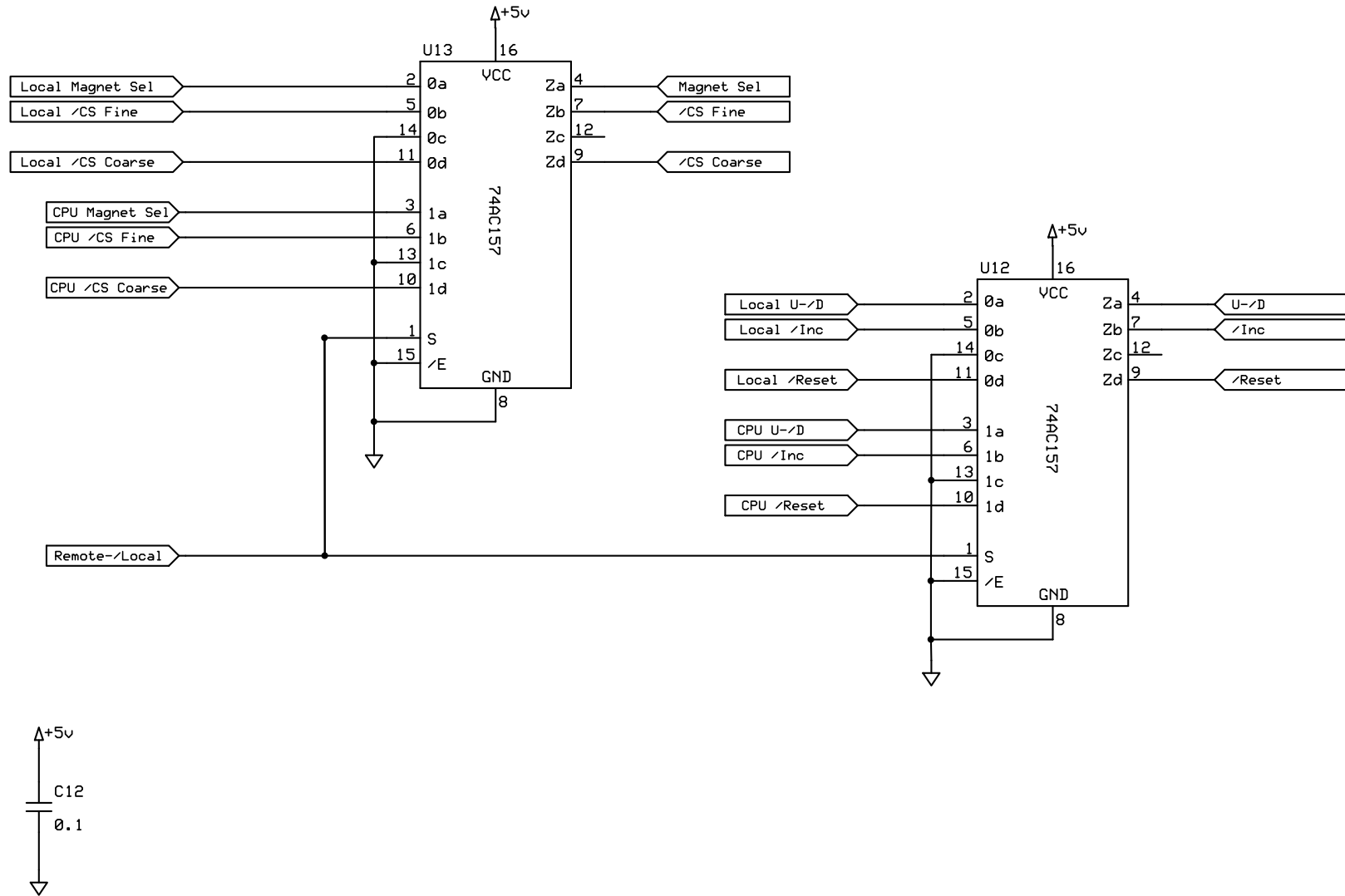
