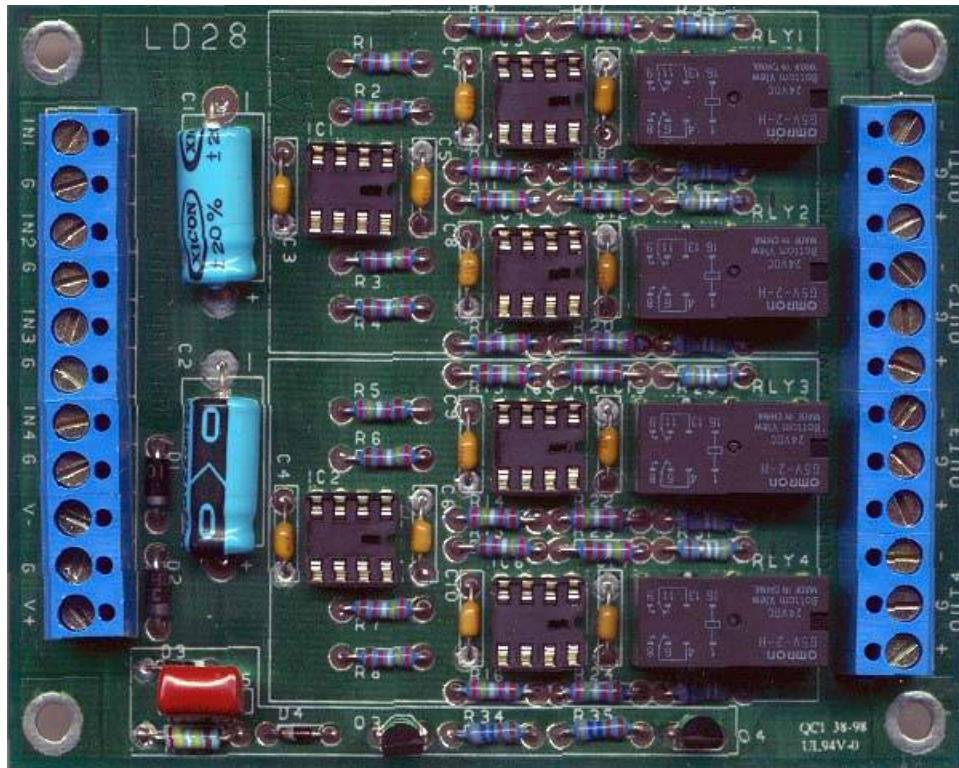


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LD28 Balanced Line Driver



The LD28 is a quad line driver board. Each of the four sections has a line driver with balanced outputs. A relay on the outputs prevents the driver from driving the outputs terminals until 2 s. after power turn on. The gain of the driver stage is 1 (0dB).

Specifications.

Dimensions:	3.20" * 4.15"
Frequency response:	DC-100KHz
Input impedance:	3.3K Ω
Voltage Gain	1
Input/Output voltage range	25V p-p (8 VRMS)
Output impedance	50 Ω
Power supply requirements	+/-15VDC max, 150 mA

