

## 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 D0-214AC (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

CSO Electronics Caltech

Magnet Control Board

F. Rice

Rev 1.2

10/5/2009

Page 6 of 6