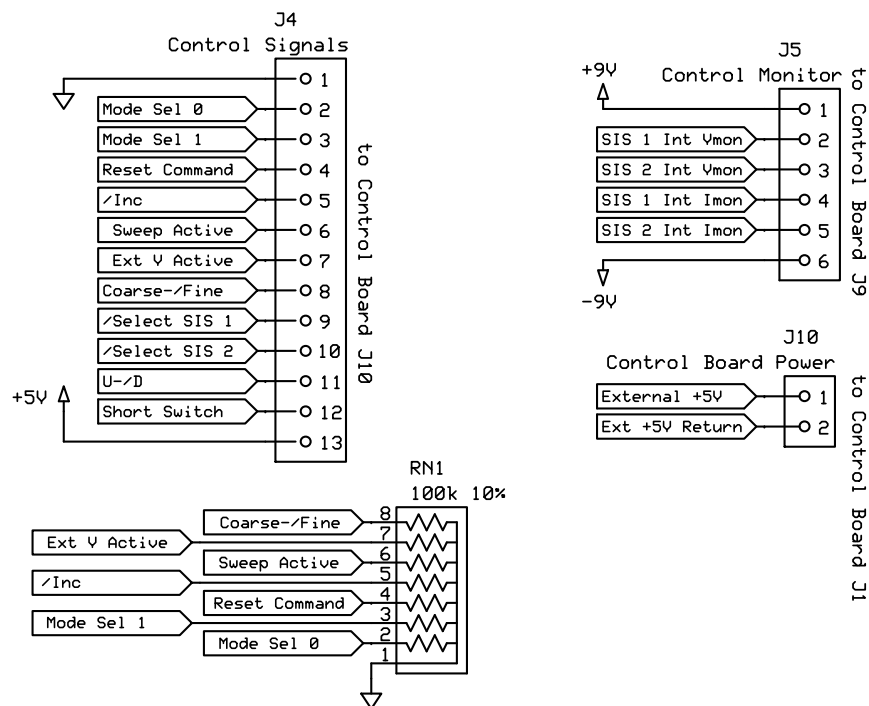
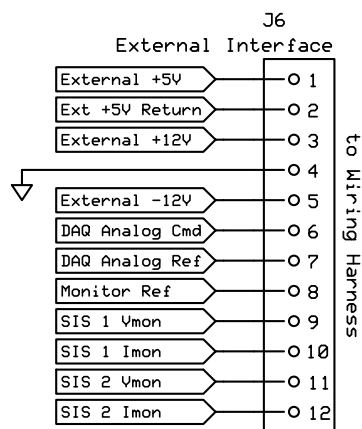


