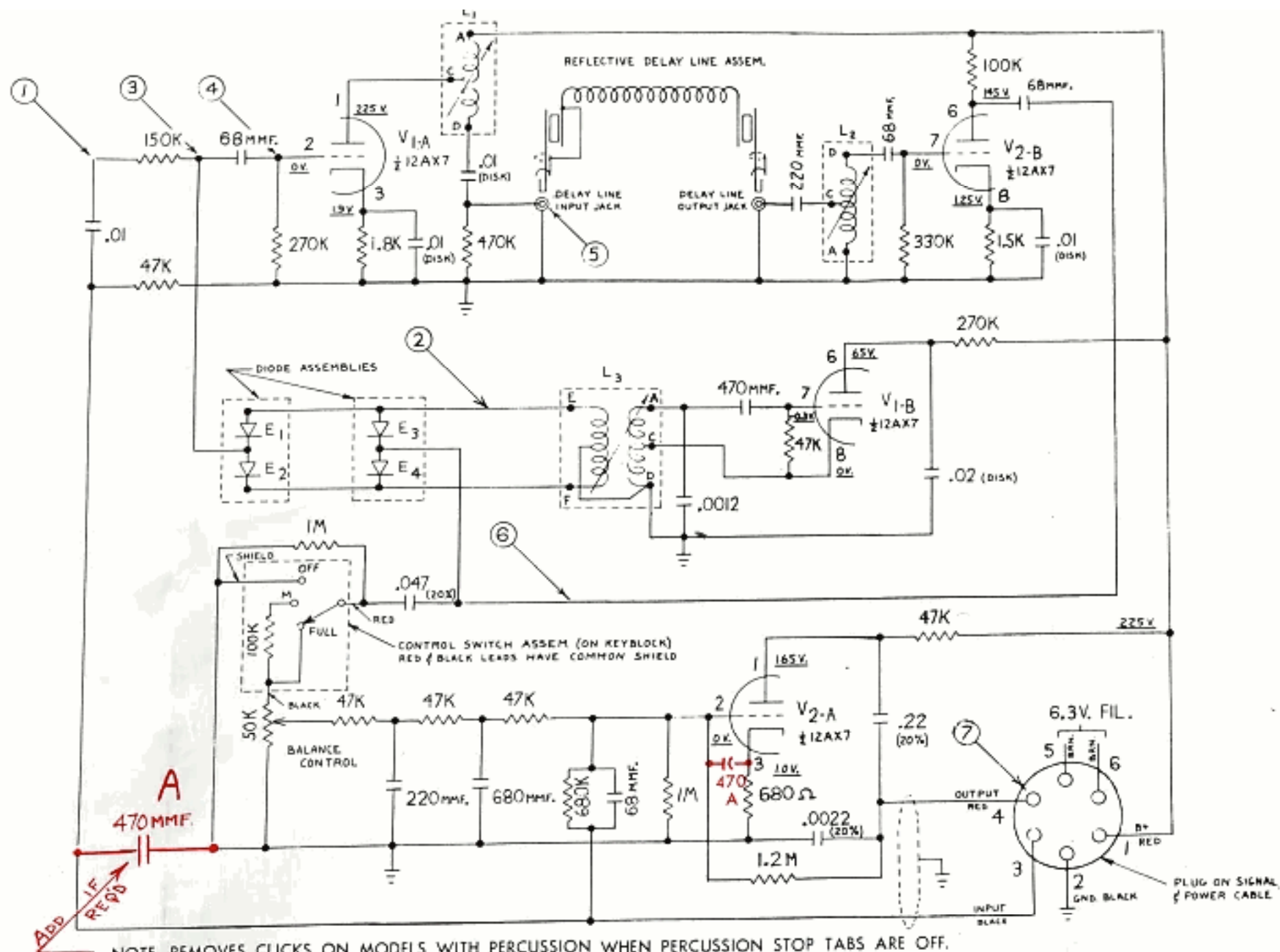
PHOTOGRAPHS SHOW INSTALLATION OF P. T. CONVERTER AND DELAY LINE ASSEMBLY IN MODEL 61 AP CONSOLE.

PARTS LIST

SERVICE DEPT. ITEM NUMBER	PART NUMBER	PART NAME
84-2	B-500-027834	Diode Assembly (E-1-E2) (E-3-E-4)
84-5	B-512-027844	L1 Variable Inductor (Driver)
84-4	B-512-027843	L2 Variable Inductor (Receiver)
84-3	B-512-027845	L3 Variable Inductor (Oscillator)
84-7	B-509-021088	Balance Control — 50K
84-6	B-506-027849	Reverberation Control Switch
84-8	C-500-027914	Reverberation Spring with Crystals

NOTE: — All Resistors are 1/2 watt and 10% Tolerance.
— All Capacitors are 10% Tolerance unless otherwise indicated.
— No Tolerance on Ceramic Capacitors.
— Tubes V1 and V2 — Type 12AX7





PANORAMIC TONE*

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