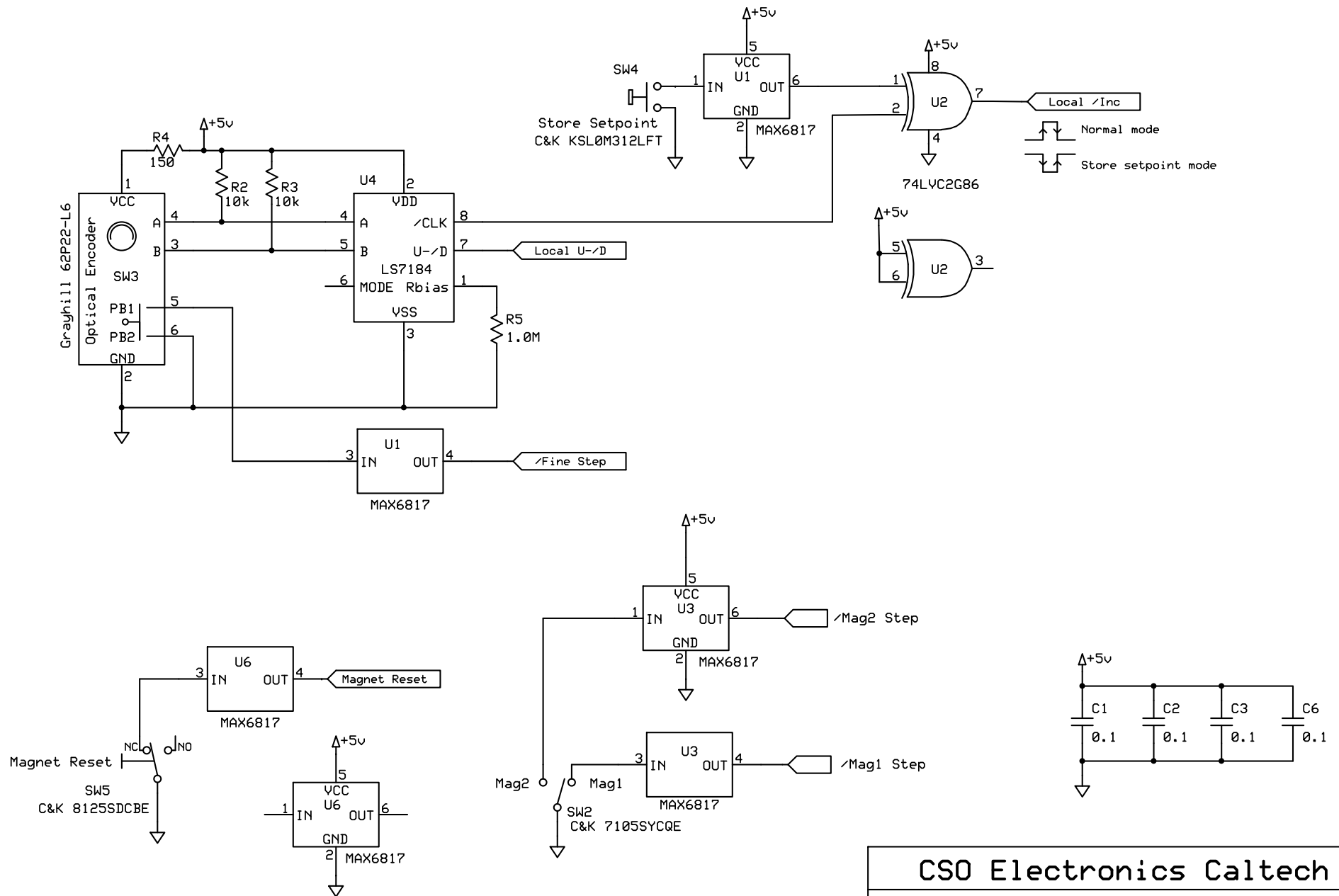


