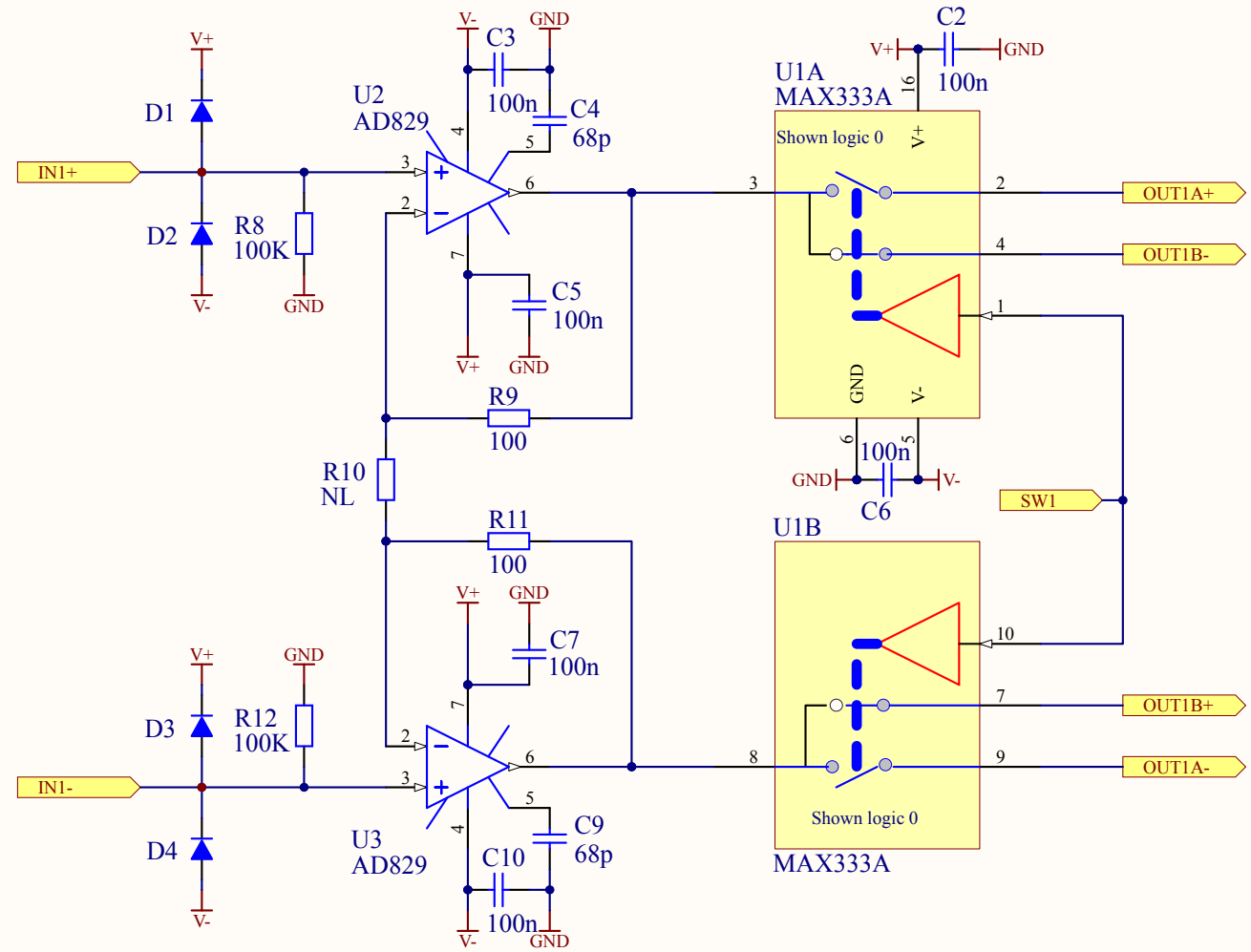
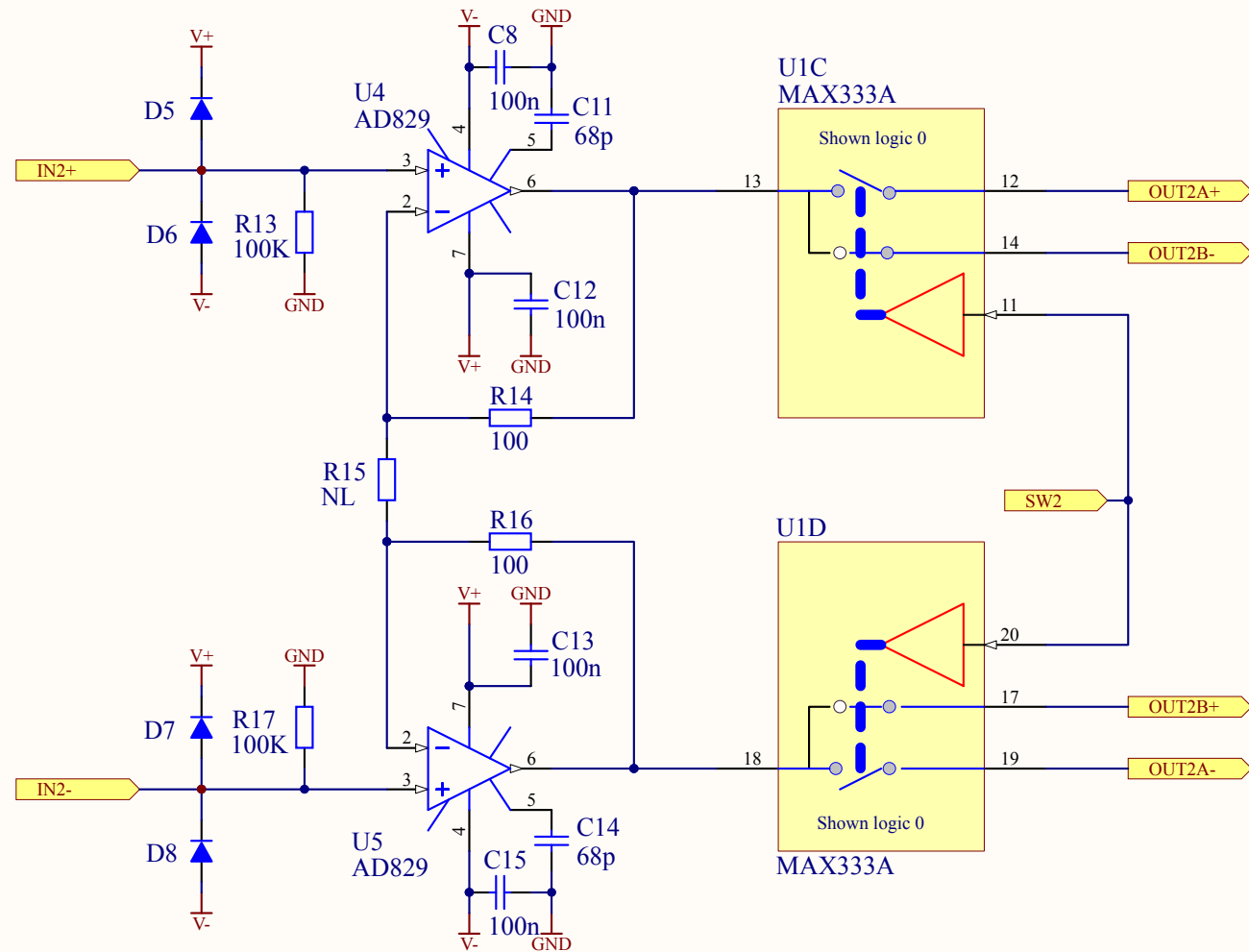