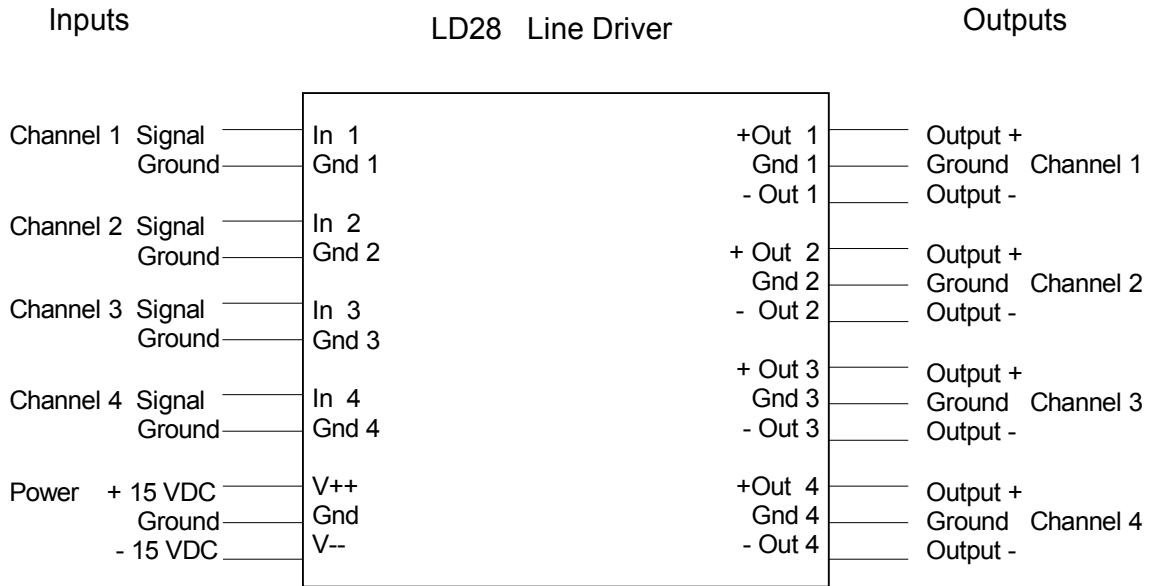
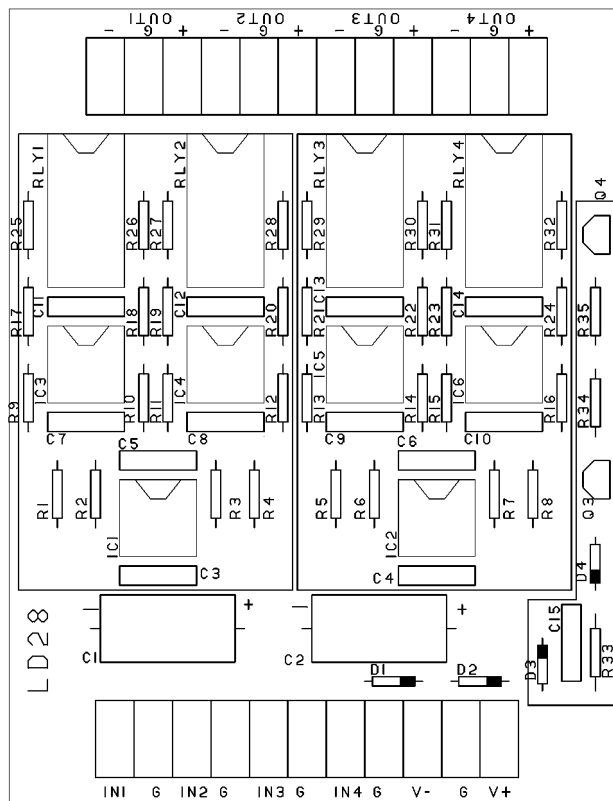


Figure 1 Typical application

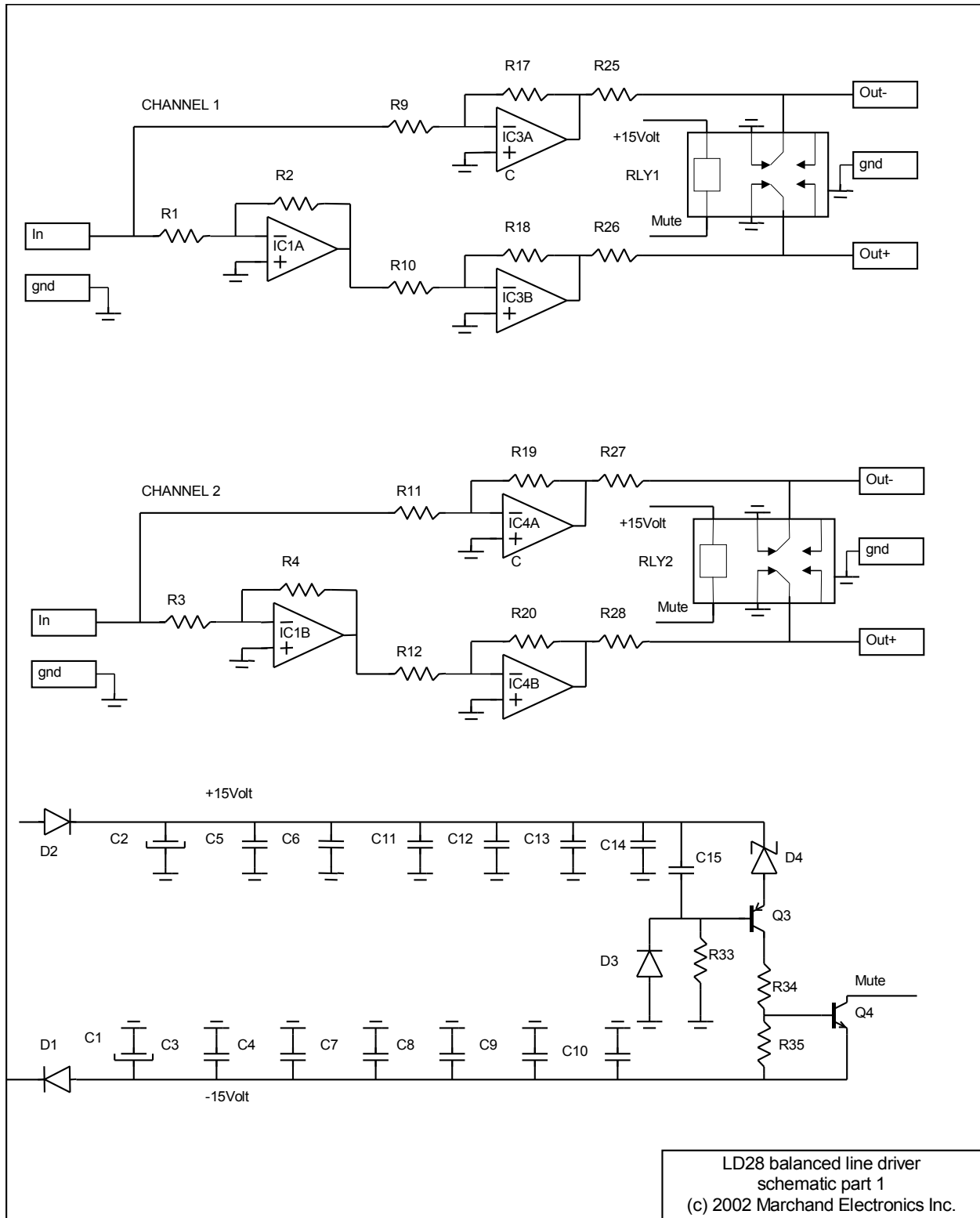


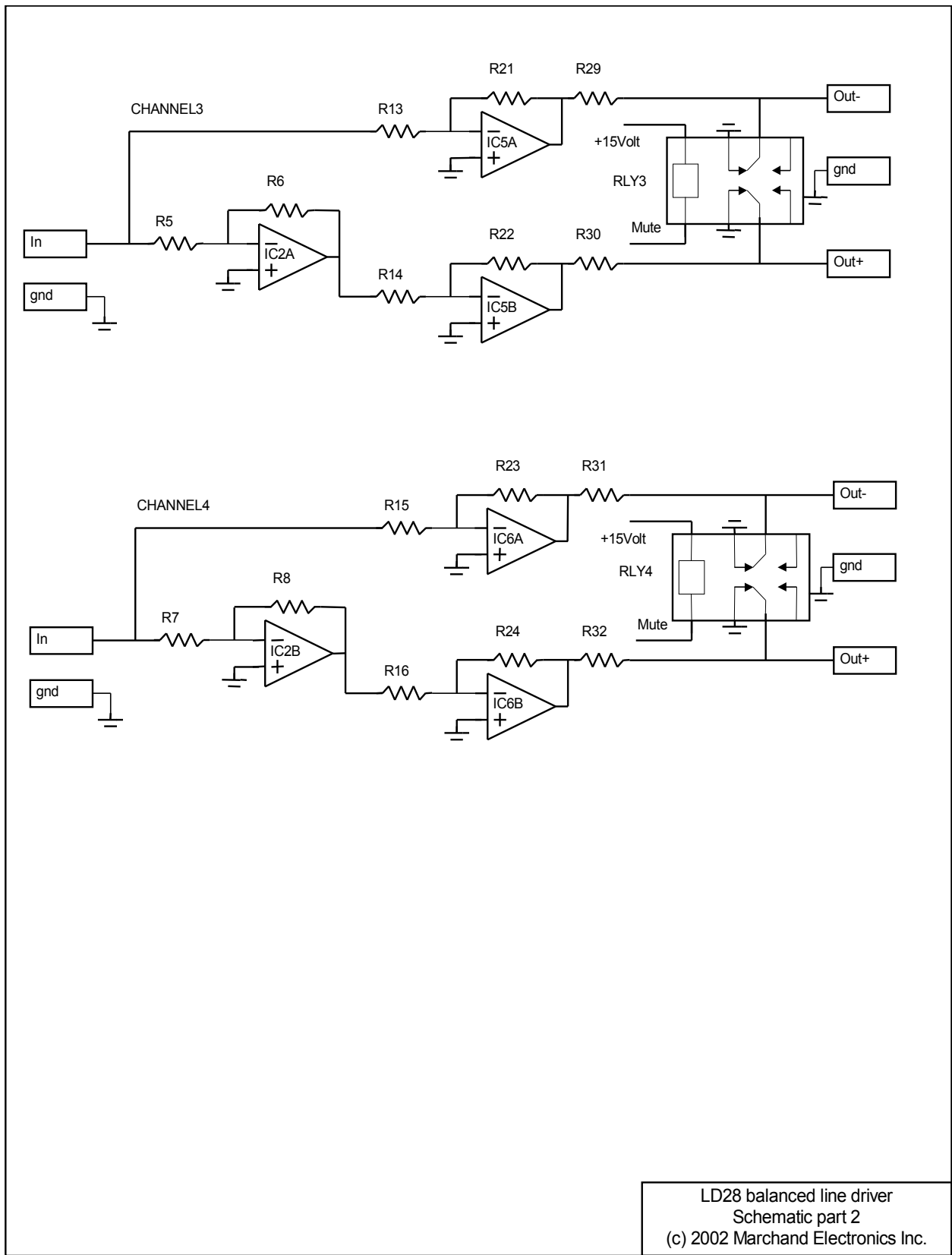
LD28 Parts List

ID	Value	Description	D4	1N5232	5.6V Zener Diode
R1	4.99K	1% ,1/4W, Metal Film	Q1	not used	
R2	4.99K	1% ,1/4W, Metal Film	Q2	not used	
R3	4.99K	1% ,1/4W, Metal Film	Q3	MPSA92	PNP Transistor
R4	4.99K	1% ,1/4W, Metal Film	Q4	PN2222	NPN Transistor
R5	4.99K	1% ,1/4W, Metal Film			
R6	4.99K	1% ,1/4W, Metal Film	IC1	OPA2134	Dual Op-Amp
R7	4.99K	1% ,1/4W, Metal Film	IC2	OPA2134	Dual Op-Amp
R8	4.99K	1% ,1/4W, Metal Film	IC3	OPA2134	Dual Op-Amp
R9	10.0K	1% ,1/4W, Metal Film	IC4	OPA2134	Dual Op-Amp
R10	10.0K	1% ,1/4W, Metal Film	IC5	OPA2134	Dual Op-Amp
R11	10.0K	1% ,1/4W, Metal Film	IC6	OPA2134	Dual Op-Amp
R12	10.0K	1% ,1/4W, Metal Film			
R13	10.0K	1% ,1/4W, Metal Film	RLY1	24V,DPDT	Relay
R14	10.0K	1% ,1/4W, Metal Film	RLY2	24V,DPDT	Relay
R15	10.0K	1% ,1/4W, Metal Film	RLY3	24V,DPDT	Relay
