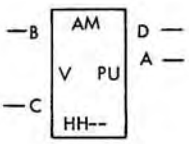

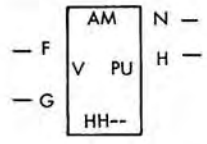

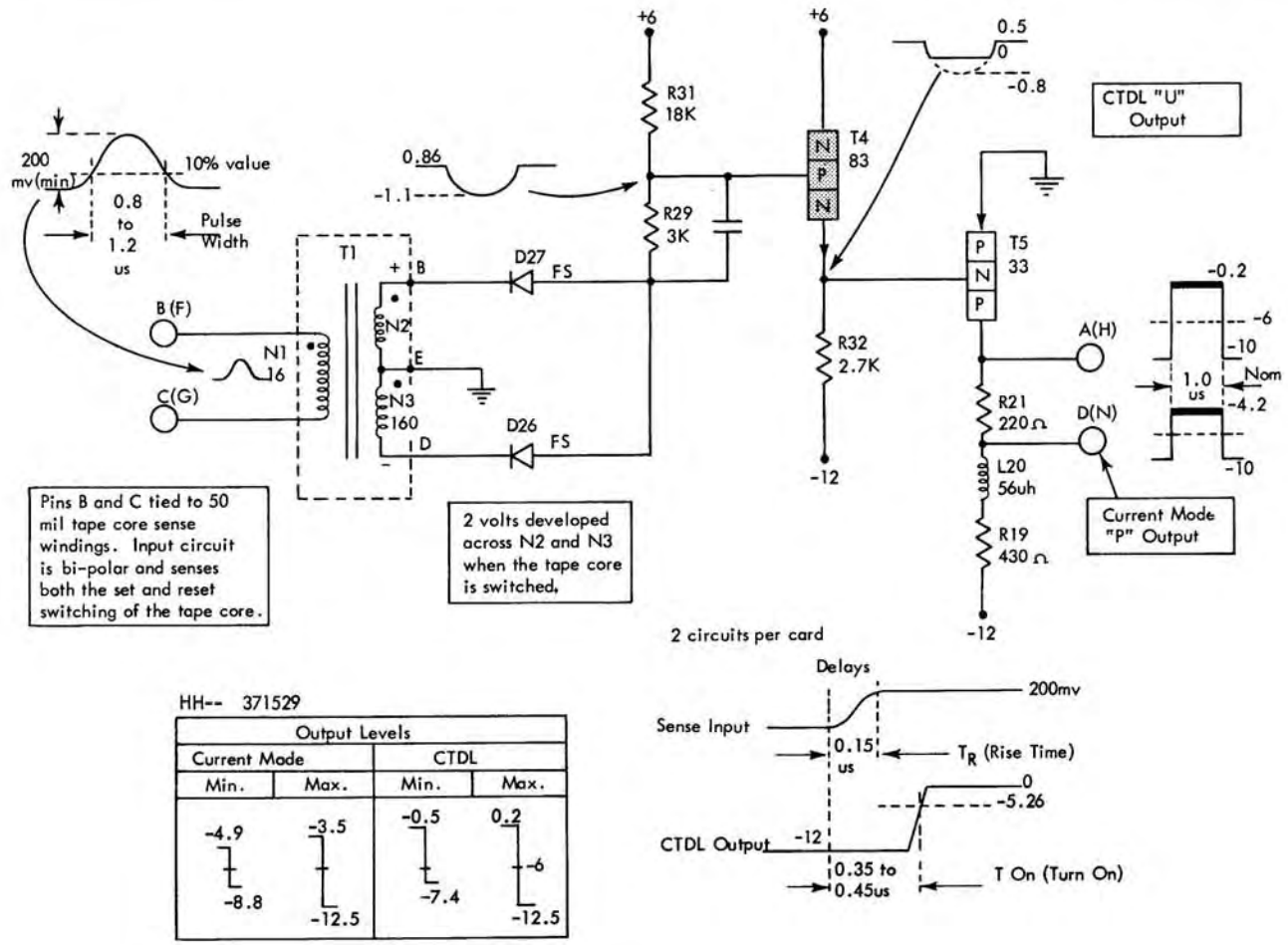

HH-- 371529

Output Levels			
Current Mode		CTDL	
Min.	Max.	Min.	Max.
-4.9 to -8.8	-3.5 to -12.5	-0.5 to -7.4	0.2 to -6 to -12.5

Tape-Core Sense Amplifier

The HH - - card consists of two tape-core sense amplifier circuits. Each circuit senses and amplifies the special mode switching output pulse of a 50 mil tape core and provides both a CTDL and a current mode output. The input circuit is tied to a core output winding and senses both the set and reset switching of the core. The output of each amplifier circuit is identical to a CTDL logic block and may drive simultaneously into both a CTDL U line and a current mode P line. A plus output is obtained on both the set and reset switching of the core.

Circuit Description

With no signal at the input pins B and C, conduction from ground through N2, D27 and from N3 and D26 to R29, R31 to +6v sets the base of the emitter follower of T4 to 0.86v. The emitter follower output reverse-biases T5 off, giving a CTDL output at pin A of 12v.

Assume the tape core is switched on (set), and the 200 millivolt input signal appears between pins B and C. About 2v is induced across windings N2 and N3 with polarities as shown. Increased current flow through the forward-biased D26 to +6v now sets the base of T4 to −1.1v. The emitter follower output decreases toward −0.8v and forward-biases T5 on. With T5 on, a +U output appears at pin A. R21 limits the voltage swing seen at pin D to a usable current mode P line output.

Circuit operation is the same when the core is switched off (reset). However, the voltages developed across N2 and N3 are now of opposite polarity to those assumed when the core was set. Greater current now flows through D27 and lowers the base voltage of T4 to −1.1v.

The turn-on delay is measured from the time the input signal starts to rise until the CTDL output signal reaches the −5.26v point. Turn-off delay data are not given as the delays cannot be referenced to the driving pulse.