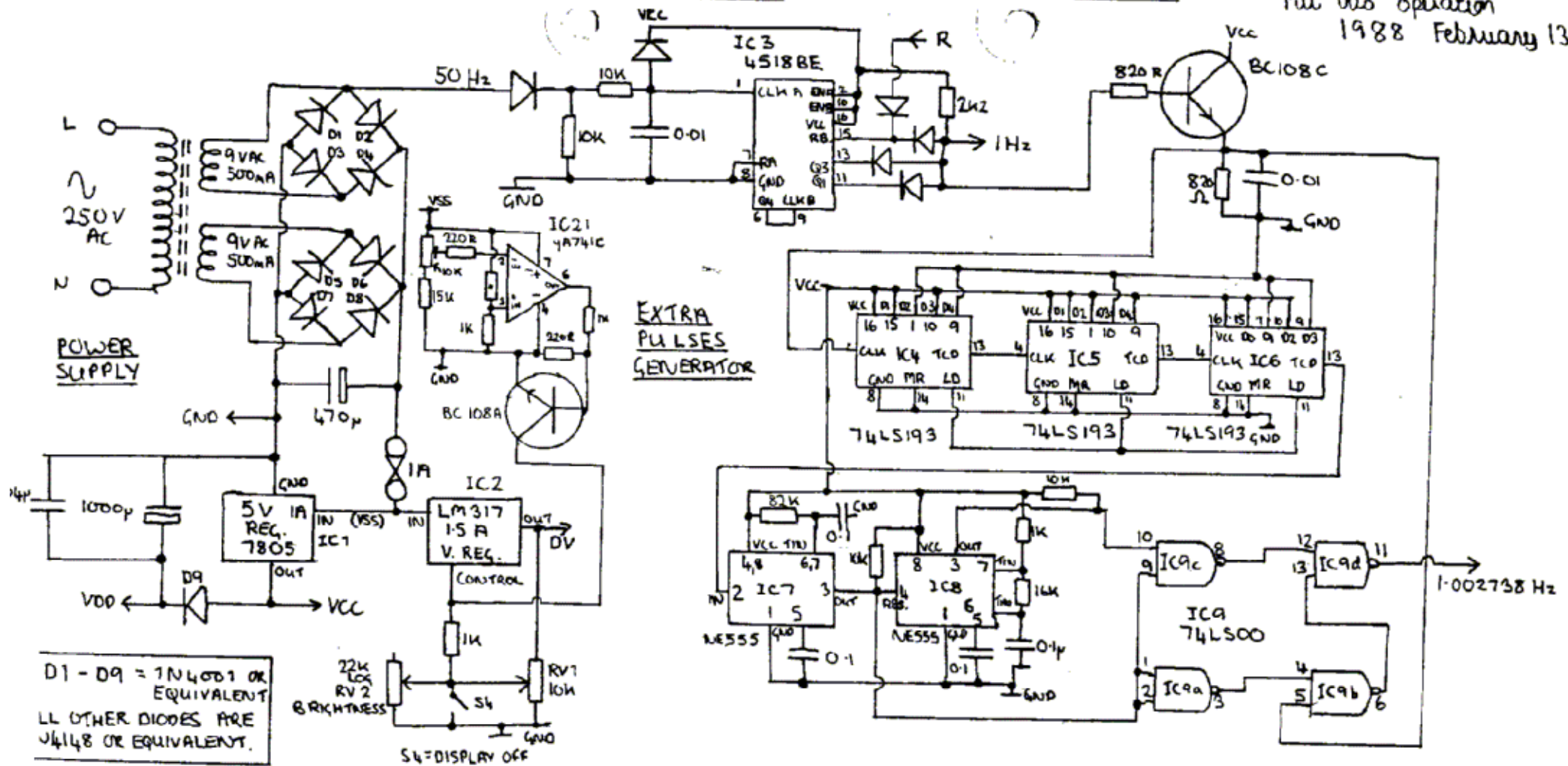


SIDEREAL CLOCK - Hans Summers 1986-8

Put into operation
1988 February 13.