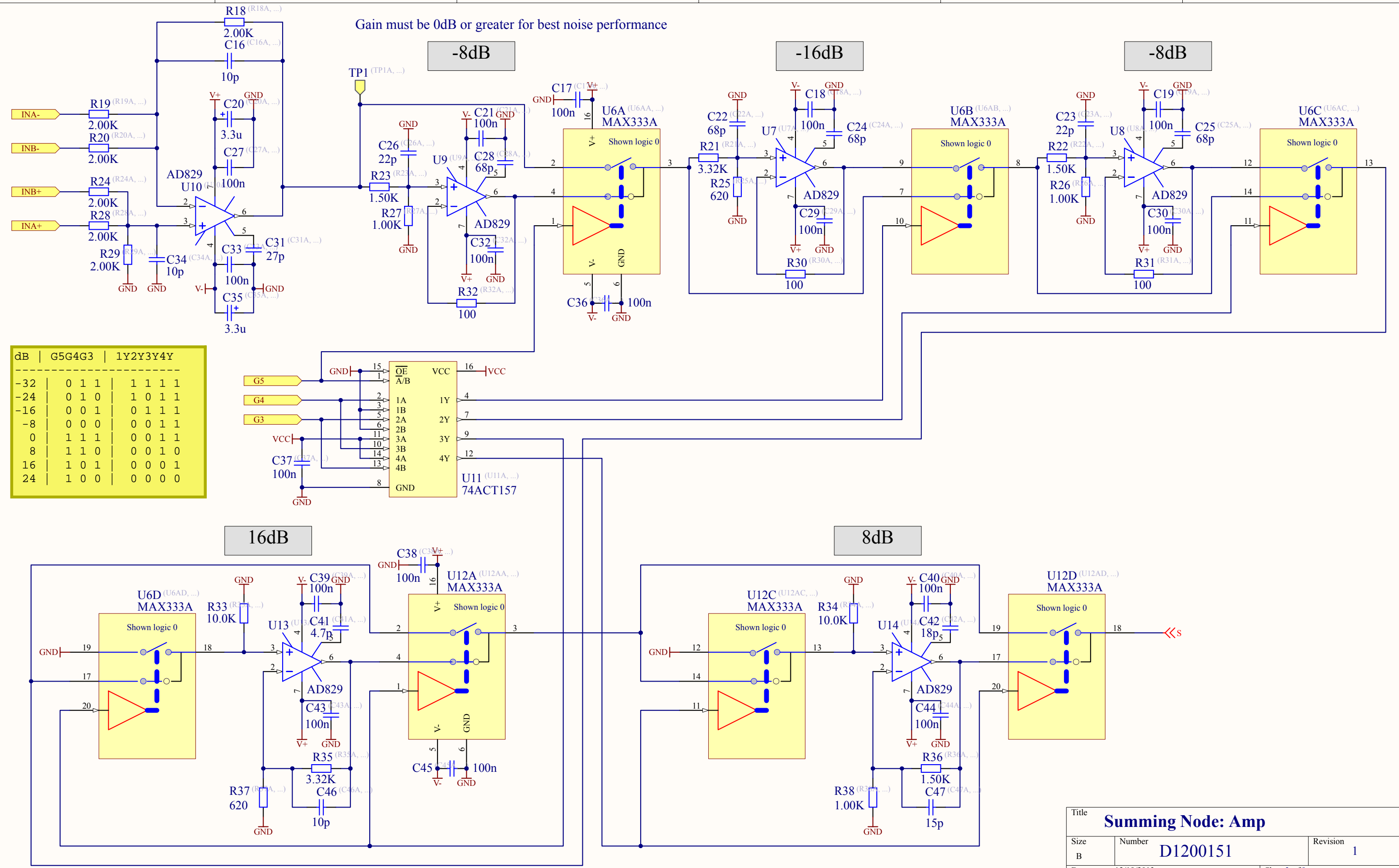