# Logic Signal Select



# Manual Input Controls



SW5 Note: NC and Common terminal connections may be reversed on PCB

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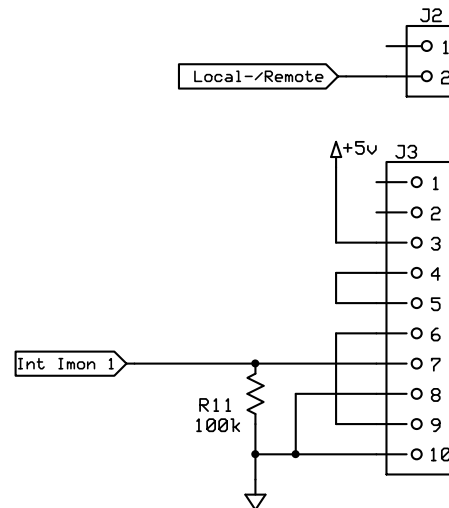
F. Rice

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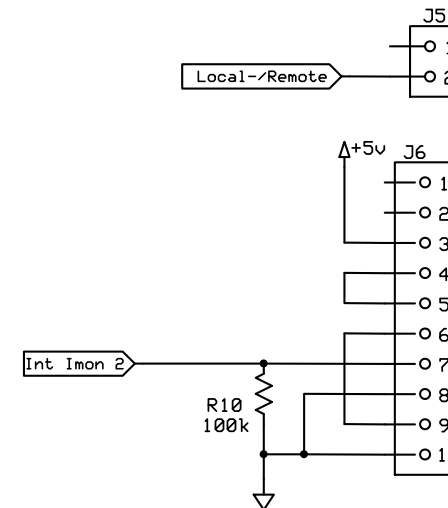
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## Panel Meters

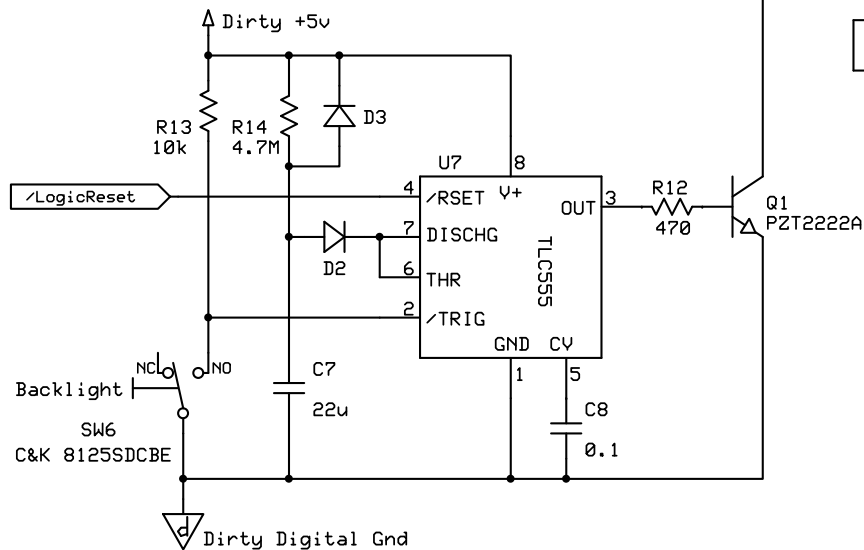
Mag1 Panel Meter



Mag2 Panel Meter



## Backlight Timer Control



### Connectors:

J2, J5: Molex/Waldom 44812-0020  
 J3, J6: Molex/Waldom 44812-0028  
 J4, J7: Molex/Waldom 44812-0022

