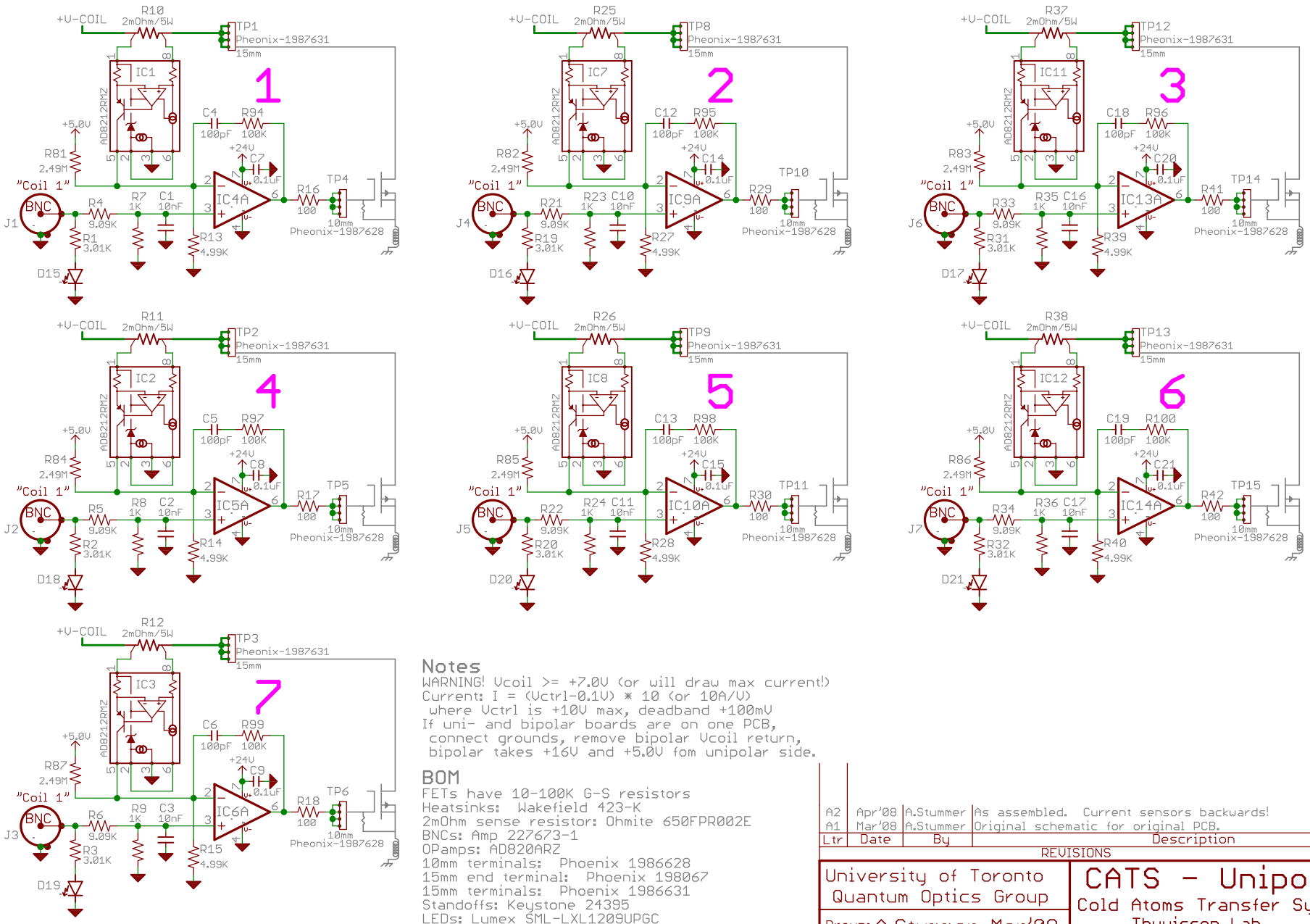


Notes

WARNING! Vcoil >= +7.0V (or will draw max current!)
Current: I = (Vctrl-0.1V) * 10 (or 10A/V)
where Vctrl is +10V max, deadband +100mV
If uni- and bipolar boards are on one PCB,
connect grounds, remove bipolar Vcoil return,
bipolar takes +16V and +5.0V fom unipolar side.

BOM

FETs have 10-100K G-S resistors
Heatsinks: Wakefield 423-K
2mOhm sense resistor: Ohmite 650FPR002E
BNCs: Amp 227673-1
OPamps: AD820ARZ
10mm terminals: Phoenix 1986628
15mm end terminal: Phoenix 198067
15mm terminals: Phoenix 1986631
Standoffs: Keystone 24395
LEDs: Lumex SML-LXL1209UPGC
Light pipes: Bivar PLP2-500

CATS Unipolar :File

Ltr	Date	By	Description
A2	Apr'08	A.Stummer	As assembled. Current sensors backwards!
A1	Mar'08	A.Stummer	Original schematic for original PCB.