Title		
Common Mode Summing Node		
Size	Number	Revision
B	D1200151	1
Date:	12/19/2013	Sheet 1 of 9
File:	D:\Users\...\CMSum0.SchDoc	Drawn By: Daniel Sigg

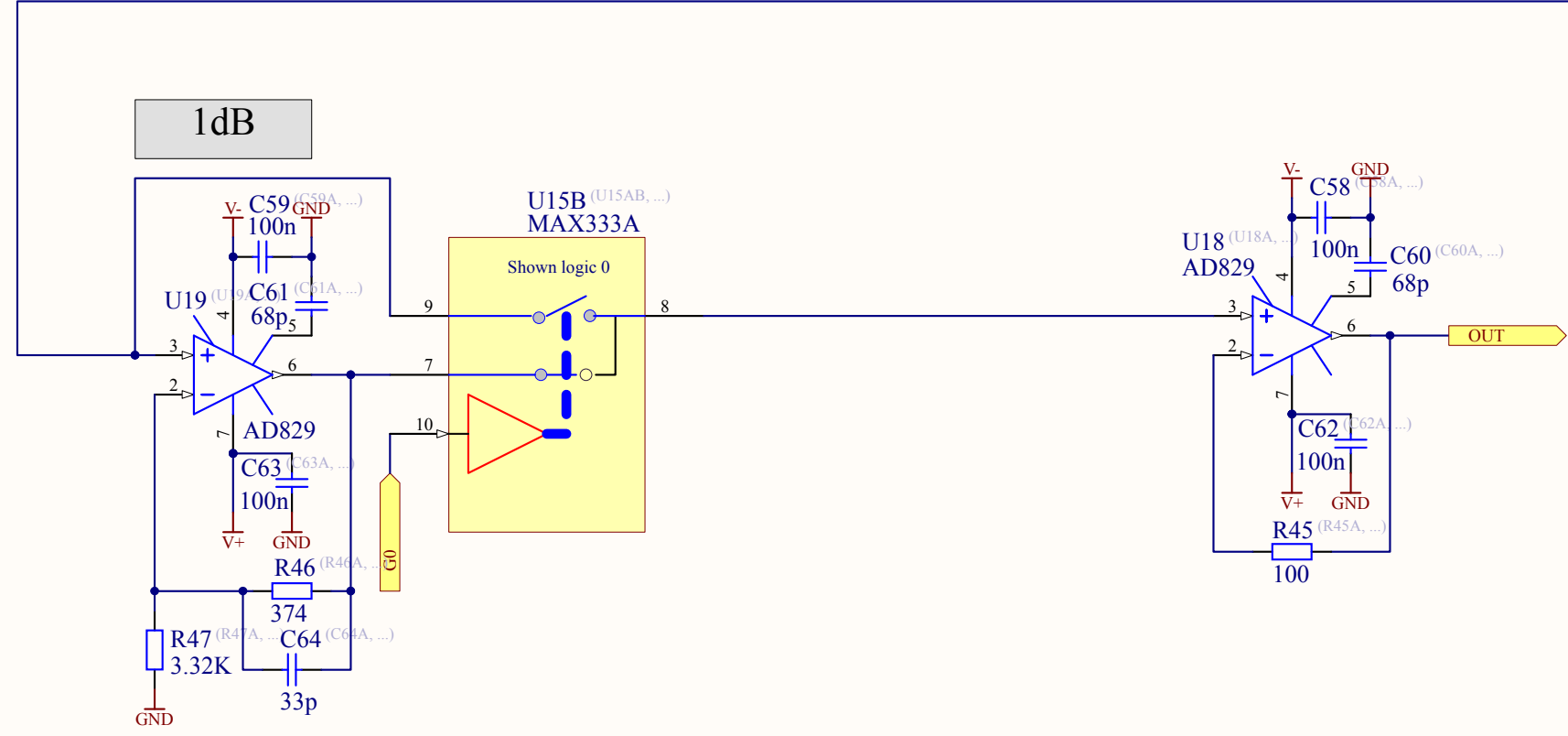
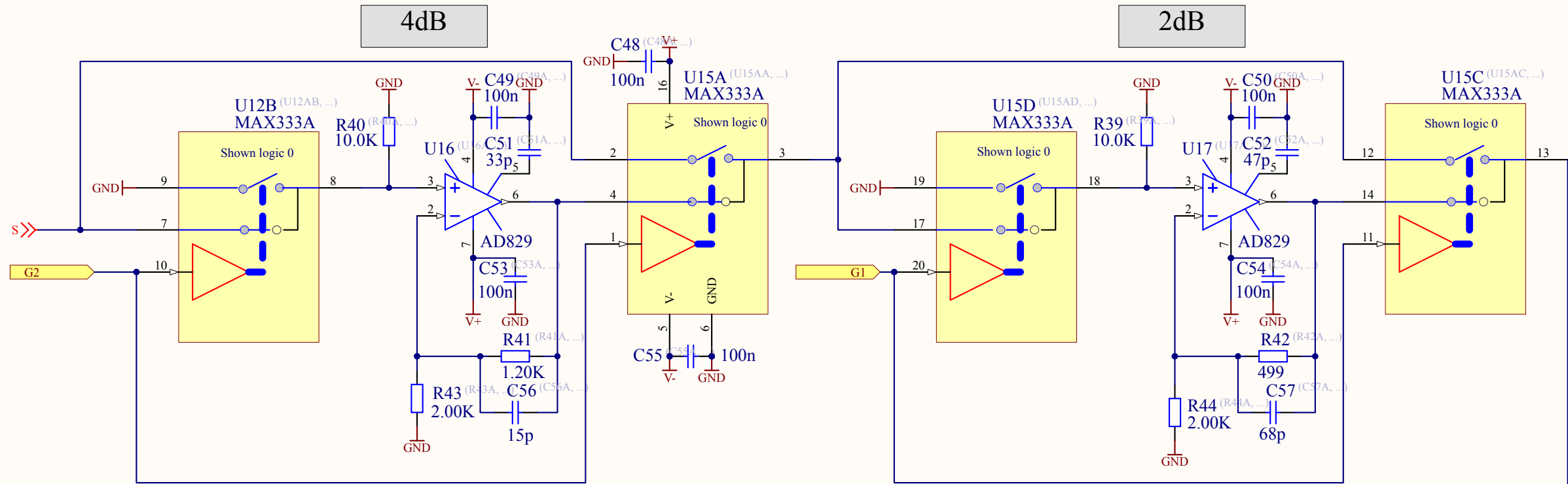
For small input signals add gain to these instrumentation amplifier stages.



