

GENERAL.

The Voting Tone Encoder is designed to operate with various types of receivers in voting systems such as RCA or GE. The Encoder will generate a tone and send it down the transmission pair to the voting comparator until a signal is received by the receiver and a carrier operated switch (COS) causes the receive audio to replace the tone.

THEORY OF OPERATION.

When there is no Carrier Operated Switch (COS) input, U1-9 will be low and U1 will oscillate at a frequency of 3.2768 MHz. The output of U1-10 is divided by 2048 in U2 with an output at U2-15 of 1600 Hz. This output passes through a low-pass filter U3-13, 14 to a level set control R19 and to the test point. From level set R19 the tone passes to summing amp U3-2, 1 to output level pot R12. R12 sets the level of signal to the transmission lines.

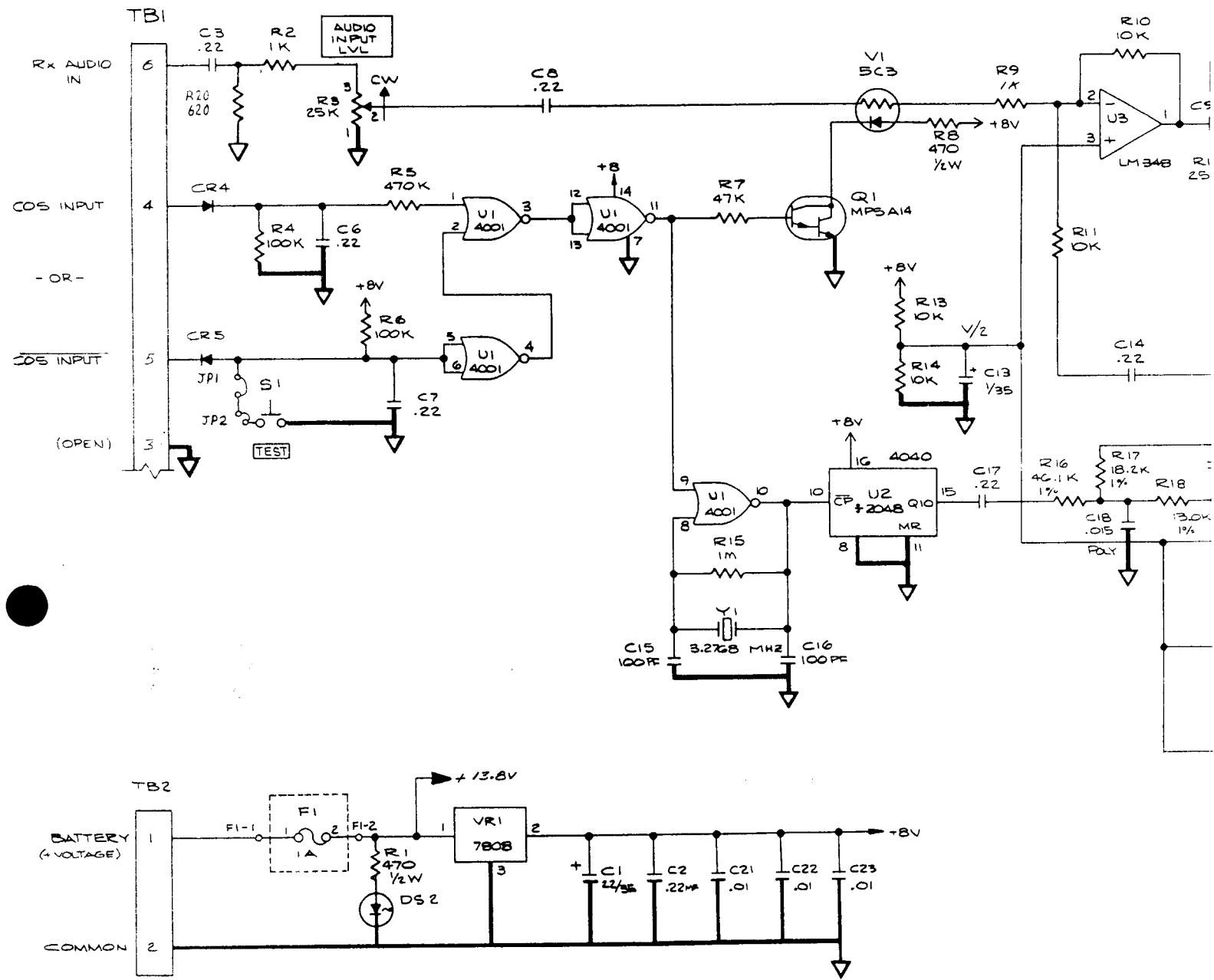
When a signal is received and a COS input is present, U1-9 will go high and Q1 collector will go low. A high on U1-9 will disable the oscillator to kill the 1600 Hz tone. A low at Q1 collector will turn on the photo-isolator V1 and allow the receive audio to pass through U3 to line driver amplifier U4.

