

**SCHEMATHEEK**  
Beh. T. Hultermans  
Postbus 4228  
5604 EE Eindhoven

## SPECIFICATIONS

Countable Digits  
Type

Six decimal digits.  
Light-emitting diode frequency display with hold memory.

DISPLAY (in combination with TS-520S)

Frequency Range

All TS-520S transmit and receive channel frequencies as precise as 0.1 kHz digit.

Accuracy  
Input

Reference time  $\pm 0.2$  count.  
TS-520S heterodyne local oscillator signal, VFO signal, and all carrier oscillator signals.

### COUNTER

Measurable Frequency Range

100 Hz to 40 MHz

Input Sensitivity

50 mV r.m.s. at 10 kHz to 10 MHz

(at Room Temperature)

200 mV r.m.s. at 100 Hz to 40 MHz

Absolute Max. Input

200V (DC + peak).

Level

5V r.m.s. (continuous at 100 Hz to 40 MHz).

Input Impedance

Approx. 5 k $\Omega$ , less than 22pF.

Accuracy

Reference time  $\pm 0.1$  count.

Count Time

0.1 sec.

Least Significant Digit

0.1 kHz.

### REFERENCE TIME

Frequency

10 MHz

Error

Less than  $1 \times 10^{-5}$  (at room temperature).

Temperature Stability

Greater than  $3 \times 10^{-5}$  (at 0°C to +50°C).

Aging Rate

Lower than  $1 \times 10^{-6}$ /month (at room temperature).

### GENERAL

Ambient Temperature

-10°C to +50°C.

Power

Supplied from TS-520S.

External Power

12 to 16V, 0.9A DC (with 13.8V reference).

Dimensions

167mm (6-9/16") wide X 260 mm (10-1/64")

[268mm (10-1/16"), max.] deep X (1-37/64")

[43mm (1-11/16"), max.] high

Net Weight

1.27 kg (2.8 lbs.)

Semiconductors Used

42 ICs, 31 transistors, 19 diodes, 3 two-digit LEDs, and 1 LED indicator.

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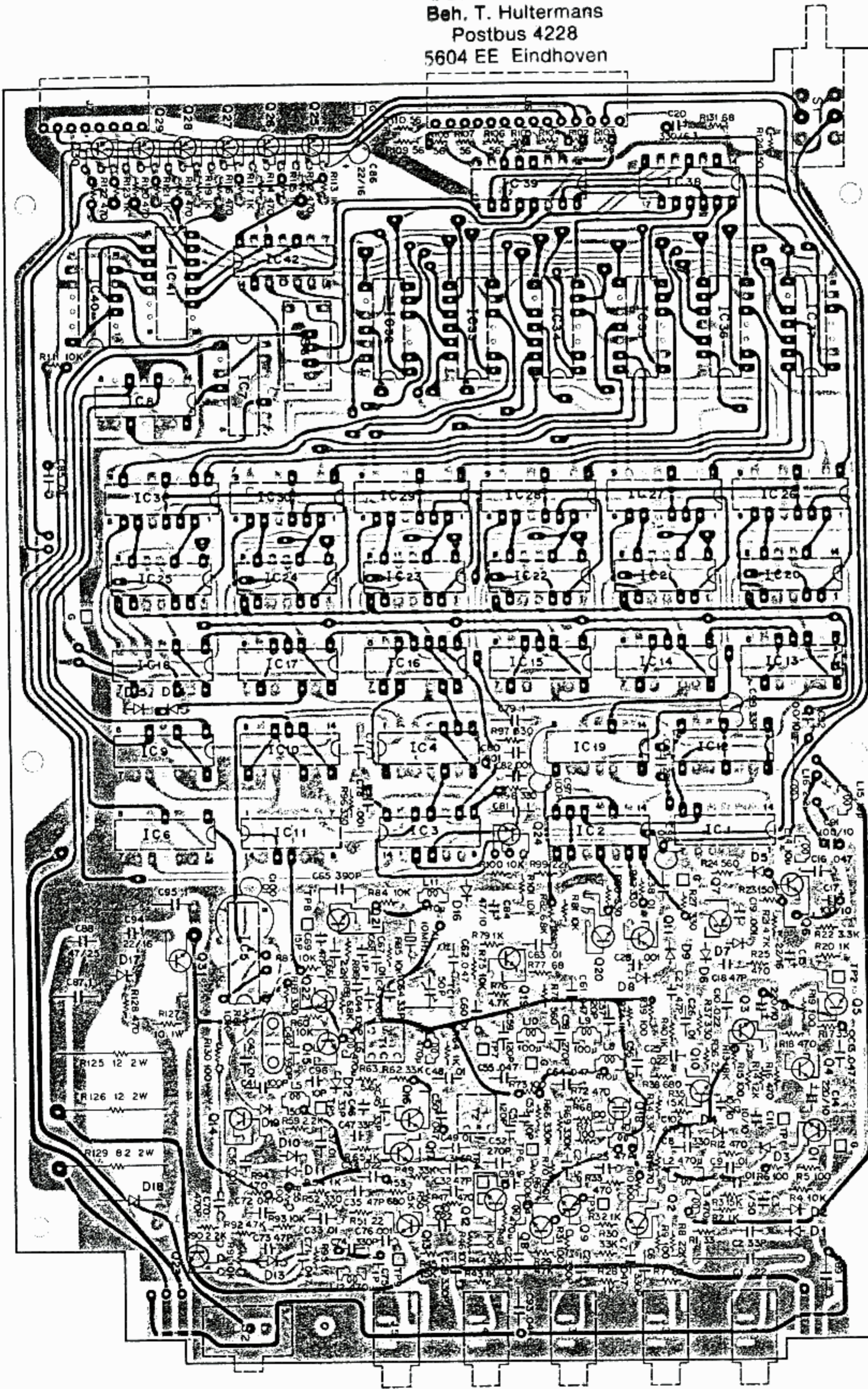
9

