The Circuit Is Shown for One Anode Drive and one Segment Drive for Display. In similar Fashion connect rest, all 5 anodes and 7 segments and one dp decimal point.

The +5 V of 2N2907 and gnd of BC547 must be directly from regulator with a big cap or even a separate supply.

This circuit is only a design concept, it is not tested, it could have errors.

use 74HC4040X chips in place of CD40XX for only 5V and high speed designs. Use Shrink sleeves and proper gauge of wire. put 104 CD cap for all ICs from positive to negative close to IC, even if omitted in circuit, for opamps on dual supply two caps. unused inputs of logic and opamps pull up or down to avoid oscillations and noise. connect supply of all chips if not mentioned.

*analog ground* and "digital ground" must be linked at power supply only, avoid loops, let grounds radiate from a ground plane. use MFR 1% for all Resistors, 33E means 33 ohms, 22K means 22 kilo ohms, 1M is 1 megohm. 10T tp means ten turn trimpot.

Arduino AT89C52 and 7135 Interface

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**Circuit Diagram**

- **ICL7135 Pin 11**: +5V, Pin 1: -5V, Pin 24 digital GND, add a decoupling 104 CD cap from +5 to GND and -5 to GND
- **analog GND**: no loop, no current

** découpling 104 CD cap from +5 to GND and -5 to GND**

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**Notes**

- **In + positive**: add zeners (pA leakage but protects)
- **In - negative**: +/- 1.9999 V DC max

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**References**

- http://delabs.topcities.com/
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**Project Details**

- **File**: delabs00025
- **Date**: Sunday, November 28, 2004
- **Sheet**: 1 of 1