# Connectors

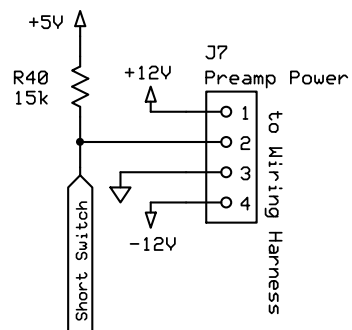
## Control Board Interface



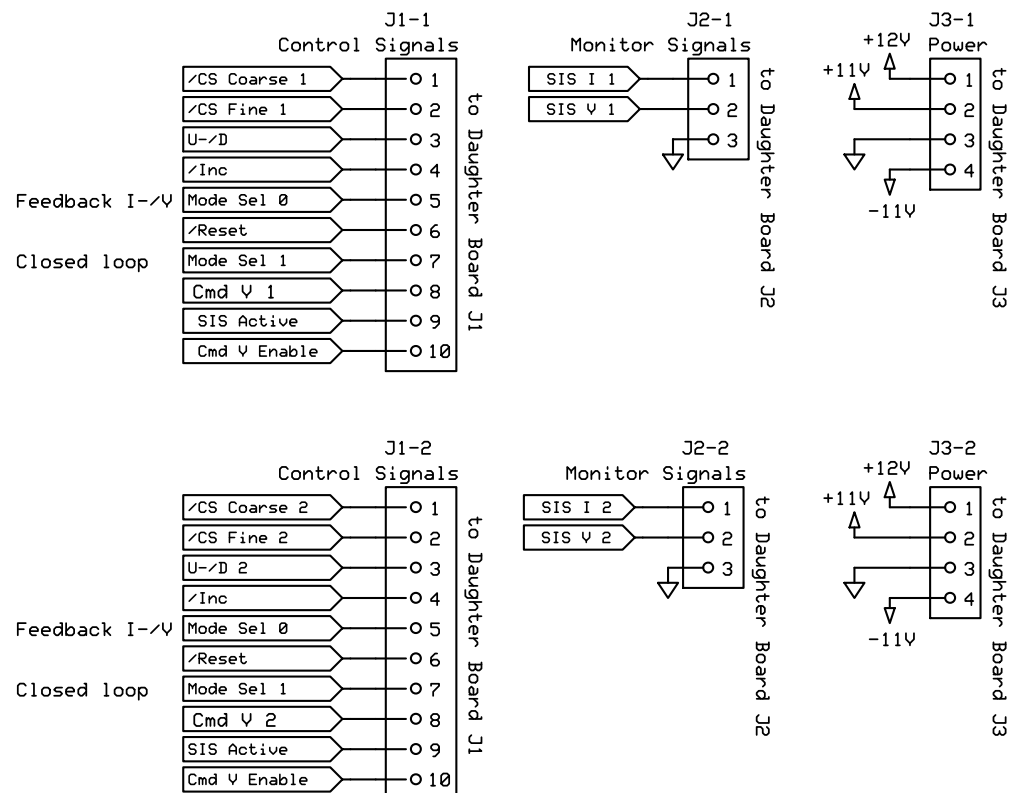
## External Interface



## SIS Preamp



## Analog Daughter Interface



## Connectors:

- J1-1, J1-2: 2x5 female vertical Hdr, 0.1" spacing, thru hole
- J2-1, J2-2: 1x3 female vertical Hdr, 0.1" spacing, thru hole
- J3-1, J3-2: 1x4 female vertical Hdr, 0.1" spacing, thru hole
- J4: 1x13 female vertical Hdr, 0.1" spacing, thru hole
- J5: 1x6 female vertical Hdr, 0.1" spacing, thru hole
- J6: 1x12 CGrid-SL 70543 vertical thru hole
- J7: 1x4 CGrid-SL 70543 vertical thru hole
- J10: 1x2 female vertical Hdr, 0.1" spacing, thru hole

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SIS Main

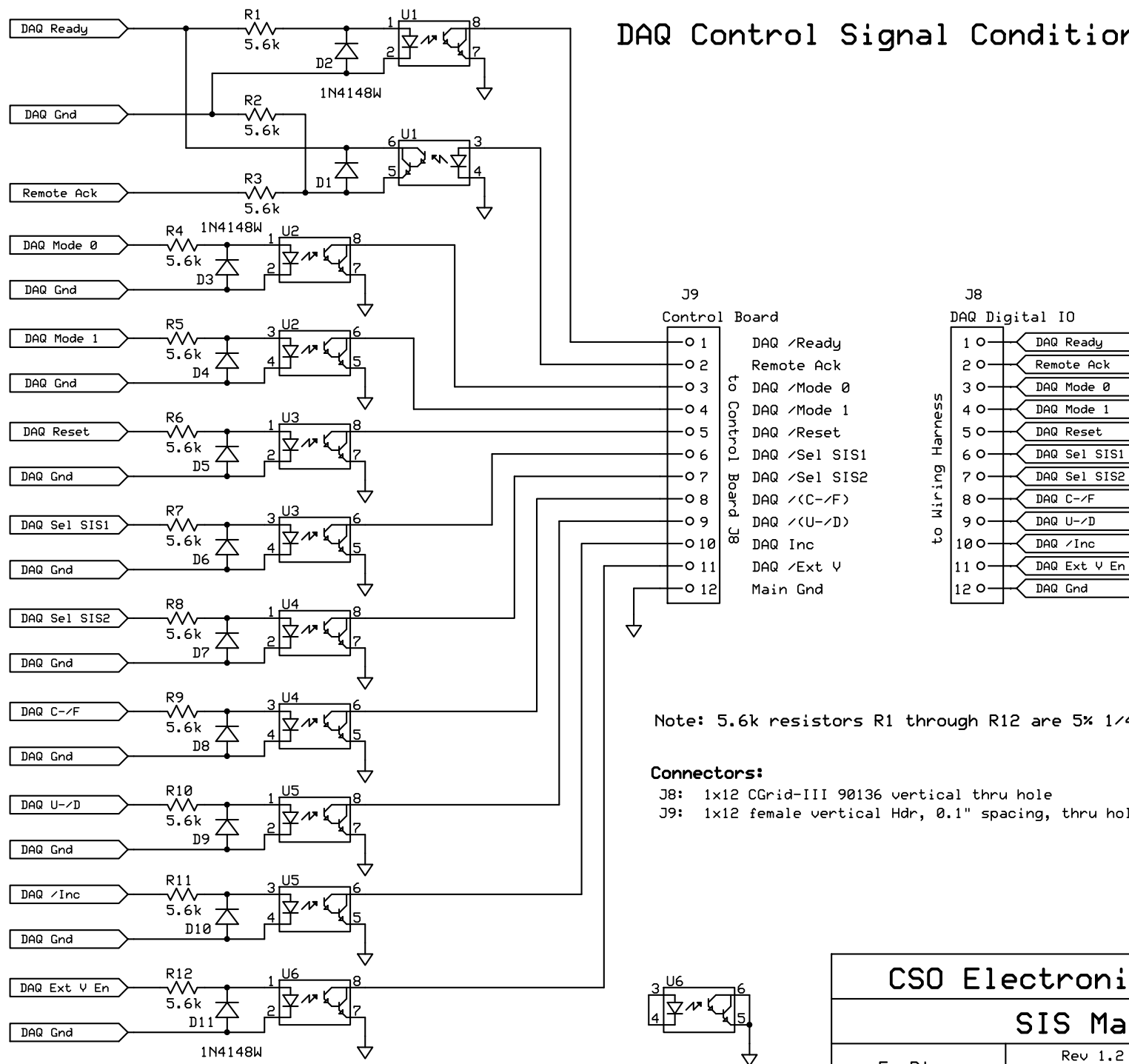
F. Rice

Rev 1.2

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# DAQ Control Signal Conditioning



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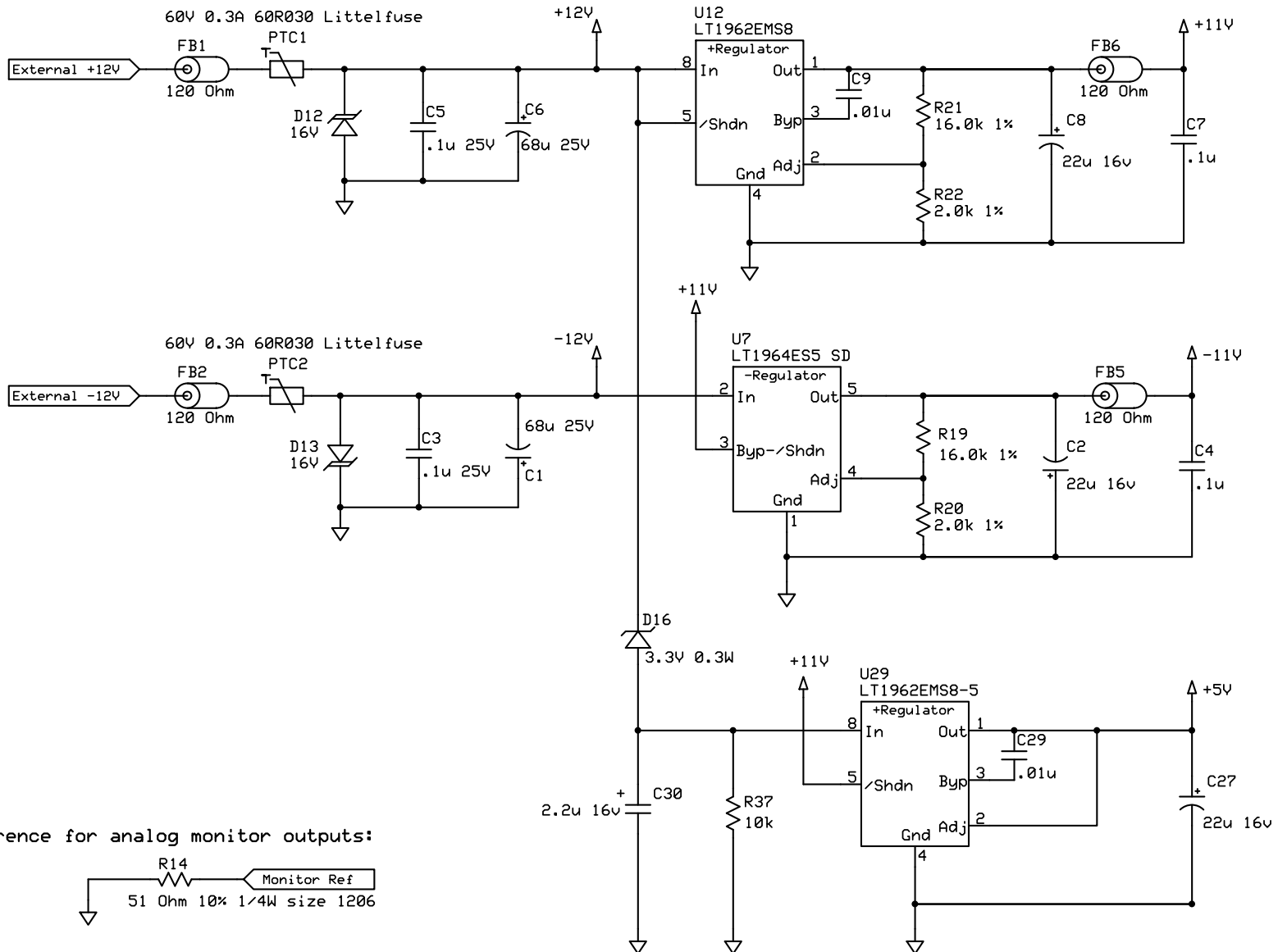
F. Rice

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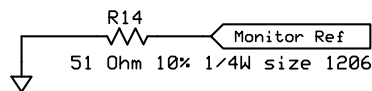
10/7/2011

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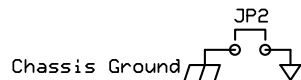
# Power Supplies



0V reference for analog monitor outputs:



JP2: on-board provision to connect chassis to system ground



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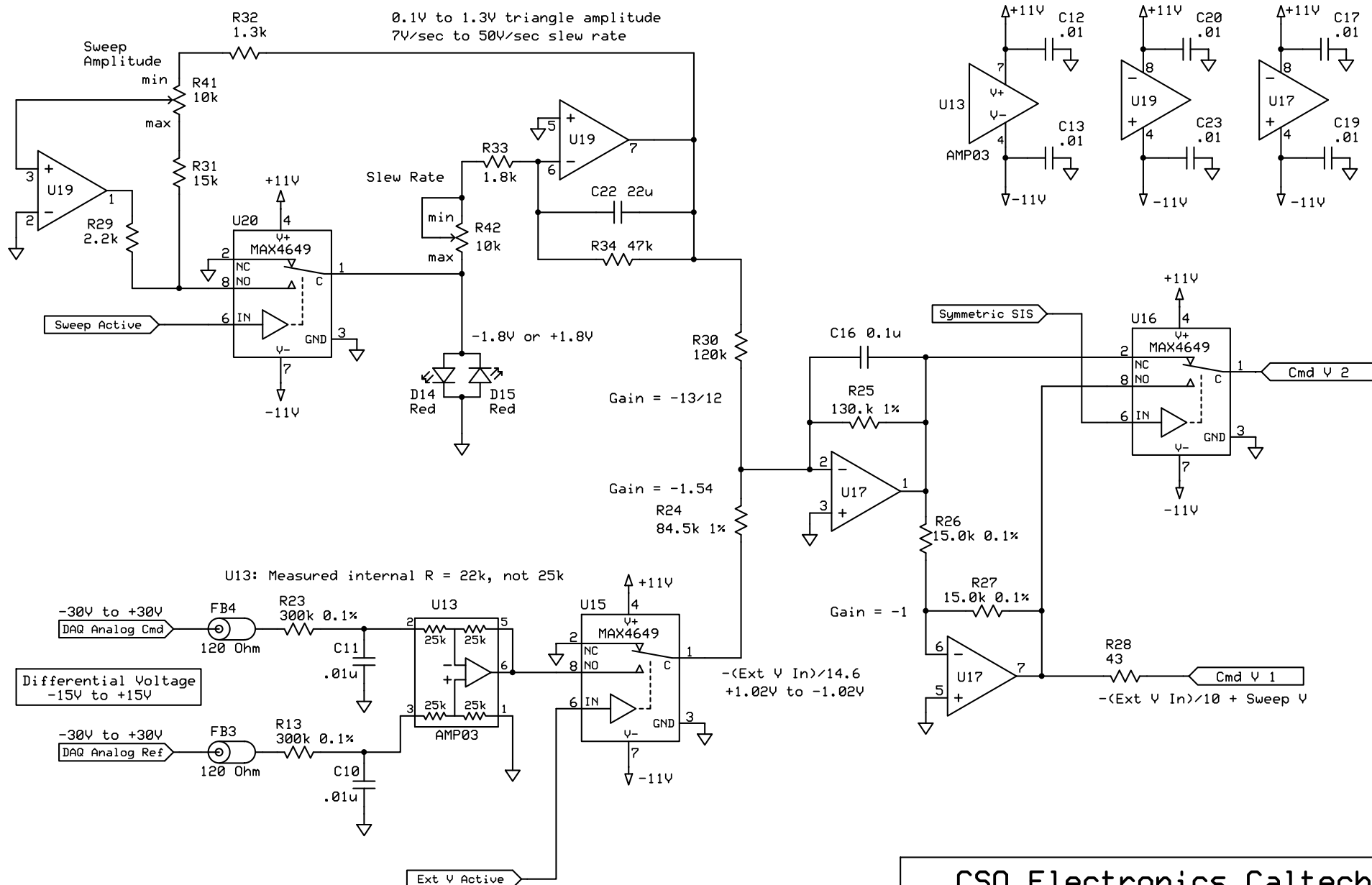
