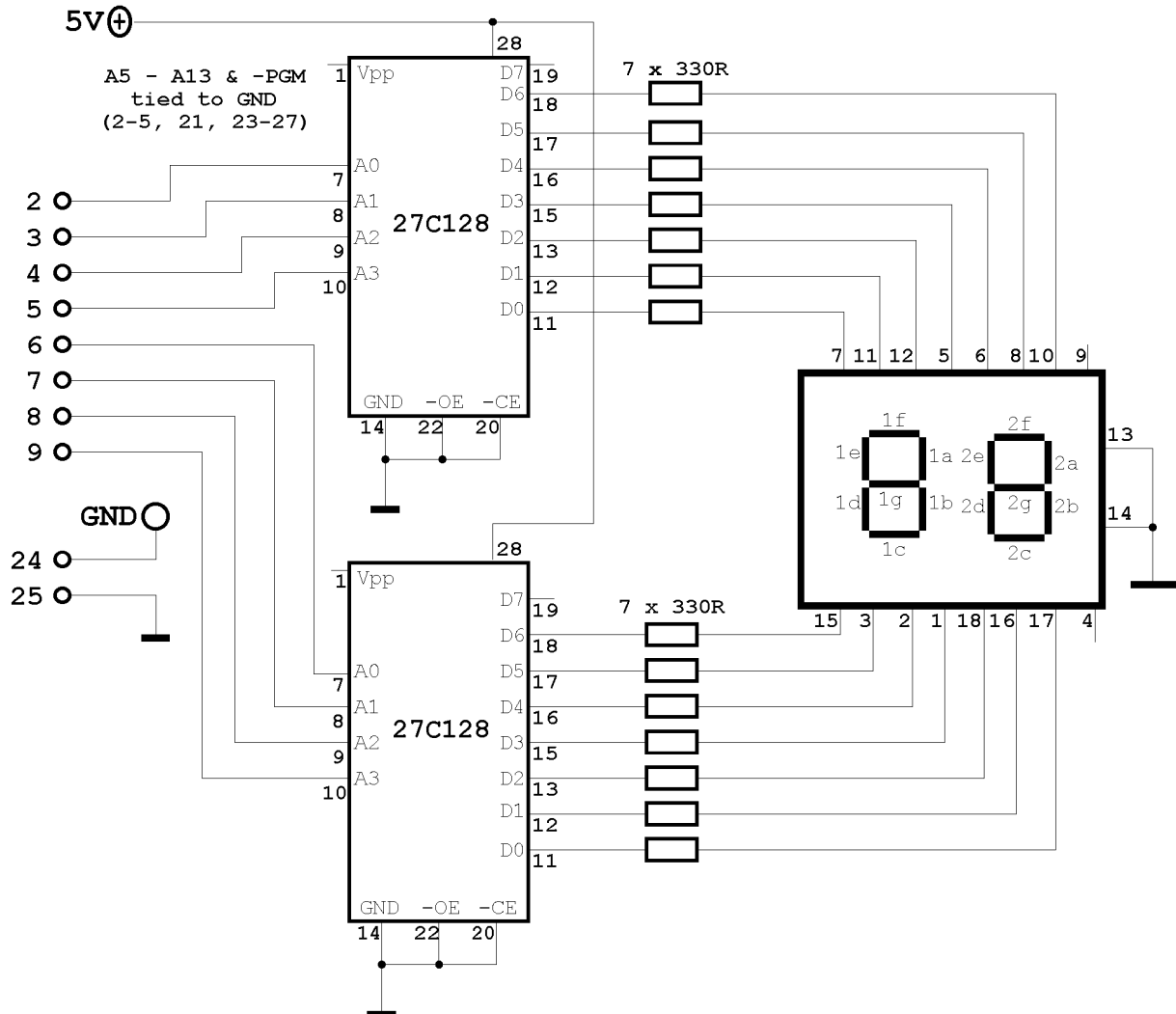


# CP Decoder for LPT-port

(C) 1999 by Peter H. Wendt



The CP-Decoder uses two Eeproms for decoding the 4-bit hexadecimal binary code for the 7-Segment displays, due to a lack of appropriate decoder ICs.

The Motorola IC MC14495 is no longer available – so I came on this solution.

I had only 27C128 at hand, but from the principle it would work with 2716 as well – but not with 2708, which are „old fashion Eeproms“, which require +5V and –5V ! The Eeproms need to be programmed with lousy 16 bytes of „bit patterns“ for the 7-segment decoding – so using a 128K x 8 bit Eeprom is a real waste.

## Program Table for the Eproms

Byte	HEX	D7	D6	D5	D4	D3	D2	D1	D0	Value
<b>0</b>	0000	0	1	1	1	1	1	1	0	<b>7E</b>
<b>1</b>	0001	0	1	1	0	0	0	0	0	<b>60</b>
<b>2</b>	0010	0	1	0	1	1	0	1	1	<b>5B</b>
<b>3</b>	0011	0	1	1	1	0	0	1	1	<b>73</b>
<b>4</b>	0100	0	1	1	0	0	1	0	1	<b>65</b>
<b>5</b>	0101	0	0	1	1	0	1	1	1	<b>37</b>
<b>6</b>	0110	0	0	1	1	1	1	1	1	<b>3F</b>
<b>7</b>	0111	0	1	1	0	0	0	1	0	<b>62</b>
<b>8</b>	1000	0	1	1	1	1	1	1	1	<b>7F</b>
<b>9</b>	1001	0	1	1	1	0	1	1	1	<b>77</b>
<b>A</b>	1010	0	1	1	0	1	1	1	1	<b>6F</b>
<b>B</b>	1011	0	0	1	1	1	1	0	1	<b>3D</b>
<b>C</b>	1100	0	0	0	1	1	1	1	0	<b>1E</b>
<b>D</b>	1101	0	1	1	1	1	0	0	1	<b>79</b>
<b>E</b>	1110	0	0	0	1	1	1	1	1	<b>1F</b>
<b>F</b>	1111	0	0	0	0	1	1	1	1	<b>0F</b>

This Table should be programmed into the decoder Eprom. Unused cells in the Eprom must be filled with „00“.

Some technical „finesses“:

- GND from the battery or power supply goes to pin 24 – but the circuit has GND on pin 25 (!) ... so you do not need any power switch. Both pins are GND – but the connection is open, when the circuit is detached from the LPT1-port.
- The „DP“ decimal point (pins 4 and 9) on the common-cathode LED display is not used. It might however been used as an activity light.
- The unused Adress lines of the Eprom must be set to GND for a logical „0“ at these inputs.