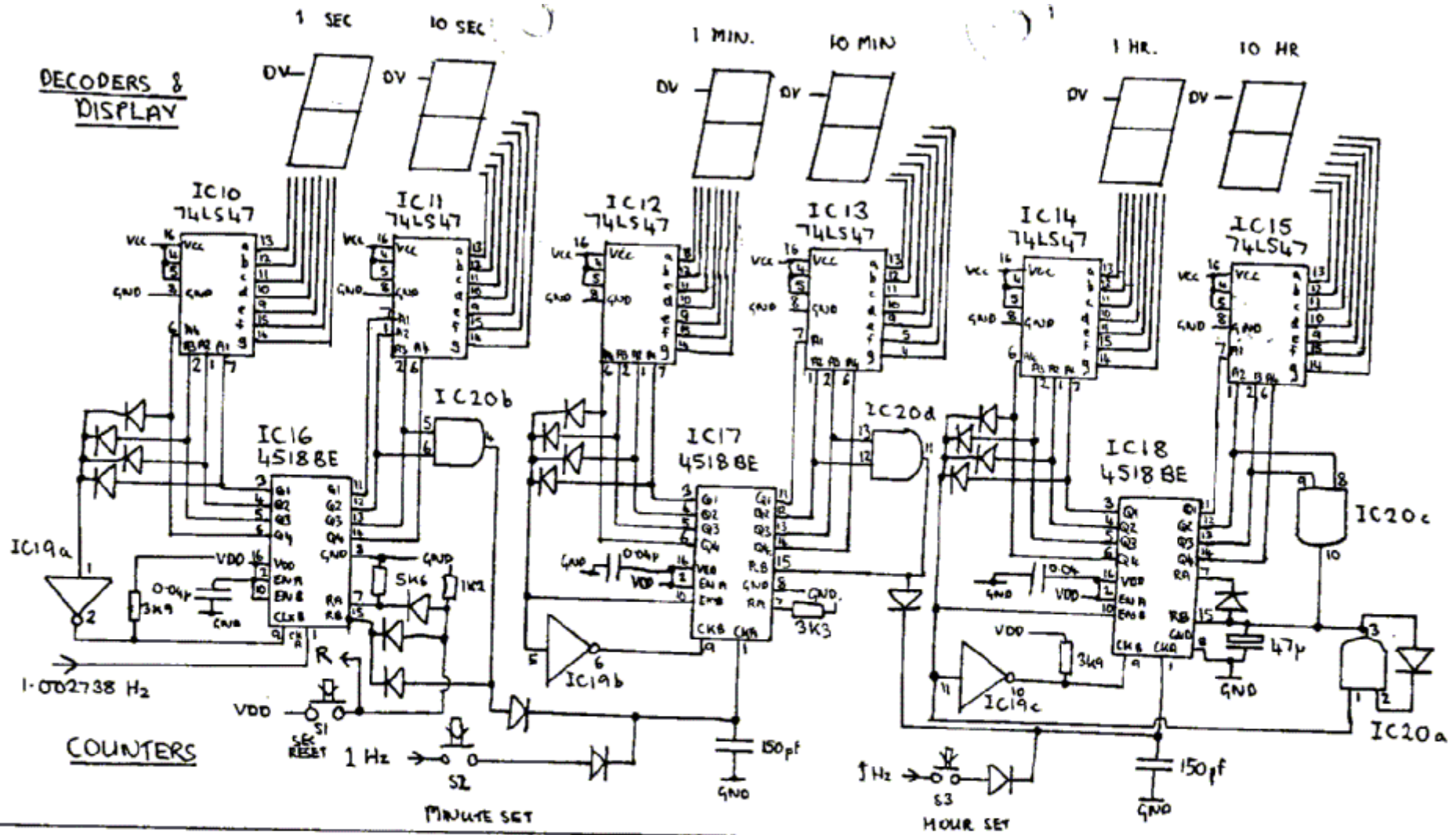


SEMICONDUCTORS.

- IC1 - 7805 : 5V 1A Voltage regulator
- IC2 - LM317 : 3-30V 1A Volt. Reg.
- IC3 - 4518BE : DUAL BCD UP COUNTER
- IC4-6 - 74LS193 : Presettable Binary counter.
- IC7,8 - NE555 : TIMER.
- IC9 - 74LS00 : QUAD 2-INPUT NAND GATE.
- IC21 - uA741 : OPERATIONAL AMPLIFIER

PIN NAMES

- CLKA/B - CLOCK INPUT TO COUNTER.
- Q1-4 - DATA OUTPUTS
- ENA/B - COUNTER ENABLE
- RA/B - RESET COUNTER
- MR - RESET COUNTER.
- TCD - CARRY OUTPUT
- LD - LOAD PRESET VALUES
- DO-3 DATA INPUTS
- VCC POS. SUPPLY (5V)
- VDD POS. CMOS SUPPLY
- GND NEG. SUPPLY (0V)
- TIN TIMING COMPONENT INPUT.
- VSS POS. SUPPLY - 10V.



SEMICONDUCTORS.

- All diodes are 1N4148 or equivalent.
- IC10-15 74LS47 : BCD TO 7-SEGMENT DECODER
 - IC16-18 4518BE : DUAL BCD UP COUNTER
 - IC19 4069BE : HEX INVERTER
 - IC20 4081BE : QUAD 2-INPUT AND GATE

PIN NAMES

- GND - NEGATIVE SUPPLY
- VCC - POSITIVE SUPPLY (5V)
- VDD - CMOS POSITIVE SUPPLY
- a-g - segment outputs to display
- A1-4 - Decoder inputs.
- Q1-4 - COUNTER OUTPUTS
- CKA/B - Clock inputs to counters
- ENA/B - ENABLE COUNTERS

- R A/B - RESET COUNTERS
- A - A COUNTERS
- B - B COUNTERS.

7-segment Display:

