

The schematic diagram illustrates a digital circuit for a keyboard controller. The main components include a 74VHC04 hex inverter, a 74VHC00 NAND gate, and a 74VHC163 3-bit counter. The circuit is powered by a 5V supply and includes a 10k pull-up resistor. The keyboard matrix is connected to the counter outputs. The diagram also shows the internal structure of the keyboard matrix, including the keyboard controller (KB) and the keyboard matrix (KM).

**74VHC04 Hex Inverter:**

- Pin 1: GND
- Pin 2: VCC
- Pin 3: Input
- Pin 4: Output
- Pin 5: GND
- Pin 6: VCC
- Pin 7: Input
- Pin 8: Output
- Pin 9: GND
- Pin 10: VCC
- Pin 11: Input
- Pin 12: Output
- Pin 13: GND
- Pin 14: VCC
- Pin 15: Input
- Pin 16: Output

**74VHC00 NAND Gate:**

- Pin 1: GND
- Pin 2: VCC
- Pin 3: Input 1
- Pin 4: Input 2
- Pin 5: Output
- Pin 6: GND
- Pin 7: VCC
- Pin 8: Input 1
- Pin 9: Input 2
- Pin 10: Output
- Pin 11: GND
- Pin 12: VCC
- Pin 13: Input 1
- Pin 14: Input 2
- Pin 15: Output
- Pin 16: GND
- Pin 17: VCC
- Pin 18: Input 1
- Pin 19: Input 2
- Pin 20: Output

**74VHC163 3-bit Counter:**

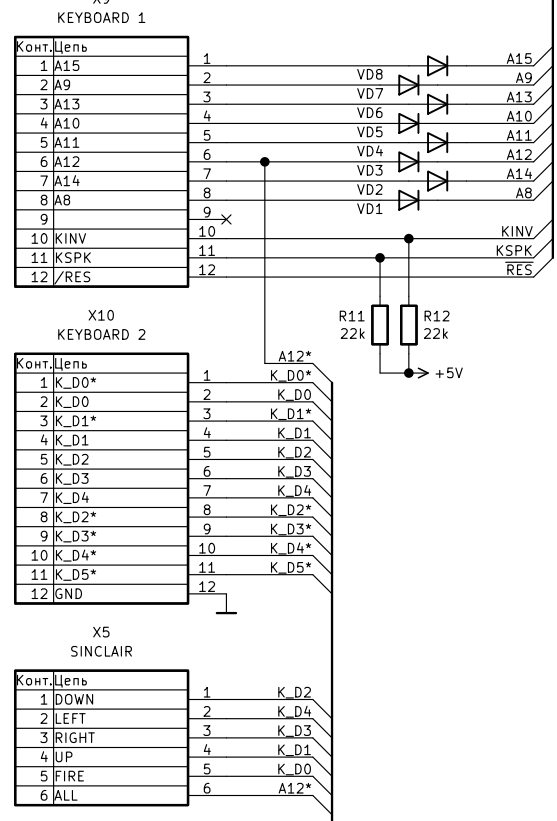
- Pin 1: GND
- Pin 2: VCC
- Pin 3: Input
- Pin 4: Output
- Pin 5: GND
- Pin 6: VCC
- Pin 7: Input
- Pin 8: Output
- Pin 9: GND
- Pin 10: VCC
- Pin 11: Input
- Pin 12: Output
- Pin 13: GND
- Pin 14: VCC
- Pin 15: Input
- Pin 16: Output
- Pin 17: GND
- Pin 18: VCC
- Pin 19: Input
- Pin 20: Output

**Keyboard Matrix (KB):**

- Pin 1: GND
- Pin 2: VCC
- Pin 3: Input
- Pin 4: Output
- Pin 5: GND
- Pin 6: VCC
- Pin 7: Input
- Pin 8: Output
- Pin 9: GND
- Pin 10: VCC
- Pin 11: Input
- Pin 12: Output
- Pin 13: GND
- Pin 14: VCC
- Pin 15: Input
- Pin 16: Output
- Pin 17: GND
- Pin 18: VCC
- Pin 19: Input
- Pin 20: Output

**Keyboard Matrix (KM):**

- Pin 1: GND
- Pin 2: VCC
- Pin 3: Input
- Pin 4: Output
- Pin 5: GND
- Pin 6: VCC
- Pin 7: Input
- Pin 8: Output
- Pin 9: GND
- Pin 10: VCC
- Pin 11: Input
- Pin 12: Output
- Pin 13: GND
- Pin 14: VCC
- Pin 15: Input
- Pin 16: Output
- Pin 17: GND
- Pin 18: VCC
- Pin 19: Input
- Pin 20: Output




EXPANSION BUILDOUT	
A12	1
A12	2
+5V	3
	4
	5
	6
	7
	8
A0	9
A1	10
A2	11
	12
10KΩ	13
	14
	15
	16
	17
	18
BUSRQ	19
A6	20
A7	21
A5	22
A6	23
RDWRD	24
BUSY	25
A9	27
A11	28

X2  
TAPE OUT

Конт. Лепь
1 MIC
2 GND
3 OUT
4 COPY
5 SPK
6 GND

Sheet: keyboard



File: keyboard.sch

Magic 05