**DG-5**

**KENWOOD**

▼ Counter Unit (X54-1260-00)

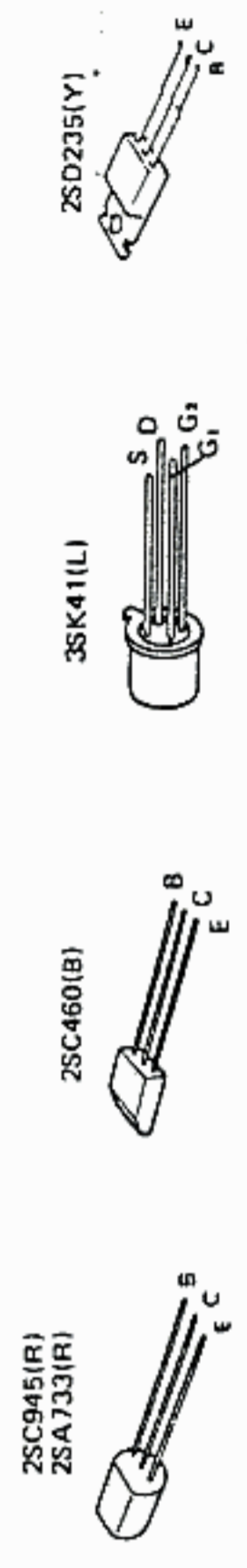
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IC1:SN74S00N, IC2~4, 38:TD3400AP, IC5~10, 13~18:SN74LS90N, IC11:TD3472AP, IC12:SN74196N,  
IC19~25:SN74176N, IC26~31:SN74LS75N, IC32, 34, 35, 37:SN7454N, IC33, 36:TD3451AP,  
IC39:TD3447AP, IC40:TD3492BP, IC41:TD3442AP, IC42:TD3404AP, Q1~3, 5, 6, 9, 10, 12, 13, 19, 20,  
22, 24:2SC945(R), Q4, 8, 15~17, 21, 23:2SC460(B), Q7, 11, 14, 25~30:2SA733(R), Q18:3SK41(L),  
Q31:2SD235(Y), D1~5, 12~16, 19:1S1587, D6~11:1N60, D17:WZ-090, D18:U05B

SN74S00N SN74176N  
TD3400AP SN7454N  
SN74LS90N TD3451AP  
TD3472AP TD3492BP  
SN74196N TD3404AP  
14 13 12 11 10 9  
1 2 3 4 5 6 7 8

