

Digital Computer Laboratory
Massachusetts Institute of Technology
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SUBJECT: GENERAL DESCRIPTION OF DECODER OUTPUT AMPLIFIER

To: N.H. Taylor, R.A. Nelson, Group 62 Section Chiefs, and
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From: Henry E. Zieman

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Abstract: The decoder output amplifier is a three stage amplifier which amplifies the output of a decoder for transmission to display scopes. Instability of the signal output has caused considerable trouble.

The decoder output amplifier receives a signal from a binary-to-analog decoder and amplifies it to a level satisfactory for transmission to several remote display scopes. Considerable trouble has been experienced with power supply variations, and induced voltages on input leads and within the amplifier itself.

The present amplifier has three stages; a differential phase inverter, a differential amplifier, and a single-ended cathode follower. The cathode follower feeds a 93 ohm terminated cable. It is planned at present to make the system push-pull throughout to decrease the susceptibility to power supply variations, and to increase the cathode coupling to increase the common mode rejection.

As presently used the amplifier puts out a positive 2 volt signal with the input shorted, and will put out a positive 22 volts at the maximum signal obtainable from the decoder.

SA-36905 is a circuit schematic of this amplifier.

Drawing:
SA-36905

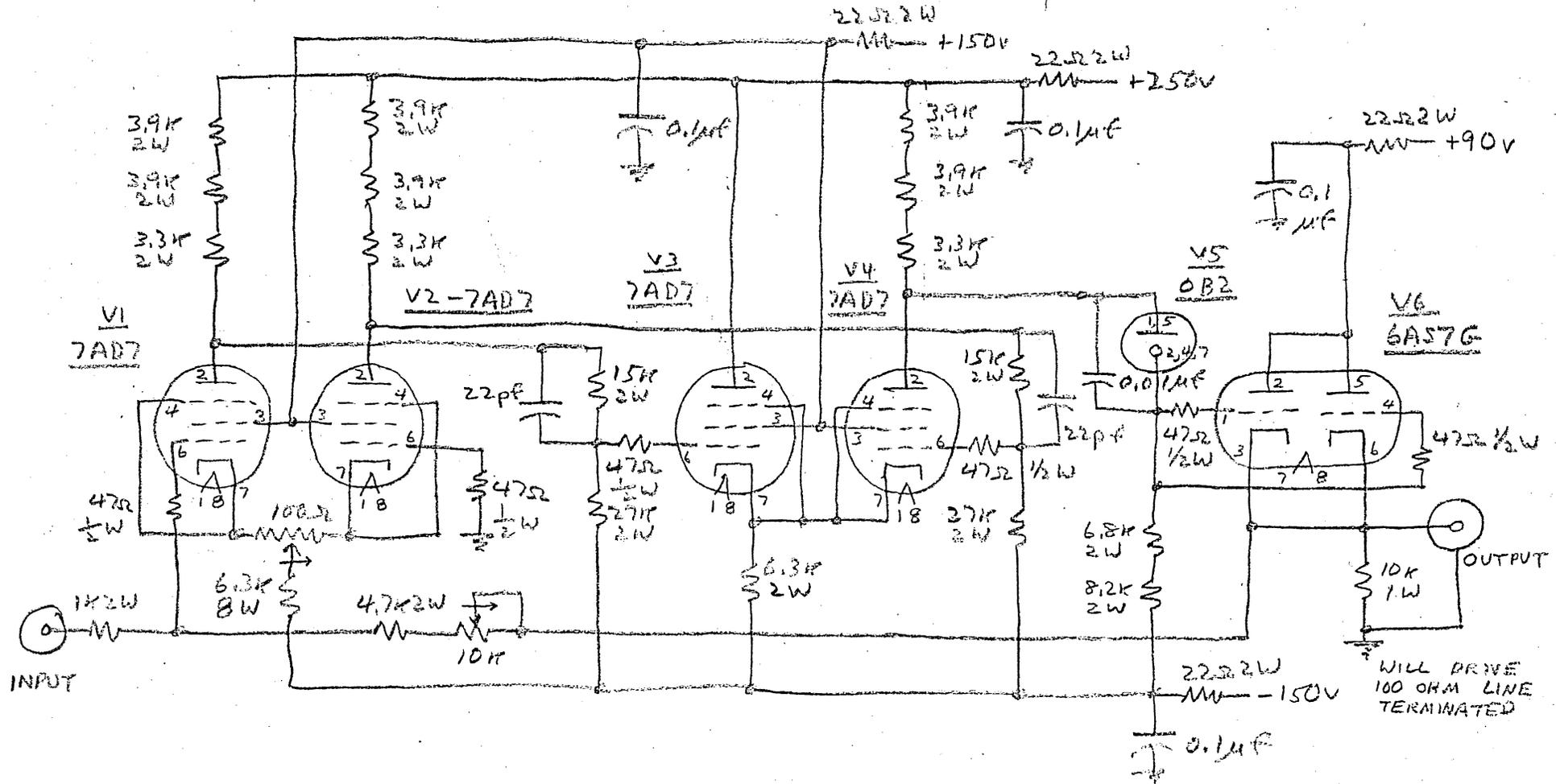
Signed Henry E. Zieman
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HEZ/cs

Approved N.H. Taylor
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DECODER OUTPUT AMPLIFIER



100 OHM POT, SHOULD BE VARIED SO THAT OUTPUT IS +2 VOLTS WHEN THE INPUT IS GROUND.
 10K POT. " " " " " " " " +22 VOLTS " " " " AT ITS MOST NEGATIVE VOLTAGE.

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