Title		
Summing Node: Input		
Size	Number	Revision
B	D1200151	1
Date:	12/19/2013	Sheet 2 of 9
File:	D:\Users\...\CMSum1.SchDoc	Drawn By: Daniel Sigg

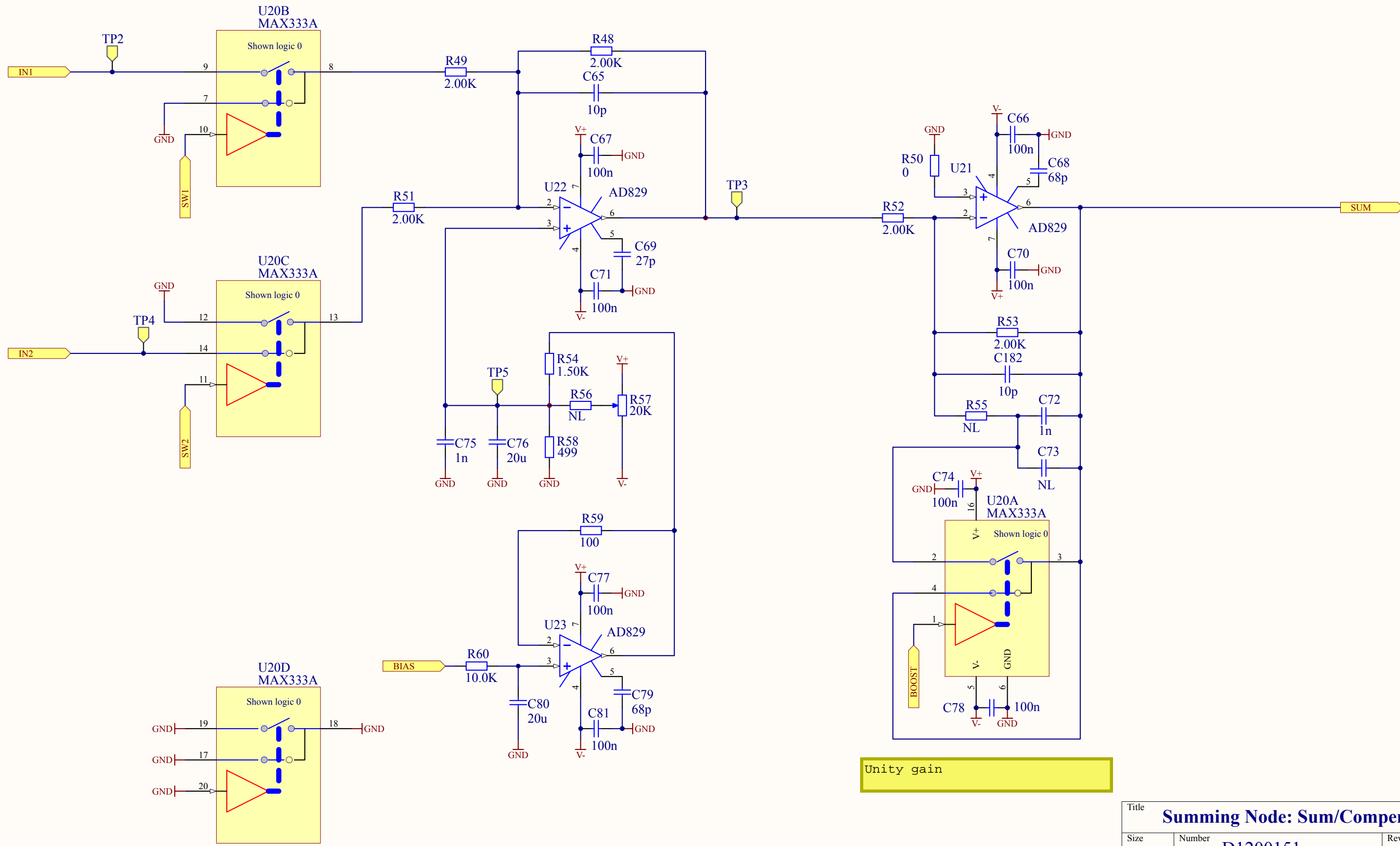


Title		
Summing Node: Amp		
Size	Number	Revision
B	D1200151	1