REVISIONS

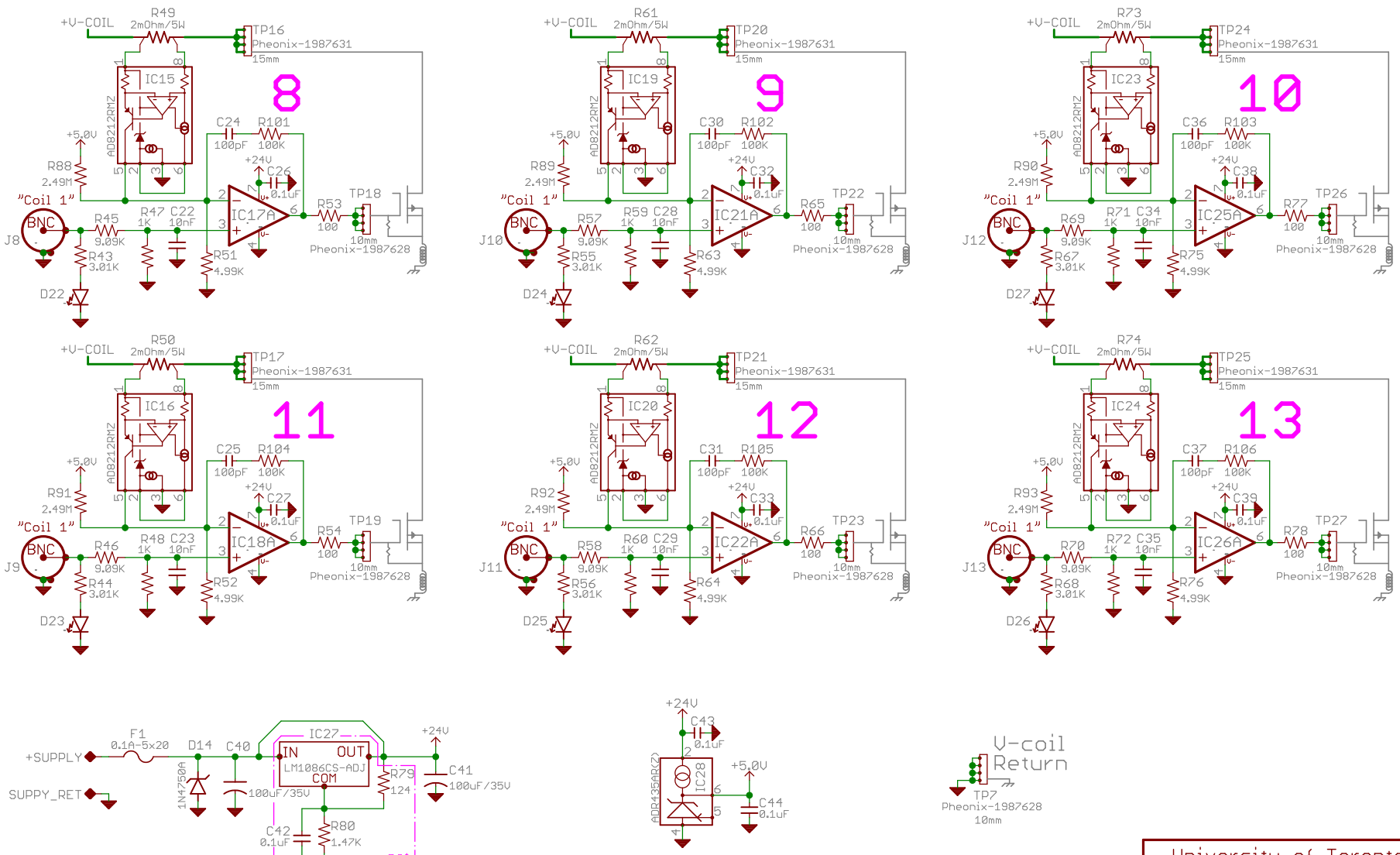
University of Toronto
Quantum Optics Group

Drawn: A.Stummer Mar'08
Edited: 12/12/2008 8:35:22

CATS - Unipolar

Cold Atoms Transfer System
Thywissen Lab

Sheet: 1/2 REV: A2


8
9
10
11
12
13
+V-COIL
R49
2mOhm/5W
TP16
Pheonix-1987631
15mm
IC15
AD8212RMZ
C24
100pF
R101
100K
+24V
C26
0.1uF
+5.0V
R88
2.49M
"Coil 1"
J8
BNC
R45
9.09K
R47
1K
C22
10nF
IC17A
R53
100
TP18
10mm
Pheonix-1987628
R43
3.01K
R51
4.99K
D22
R61
TP20
IC19
C30
R102
C32
R89
J10
R57
R59
C28
IC21A
R65
TP22
R55
R63
D24
R73
TP24
IC23
C36
R103
C38
R90
J12
R69
R71
C34
IC25A
R77
TP26
R67
R75
D27
R50
TP17
IC16
C25
R104
C27
R91
J9
R46
R48
C23
IC18A
R54
TP19
R44
R52
D23
R62
TP21
IC20
C31
R105
C33
R92
J11
R58
R60
C29
IC22A
R66
TP23
R56
R64
D25
R74
TP25
IC24
C37
R106
C39
R93
J13
R70
R72
C35
IC26A
R78
TP27
R68
R76
D26
F1
0.1A-5x20
+SUPPLY
SUPPY_RET
D14
1N4750A
C40
100uF/35V
IC27
IN
OUT
LM1086CS-ADJ
COM
R79
124
C41
100uF/35V
C42
0.1uF
R80
1.47K
not
required
IC28
ADR4536BRZ
C43
0.1uF
C44
0.1uF
V-coil
Return
TP7
Pheonix-1987628
10mm
University of Toronto
Quantum Optics Group
CATS
Unipolar Channels
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Sheet: 2/2
REV: A2
CATS Unipolar :File