SN74LS75N  
TD3447AP  
TD3442AP  
14 13 12 11 10 9  
1 2 3 4 5 6 7 8



A

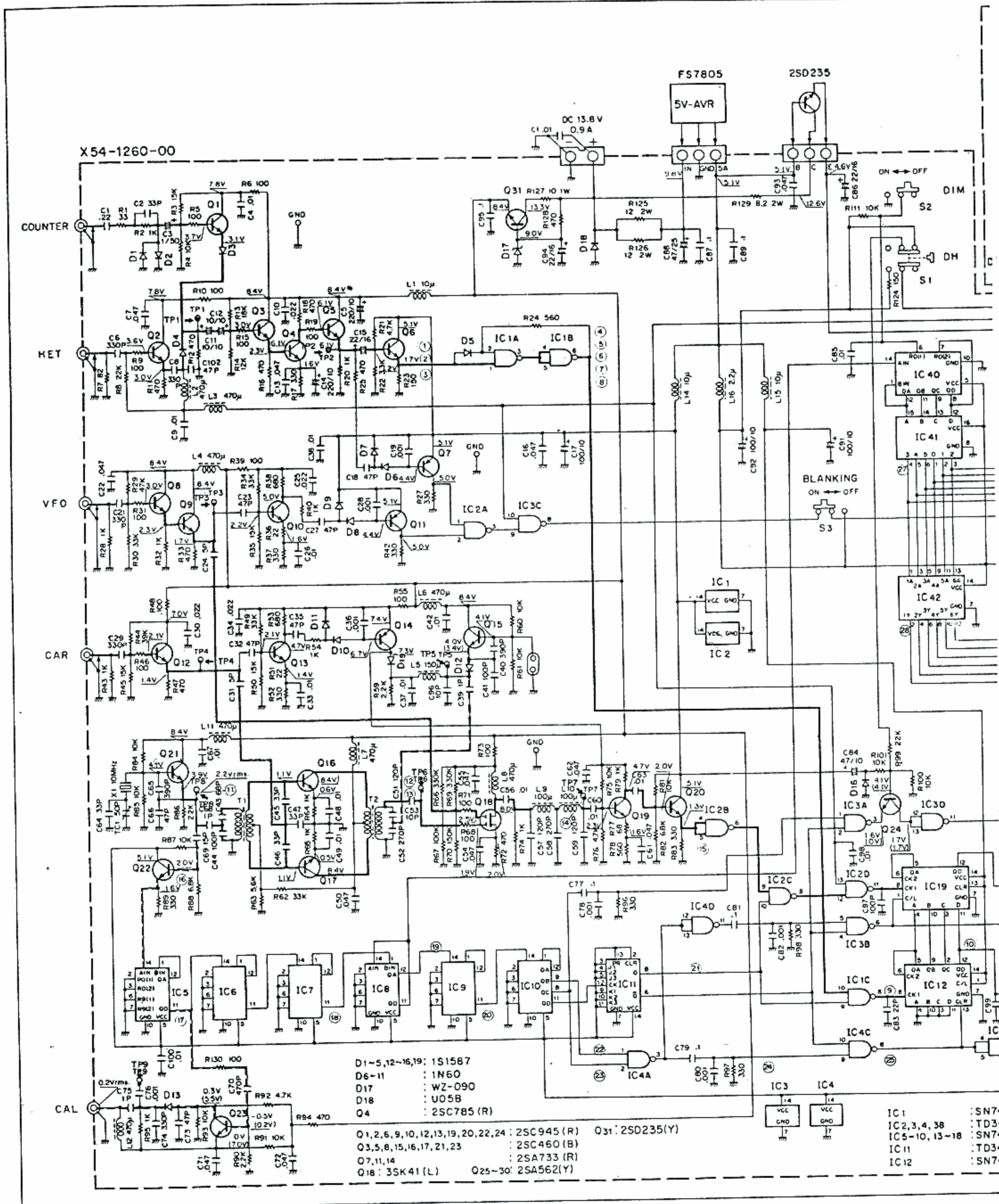
B

C

D

With regard to the numbers in this diagram, refer to the the wave forms on page 37.

— Signal line    ..... Power line



1  
2  
3  
4  
5  
6

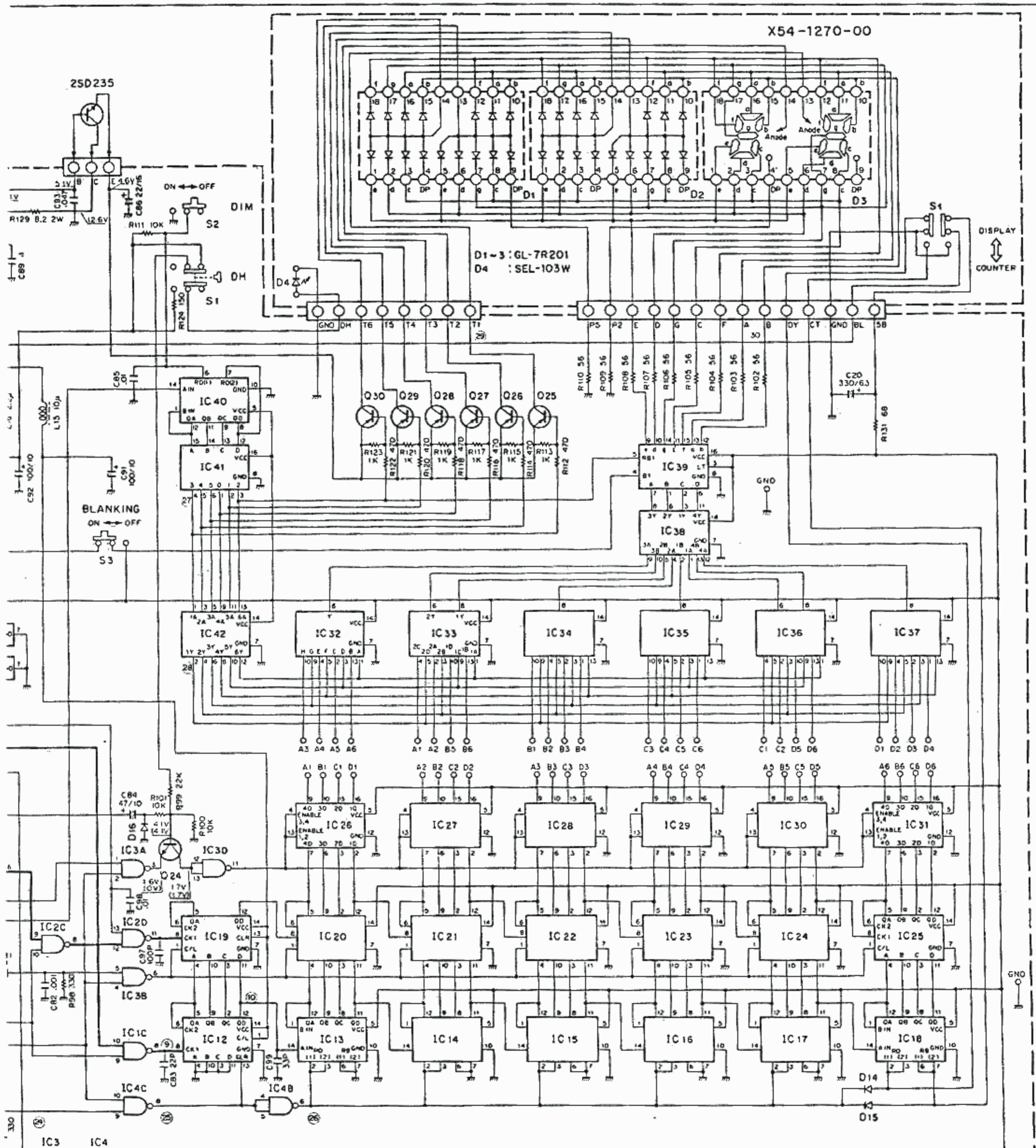
D

E

F

G

— Signal line    ..... Control signal line



IC 1	: SN74S00N	IC 19 - 25	: SN74176 N	IC 40	: TD3492BP
IC 2, 3, 4, 38	: TD3400AP	IC 26 - 31	: SN74LS75N	IC 41	: TD3442AP
IC 5 - 10, 13 - 18	: SN74LS90N	IC 32, 34, 35, 37	: SN7454N	IC 42	: TD3404AP
IC 11	: TD3472AP	IC 33, 36	: TD3451AP		
IC 12	: SN74196N	IC 39	: SN74247N		

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