Date:	12/19/2013	Sheet 3 of 9
File:	D:\Users\...\CMSum2A.SchDoc	Drawn By: Daniel Sigg



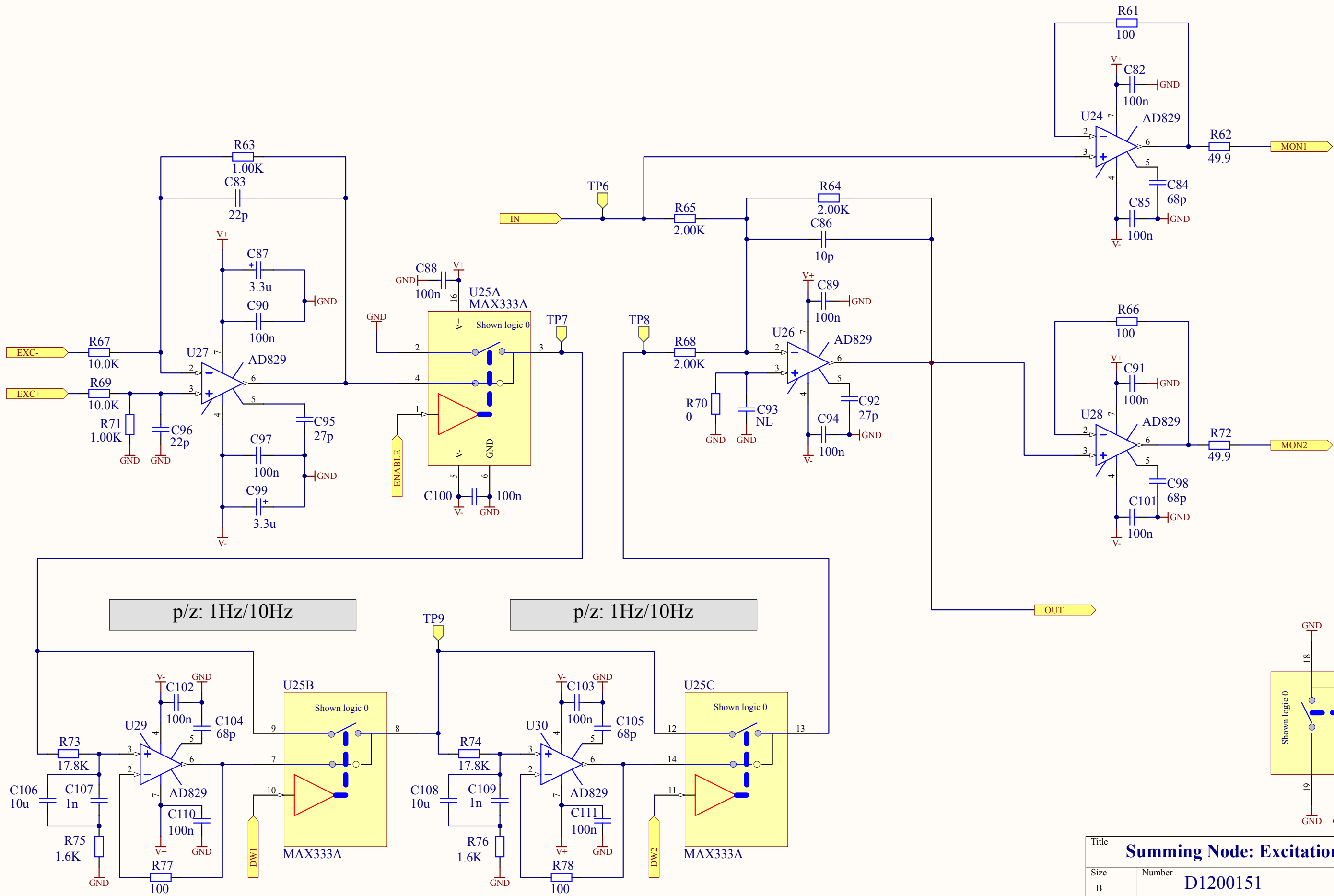
Title		
Summing Node: Amp		
Size	Number	Revision
B	D1200151	1
Date:	12/19/2013	Sheet 4 of 9
File:	D:\Users\...\CMSum2B.SchDoc	Drawn By: Daniel Sigg

Optional pole/zero pair



Unity gain

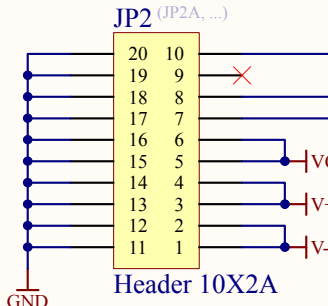
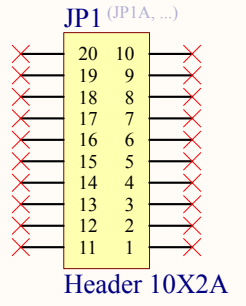
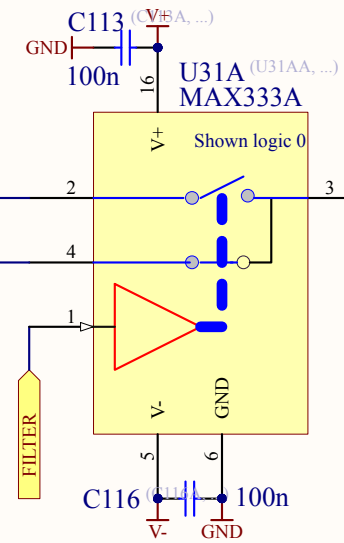
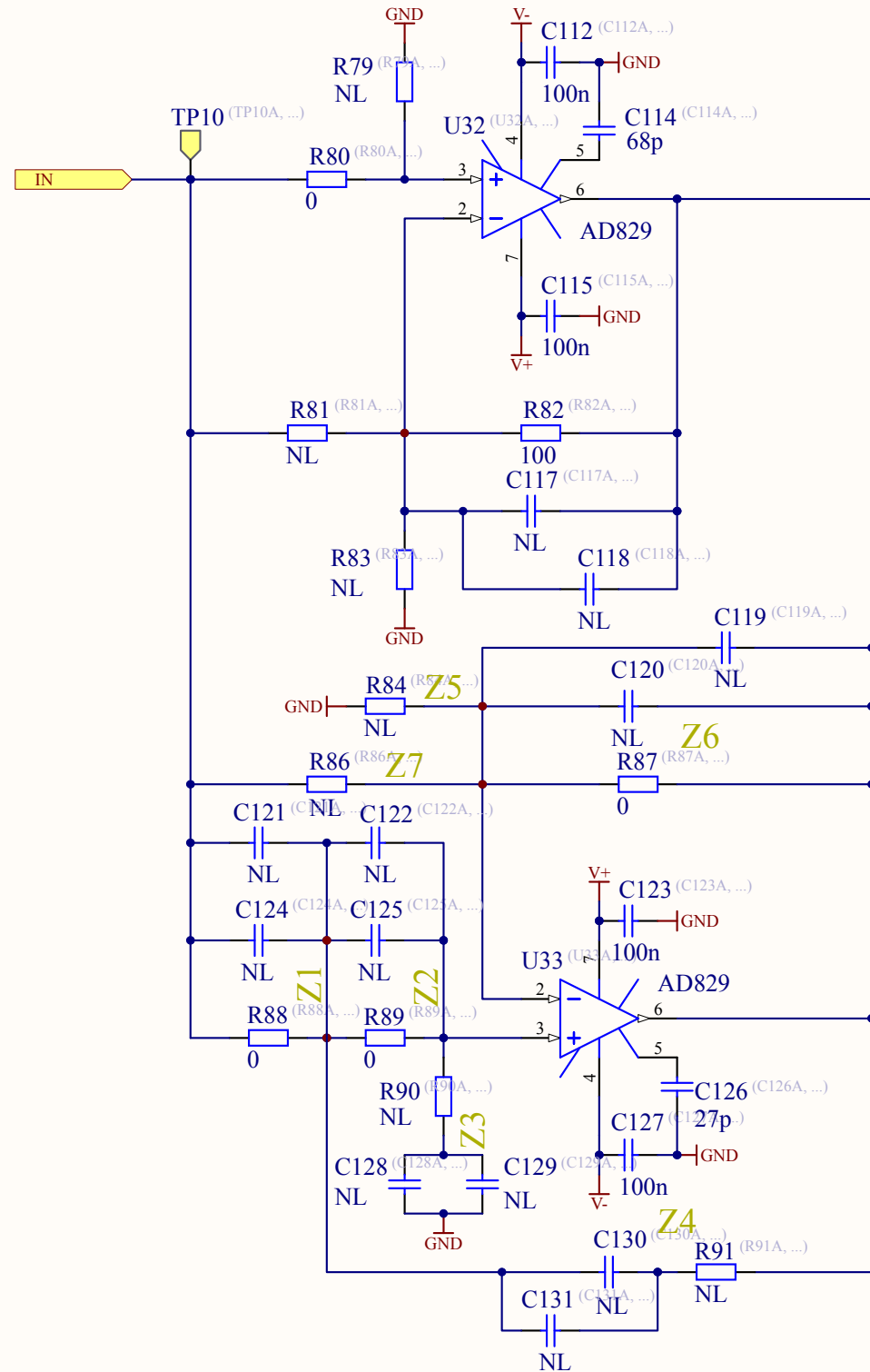
Title		
Summing Node: Sum/Compensation		
Size	Number	Revision
B	D1200151	1
Date:	12/19/2013	Sheet 5 of 9
File:	D:\Users\...\CMSum3.SchDoc	Drawn By: Daniel Sigg