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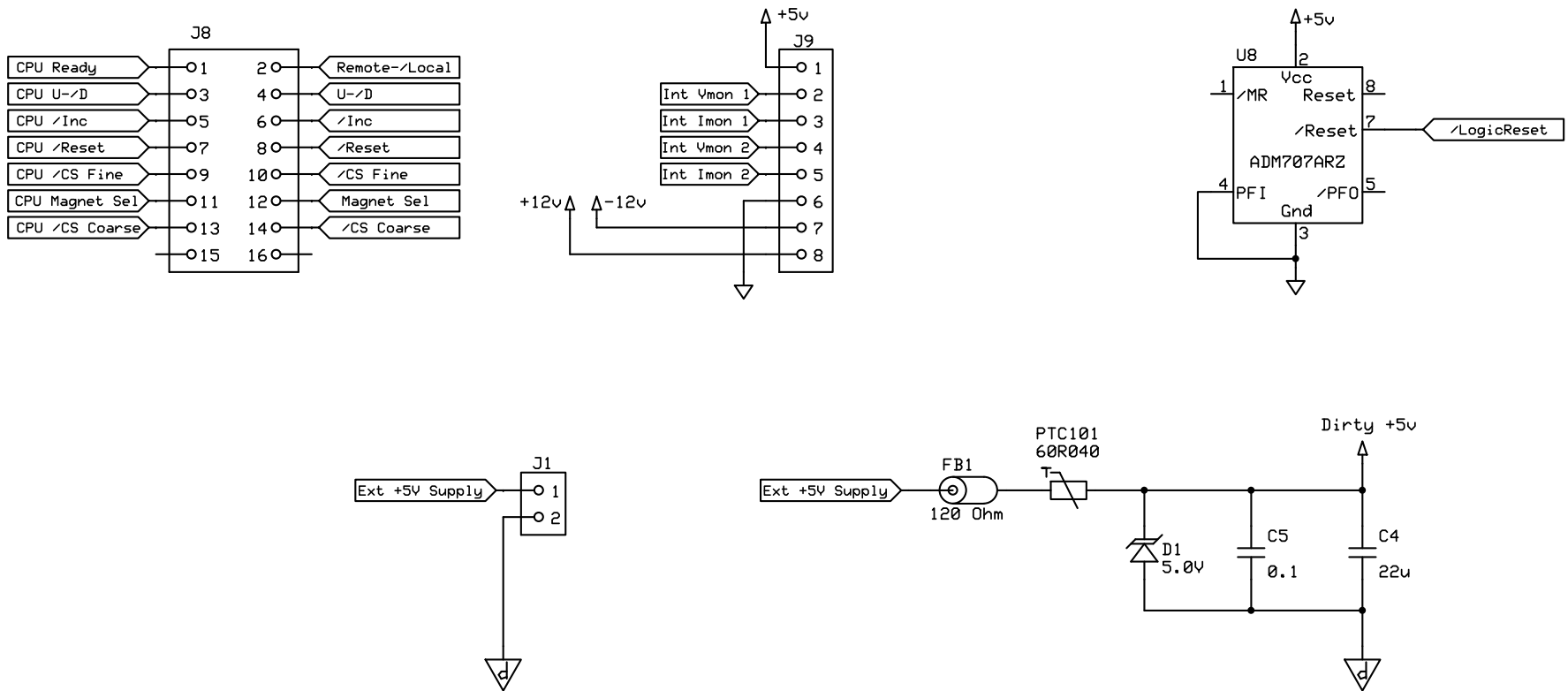
F. Rice

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SW6 Note: NC and Common terminals may be tied together on PCB

## Main Board Connectors and Power



### Connectors:

J1: 1x2 male vertical Hdr, 0.1" spacing, 0.230"-0.240" contact length, thru hole

J8: 2x8 male vertical Hdr, 0.1" spacing, 0.230"-0.240" contact length, thru hole

J9: 1x8 male vertical Hdr, 0.1" spacing, 0.230"-0.240" contact length, thru hole

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## General Notes

### Changes from v1.1:

Corrected pin number errors on U2 and U5

### Resistors

Unless otherwise specified, resistors are size 0805, 1/10W or 1/16W, and may be thick or thin film

Unless otherwise specified, actual value used may be a standard 5% or 1% value within 10% of value shown

### Capacitors

0.1uF capacitors are X7R ceramic 10V (or higher), 20% (or better), size 0805

22uF capacitors may be X5R ceramic or low-ESR tantalum 10V (or higher), 20%, size B/3528/3216/1210/1206

### Digital Panel Meters and Monitors

The digital panel meters should be Jewel BL-3x0302-01 (5V supply, 2V full scale, green 5V backlight)

The backlight timer provides approx. 2 minutes of backlight power

### Diodes and Transistor

Diode D1 is silicon TVS 400W DO-214AC (Littelfuse SMAJ series or equivalent)

Diodes D2 and D3 are 1N4148W, case size SOD-323

LEDs are red (other colors ok), 10 mA, T-1 with 0.465" (12mm) standoffs (CML 5310F series)

Transistor is type PZT2222ACT, case style SOT-223

### Circuit Board

Circuit board version "Magnet Control v1.2" with date 10/5/09

To meet this design, cuts and jumpers are required to the circuit board "Magnet Control v1.1" with date 9/14/09

This design is compatible with Magnet Main board v1.0

The current monitor inputs should have gain = 10 Ohm (100mA -> 1V); meter full scale reading is 199.9mA

PTC101 and all controls and LEDs mount on the back side of the board

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