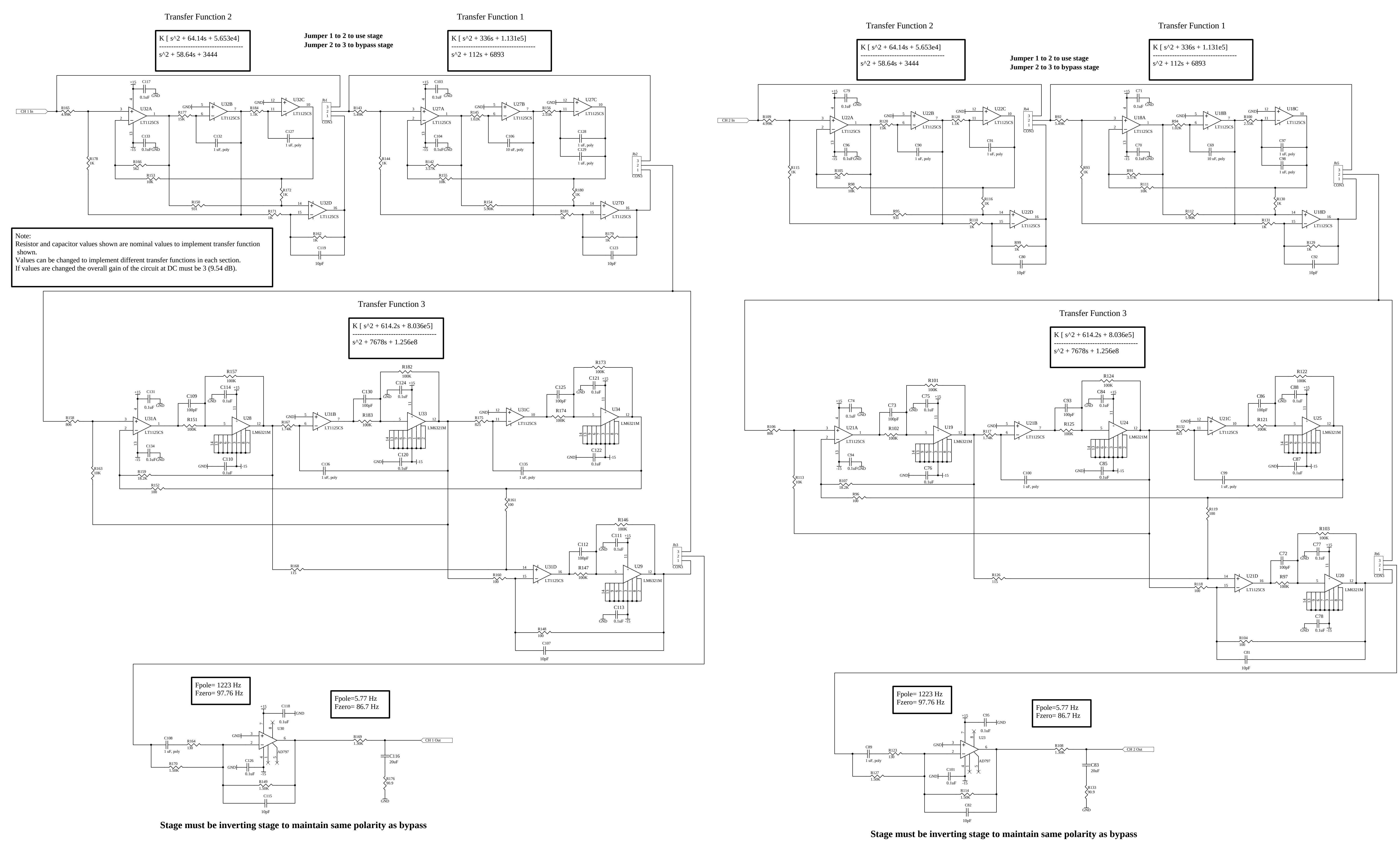
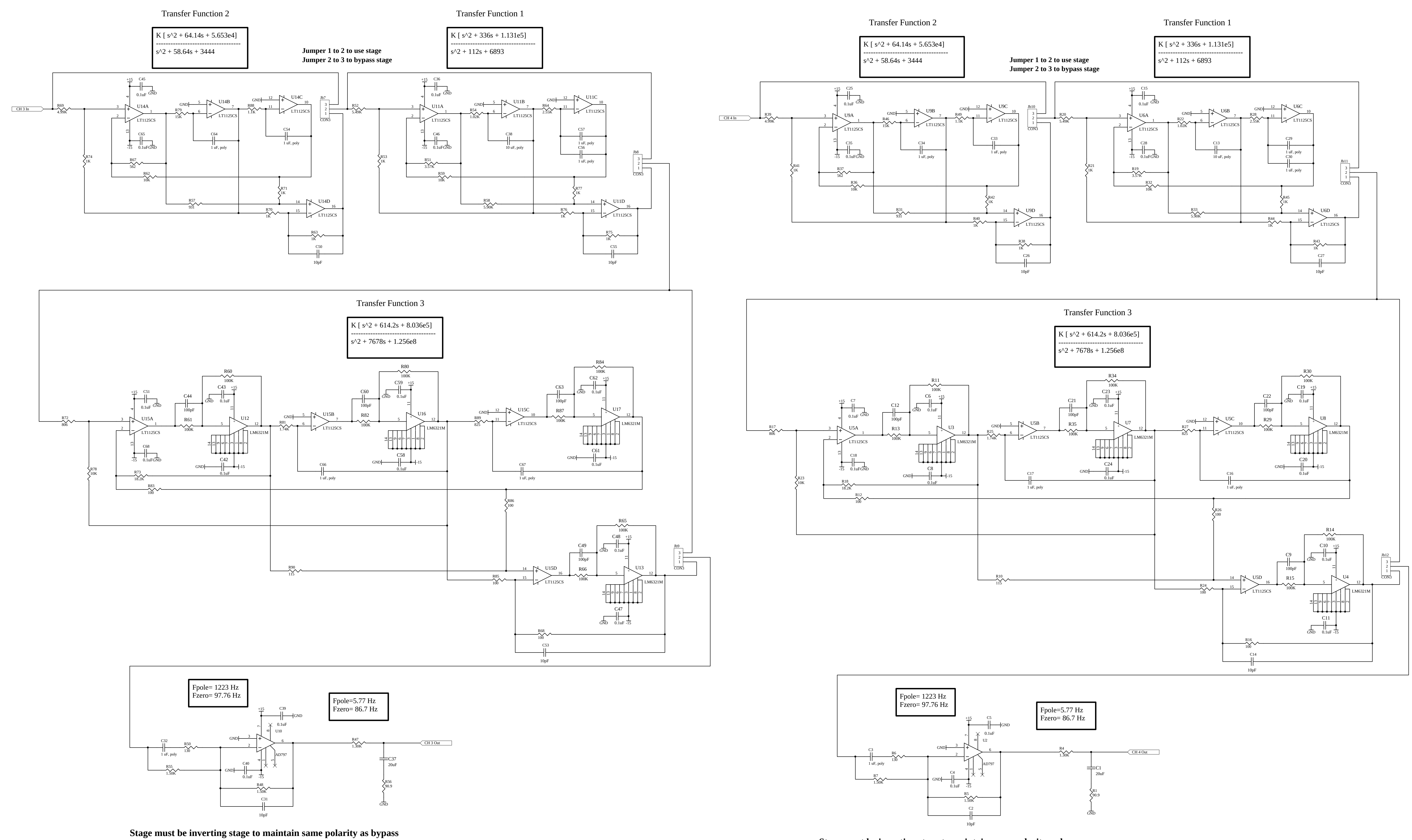
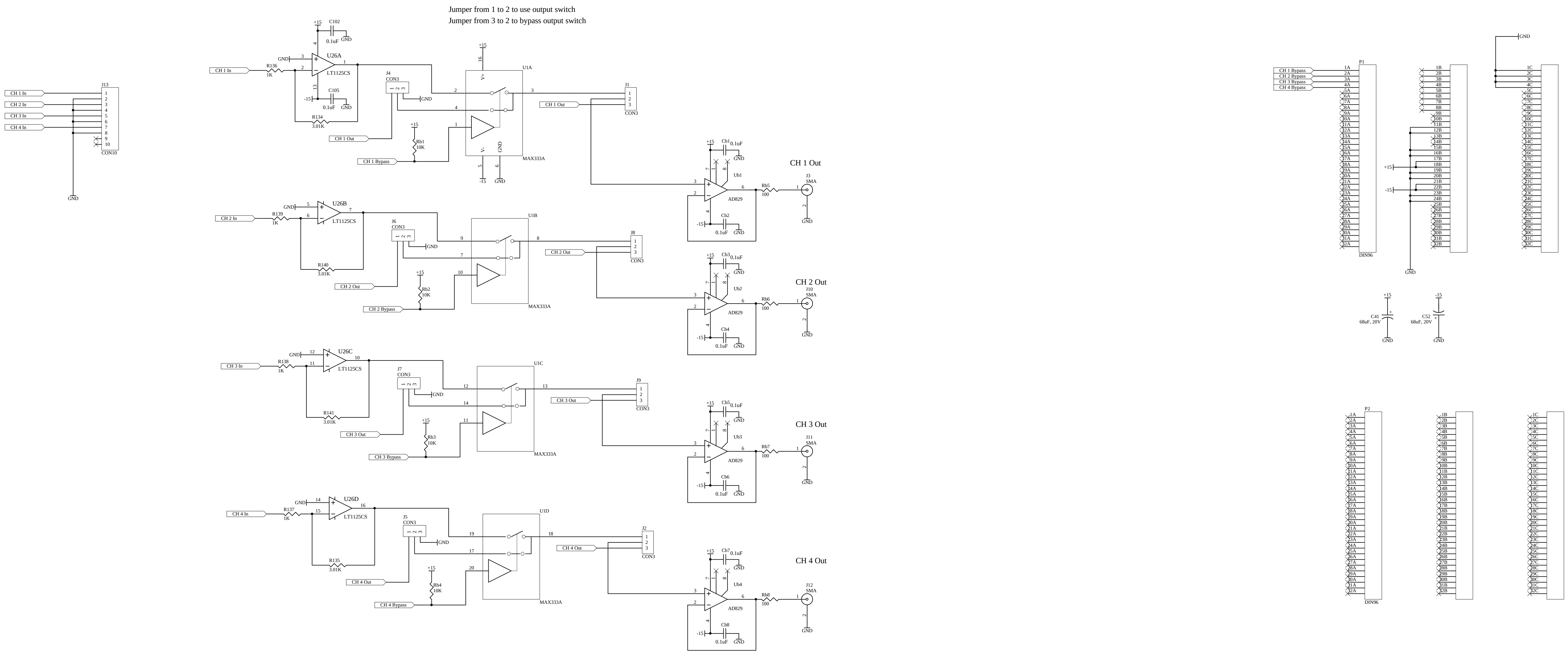

Transfer Function 2
K [s^2 + 64.14s + 5.653e4]
s^2 + 58.64s + 3444
Jumper 1 to 2 to use stage
Jumper 2 to 3 to bypass stage
Transfer Function 1
K [s^2 + 336s + 1.131e5]
s^2 + 112s + 6893
CH 1 In
Note:
Resistor and capacitor values shown are nominal values to implement transfer function shown.
Values can be changed to implement different transfer functions in each section.
If values are changed the overall gain of the circuit at DC must be 3 (9.54 dB).
Transfer Function 3
K [s^2 + 614.2s + 8.036e5]
s^2 + 7678s + 1.256e8
Fpole= 1223 Hz
Fzero= 97.76 Hz
Fpole=5.77 Hz
Fzero= 86.7 Hz
CH 1 Out
Stage must be inverting stage to maintain same polarity as bypass
Transfer Function 2
K [s^2 + 64.14s + 5.653e4]
s^2 + 58.64s + 3444
Jumper 1 to 2 to use stage
Jumper 2 to 3 to bypass stage
Transfer Function 1
K [s^2 + 336s + 1.131e5]
s^2 + 112s + 6893
CH 2 In
Transfer Function 3
K [s^2 + 614.2s + 8.036e5]
s^2 + 7678s + 1.256e8
Fpole= 1223 Hz
Fzero= 97.76 Hz
Fpole=5.77 Hz
Fzero= 86.7 Hz
CH 2 Out
Stage must be inverting stage to maintain same polarity as bypass

Title: *Universal Dewhitening Filter*		*LIGO Laboratory California Institute of Technology Massachusetts Institute of Technology*	LIGO
Size: D	DCC Number: D000183	SCH / PCB Revision: B	Engineer: *J. Heefner*
File: K:\h\cad\ligo\users\jay\UnivDewhite\RevB\UnivDewhiteRevB1.Sch			Date: 26-Mar-2001 Time: 14:42:08 Sheet 1 of 3



Transfer Function 2
K [s^2 + 64.14s + 5.653e4]
s^2 + 58.64s + 3444
Jumper 1 to 2 to use stage
Jumper 2 to 3 to bypass stage
Transfer Function 1
K [s^2 + 336s + 1.131e5]
s^2 + 112s + 6893
CH 3 In
Transfer Function 3
K [s^2 + 614.2s + 8.036e5]
s^2 + 7678s + 1.256e8
Fpole= 1223 Hz
Fzero= 97.76 Hz
Fpole=5.77 Hz
Fzero= 86.7 Hz
CH 3 Out
Stage must be inverting stage to maintain same polarity as bypass
Transfer Function 2
K [s^2 + 64.14s + 5.653e4]
s^2 + 58.64s + 3444
Jumper 1 to 2 to use stage
Jumper 2 to 3 to bypass stage
Transfer Function 1
K [s^2 + 336s + 1.131e5]
s^2 + 112s + 6893
CH 4 In
Transfer Function 3
K [s^2 + 614.2s + 8.036e5]
s^2 + 7678s + 1.256e8
Fpole= 1223 Hz
Fzero= 97.76 Hz
Fpole=5.77 Hz
Fzero= 86.7 Hz
CH 4 Out
Stage must be inverting stage to maintain same polarity as bypass

Title: *Universal Dewhitening Filter*		*LIGO Laboratory, California Institute of Technology, Massachusetts Institute of Technology*	LIGO
Size: D	DCC Number: D000183	SCH / PCB Revision: B	Engineer: *J. Heefner*
File: K:\h\cad\ligo\users\jay\UnivDewhite\RevB\UnivDewhiteRevB2.Sch			Date: 26-Mar-2001 / Time: 14:42:15 / Sheet 2 of 3



Revision	Description of Change	Date
A	Initial release	5/00
A1	1. Added note about RevA1 upgrade board. 2. Changed R134, R135, R140, R141 to 3.01K	1/01
B	1. Added jumpers JbX to selectively jumper individual filter sections. 2. Added output buffer amps UbX to each channel. 3. All components added for Rev B have a "b" in the designator.	3/01

Title: ***Universal Dewhitening Filter***

LIGO Laboratory
California Institute of Technology
Massachusetts Institute of Technology

LIGO

Size: D | DCC Number: D000183 | SCH / PCB Revision: B | Engineer: *J. Heefner*

Date: 23-Mar-2001
Time: 13:34:59

File: K:\h\cad\ligo\users\jay\UnivDewhite\RevB\UnivDewhiteRevB3.Sch

Sheet 4 of 4

UnivDewhiteRevB1
UnivDewhiteRevB1.Sch

- CH 1 In
- CH 1 Out
- CH 2 In
- CH 2 Out

UnivDewhiteRevB2
UnivDewhiteRevB2.Sch

- CH 3 In
- CH 3 Out
- CH 4 In
- CH 4 Out

UnivDewhiteRevB3
UnivDewhiteRevB3.Sch

- CH 1 Out
- CH 1 In
- CH 2 In
- CH 3 In
- CH 4 In
- CH 1 Bypass
- CH 1 In
- CH 1 Out
- CH 2 Out
- CH 2 Bypass
- CH 2 In
- CH 2 Out
- CH 3 Out
- CH 3 Bypass
- CH 3 In
- CH 3 Out
- CH 4 Out
- CH 4 Bypass
- CH 4 In
- CH 4 Out
- CH 1 Bypass
- CH 2 Bypass
- CH 3 Bypass
- CH 4 Bypass

Title
Universal Dewhitening Filter

LIGO Laboratory
California Institute of Technology
Massachusetts Institute of Technology

LIGO

Size: B	DCC Number: D000183	SCH / PCB Revision: B	Engineer: *J. Heefner*	Date: 26-Mar-2001
				Time: 14:41:57
File: K:\h\cad\ligo\users\jay\UnivDewhite\RevB\UnivDewhiteRevB.prj				Sheet 0 of 1