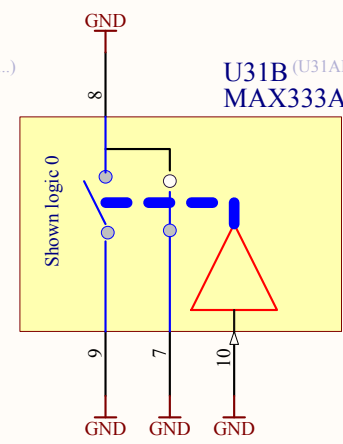
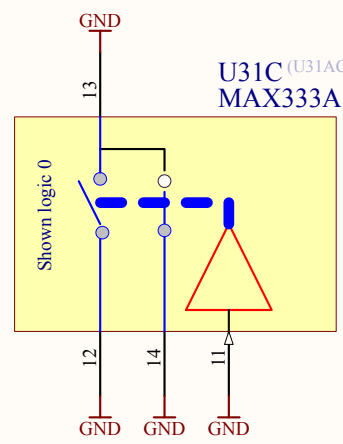
Title		
Summing Node: Excitation		
Size	Number	Revision
B	D1200151	1
Date:	12/19/2013	Sheet 6 of 9
File:	D:\Users\...\CMSum4.SchDoc	Drawn By: Daniel Sigg

generic filter stage

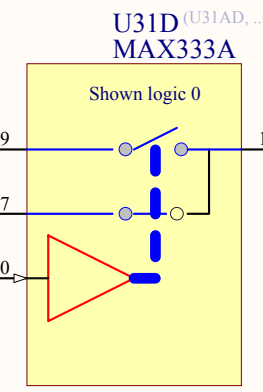
option stage



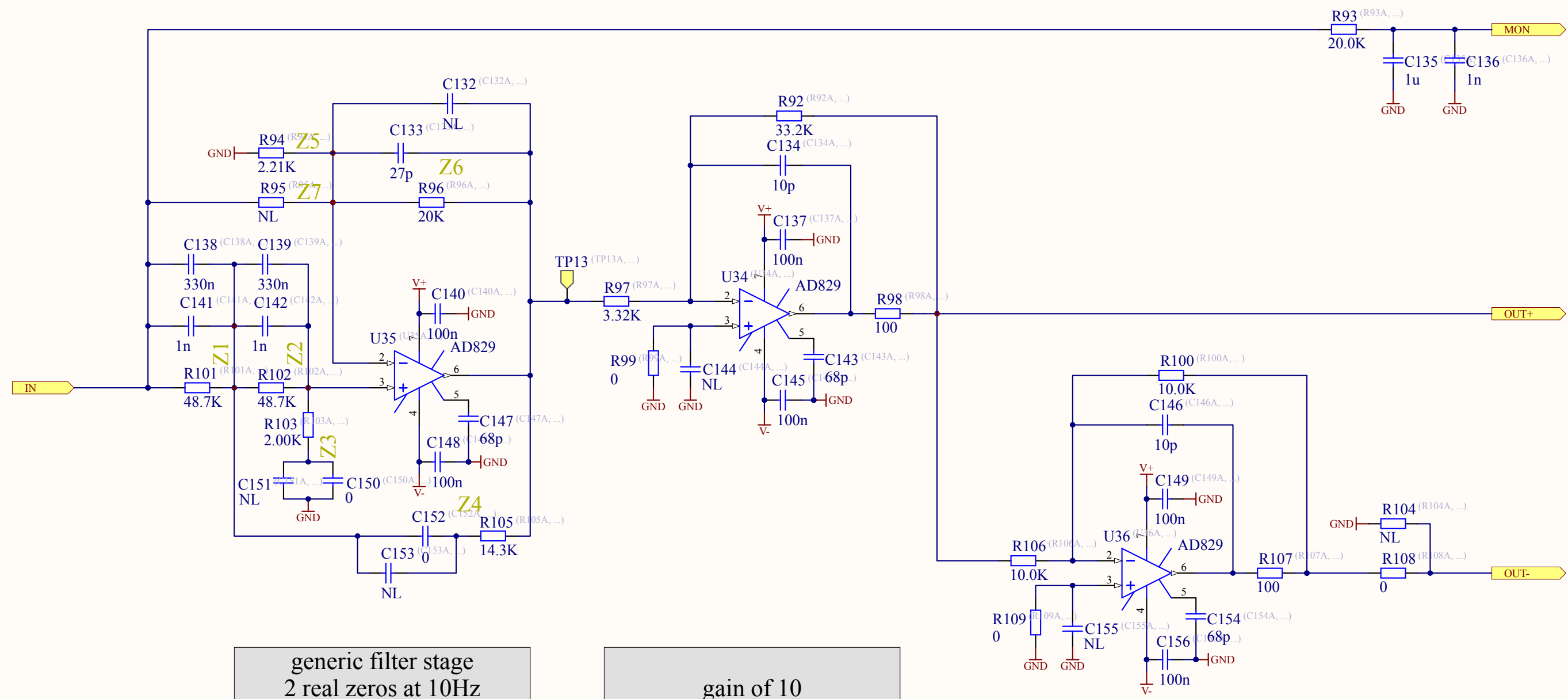
optional daughter board



- M1 (M3 standoff, 12mm)
- M2 (M2A, M3 pan, 8mm)
- M3 (M3 standoff, 12mm)
- M4 (M4A, M3 pan, 8mm)
- M5 (M3 standoff, 12mm)
- M6 (M6A, M3 pan, 8mm)
- M7 (M3 standoff, 12mm)
- M8 (M8A, M3 pan, 8mm)
- M9 (M3 standoff, 12mm)
- M10 (M10A, M3 pan, 8mm)
- M11 (M3 standoff, 12mm)
- M12 (M12A, M3 pan, 8mm)
- M13 (M13A, M3 pan, 8mm)
- M14 (M14A, M3 pan, 8mm)
- M15 (M15A, M3 pan, 8mm)
- M16 (M16A, M3 pan, 8mm)
- M17 (M17A, M3 pan, 8mm)
- M18 (M18A, M3 pan, 8mm)
- McMaster-Carr 90317A115
- Digi-Key 24434K-ND