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## External $\Psi$ In and Sweep Generator



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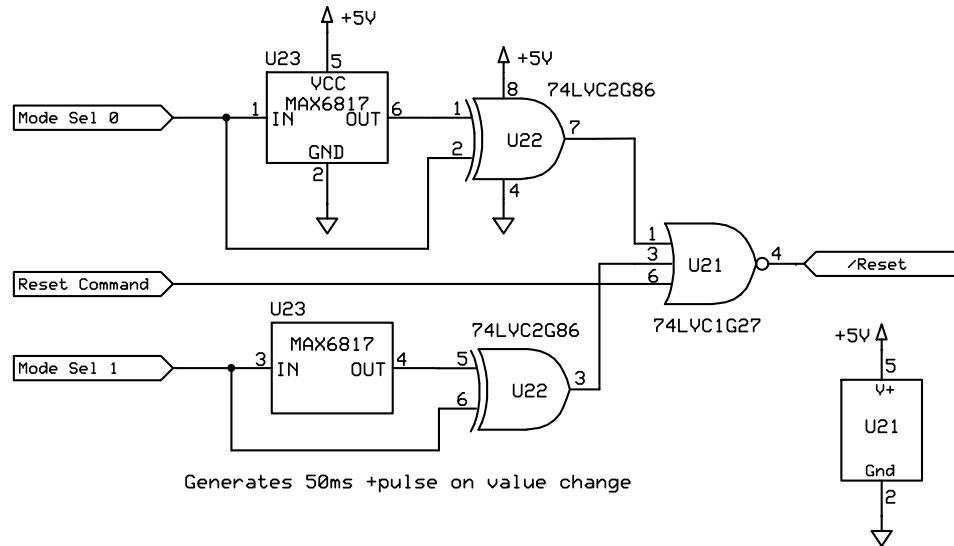
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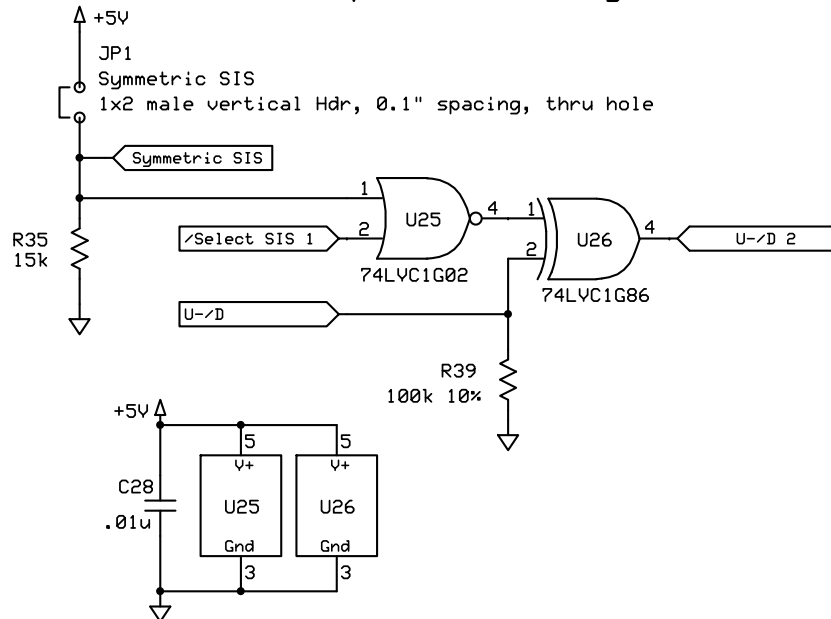
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# Logic Circuits