R3 is used to adjust the receive level for best signal without clipping.

R19 is used to adjust the tone level relative to the receive level.

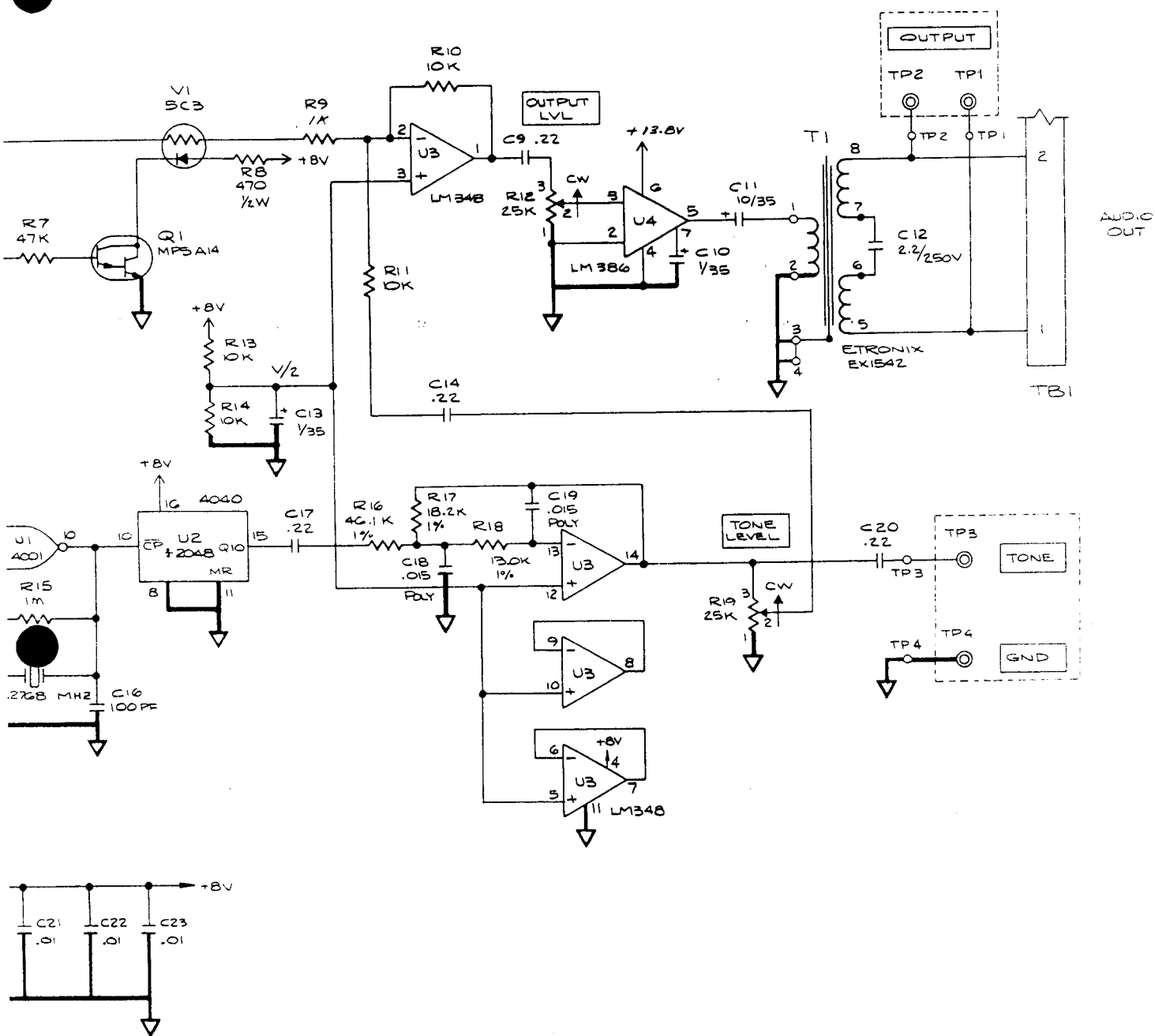
R12 is used to adjust the overall output level to the transmission line.

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1N9.4
S PART NUMBERS ARE FOR ENGINEERING
Y
R VOLTAGE AND GROUND CONNECTIONS
DT/LAST USED COMPONENTS
μF CAPACITORS ACROSS ± VOLTAGE
SIBLE
VALUES ARE IN MICROFARADS
VALUES ARE IN OHMS, ± 5%, 1/4 W
otherwise Specified

LTR	
A	PRO
B	SEE
C	SEE
D	SEE



AUDIO OUT

TB1

TONE LEVEL

TONE

GND

QTY	ITEM	PART NUMBER
RECD	NO.	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND APPLY AFTER FINISH. REMOVE BURRS AND BREAK SHARP EDGES.	APPROVALS
	DESIGNER
	MECH
	DESIGN
	FILE
	RELEASE

NEAT ASSY	USED ON
APPLICATION	FINISH