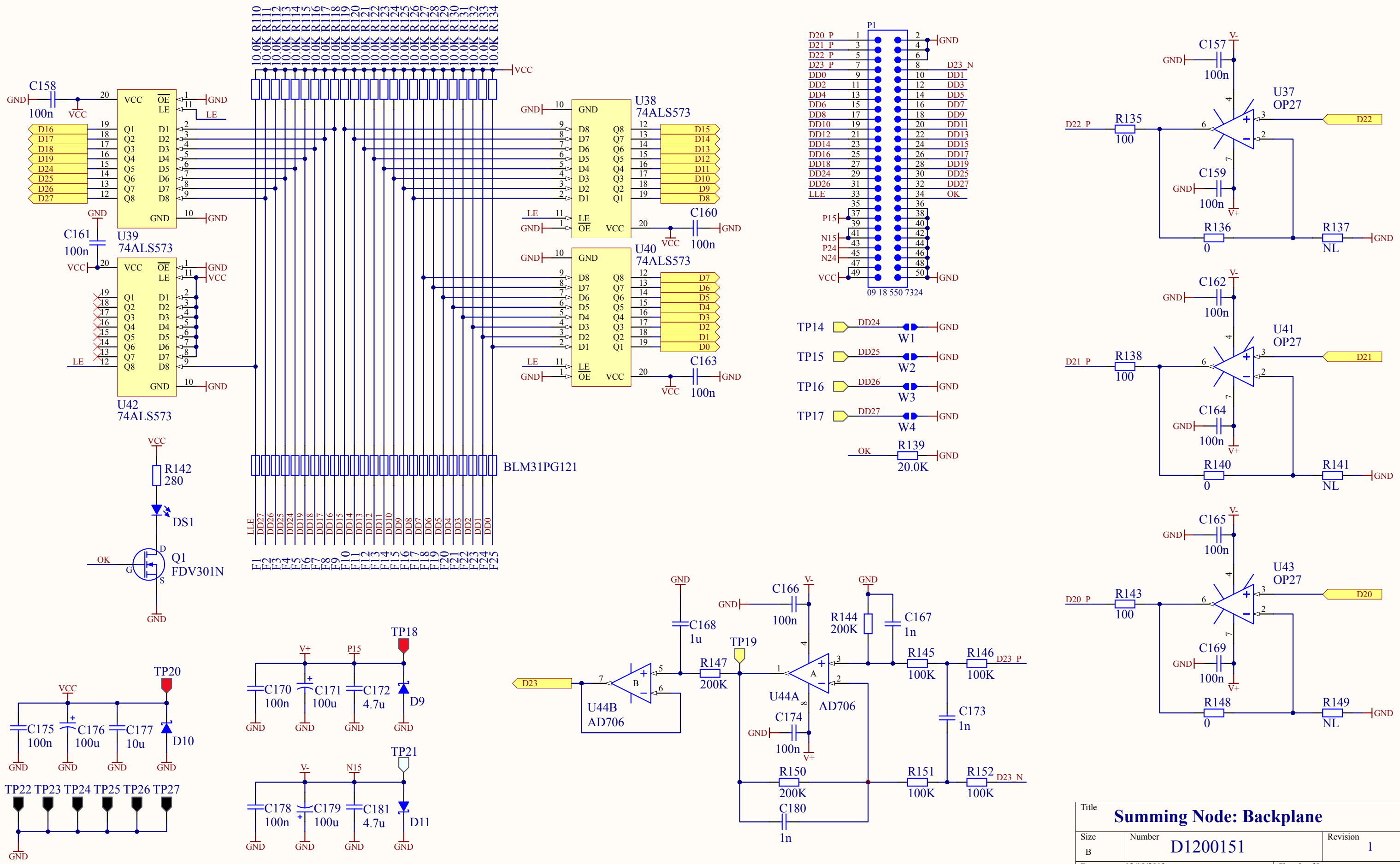
Title		
Summing Node: Filter/Option		
Size	Number	Revision
B	D1200151	1
Date:	12/19/2013	Sheet7 of9
File:	D:\Users\...\CMSum5.SchDoc	Drawn By: Daniel Sigg



generic filter stage
 2 real zeros at 10Hz
 2 real poles at 100Hz
 dc gain of 0.1

gain of 10

Title		
Summing Node: DAQ		
Size	Number	Revision
B	D1200151	1
Date:	12/19/2013	Sheet8 of 8
File:	D:\Users\...\CMSSum6.SchDoc	Drawn By: Daniel Sigg



Title		
Summing Node: Backplane		
Size	Number	Revision
B	D1200151	1
Date:	12/19/2013	Sheet9 of 9
File:	D:\Users\...CMSum7.SchDoc	Drawn By: Daniel Sigg