

January 25, 1956

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Dear Dr. Gottschalk -

The purpose of this letter is to rectify an oversight which my memory is foggy enough to suggest might have been made. I believe you and your engineer friend visited here to observe our flow recording setup and to copy the diagrams of the circuits used therein. If so, then this letter may or may not be pertinent; if not, it won't make much sense.

At any rate, in checking over these circuits it appears that one page is missing. We did not miss it because we have been working mainly on the probe units recently and have not done much with the circuitry although much remains to be done. Possibly I did furnish you with a page which I have subsequently lost; possibly we pieced it together from older circuit diagrams from which it is derived; or maybe things looked complicated enough without another page of the same. Not being certain what we did, I am enclosing a copy of the circuit that seems to be missing. If you have it already, no harm will be done; if not, it may keep you from ending up in confusion.

The flow signal enters the top 6SL7 from the main amplifier section; the following circuits to the right are a rectifier-discriminator arrangement which provides a DC signal for a recording instrument of whatever type you have. (B) is a synchronizing pulse from the oscillator circuit which actuates the 6SN7 flip-flop to control the flow signal rectifier circuit. (D) is a synchronizing pulse for the spike blanking circuit in the middle of the flow amplifier; on the bottom of the amplifier diagram is a 6SN7 with two inputs to the cathodes. D is connected to one of these inputs and a similar 6SC7 in the magnet supply circuit goes to the other. These cathode input pulses initiate and terminate the blank period during which the magnet polarity is reversed. I forget which input is which although it is easy to tell with an oscilloscope: the magnet-reversal spike is supposed to be suppressed; if the spike appears in the output and a half-cycle of the flow signal is suppressed instead, the cathode inputs are backwards and should be reversed.

I hope that this letter is superfluous; if not, I trust that it makes everything clear.

Sincerely,

*Alan B. Denison*