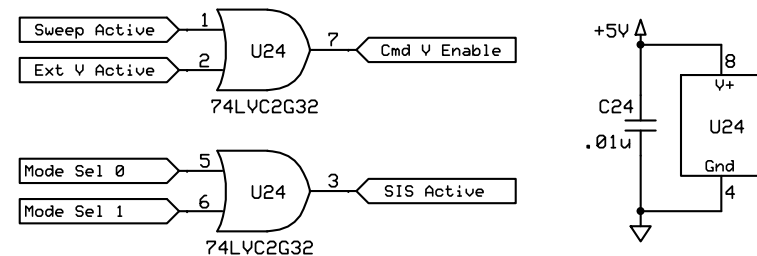
## Reset Driver



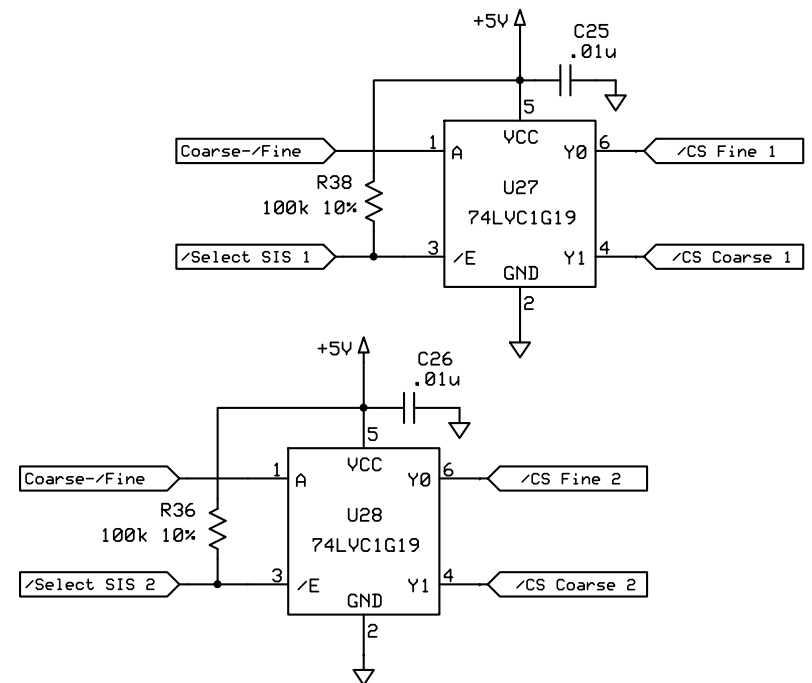
## SIS 2 Step Direction Logic



## Mode Command Logic



## Coarse-Fine Logic



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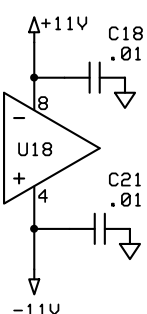
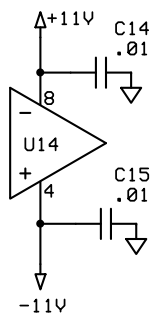
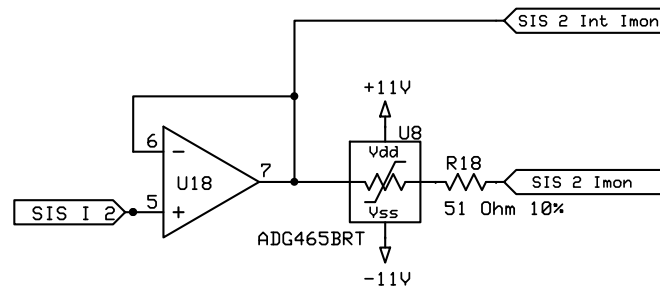
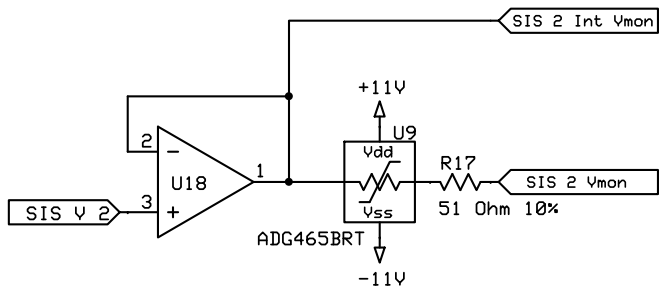
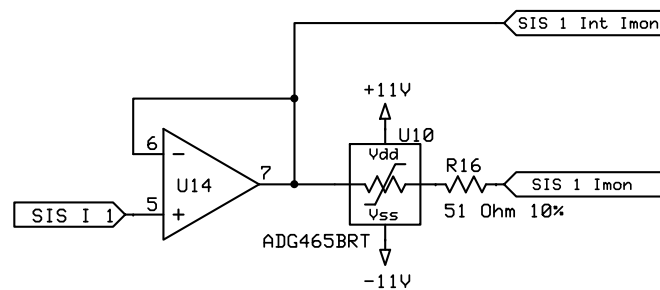
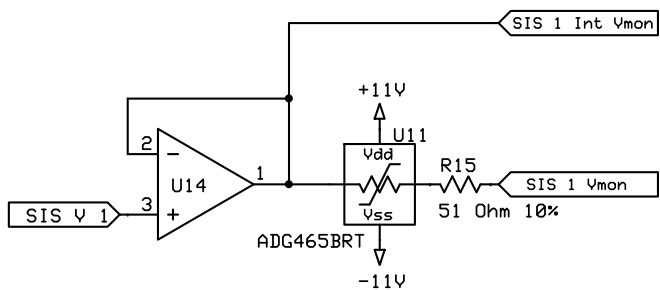
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# SIS Analog Monitors



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## General Notes

### Change from v1.1

R24 changed to 84.5k

### Resistors

Unless otherwise specified resistors are 5% (or better), size 0805, 1/10W or 1/16W, and may be thick or thin film  
Resistors with 10% tolerance may be substituted with a standard 5% or 1% value within 10% of value shown

### Capacitors

Unless otherwise specified 0.1uF and smaller capacitors are X7R ceramic 15V (or higher), 20% (or better), size 0805  
22uF capacitors may be X5R ceramic or low-ESR tantalum 16V (or higher), 20%, size B/3528/3216/1210/1206

### Connectors

Control board connectors J4, J5, J9, and J10 and jumper JP1 mount to front side of board

**All other connectors mount to back side of board**

### Diodes

Diodes D12, D13 are silicon TVS 400W DO-214AC (Littelfuse SMAJ series or equivalent)

LEDs D14, D15 are size 1206, 10mA at 1.8V  $V_f$  max

Other diodes are case size SOD-323. Signal diodes are type 1N4148W

### Circuit Board

Circuit board version "SIS Main v1.2 2/2011"

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