R16	10.0K	1% ,1/4W, Metal Film	RLY4	24V,DPDT	Relay
R17	4.99K	1% ,1/4W, Metal Film			
R18	4.99K	1% ,1/4W, Metal Film			
R19	4.99K	1% ,1/4W, Metal Film			
R20	4.99K	1% ,1/4W, Metal Film			
R21	4.99K	1% ,1/4W, Metal Film			
R22	4.99K	1% ,1/4W, Metal Film			
R23	4.99K	1% ,1/4W, Metal Film			
R24	4.99K	1% ,1/4W, Metal Film			
R25	48.7 Ohm	1% ,1/4W, Metal Film			
R26	48.7 Ohm	1% ,1/4W, Metal Film			
R27	48.7 Ohm	1% ,1/4W, Metal Film			
R28	48.7 Ohm	1% ,1/4W, Metal Film			
R29	48.7 Ohm	1% ,1/4W, Metal Film			
R30	48.7 Ohm	1% ,1/4W, Metal Film			
R31	48.7 Ohm	1% ,1/4W, Metal Film			
R32	48.7 Ohm	1% ,1/4W, Metal Film			
R33	1M00M	1% ,1/4W, Metal Film			
R34	10.0K	1% ,1/4W, Metal Film			
R35	10.0K	1% ,1/4W, Metal Film			
C1	220uF, 25V	Aluminum Electrolytic			
C2	220uF, 25V	Aluminum Electrolytic			
C15	0.22uF	Stacked Film			
CB	0.10uF	Axial Ceramic (12 places)			
D1	1N4937	1A Diode			
D2	1N4937	1A Diode			
D3	1N4148	Signal Diode			

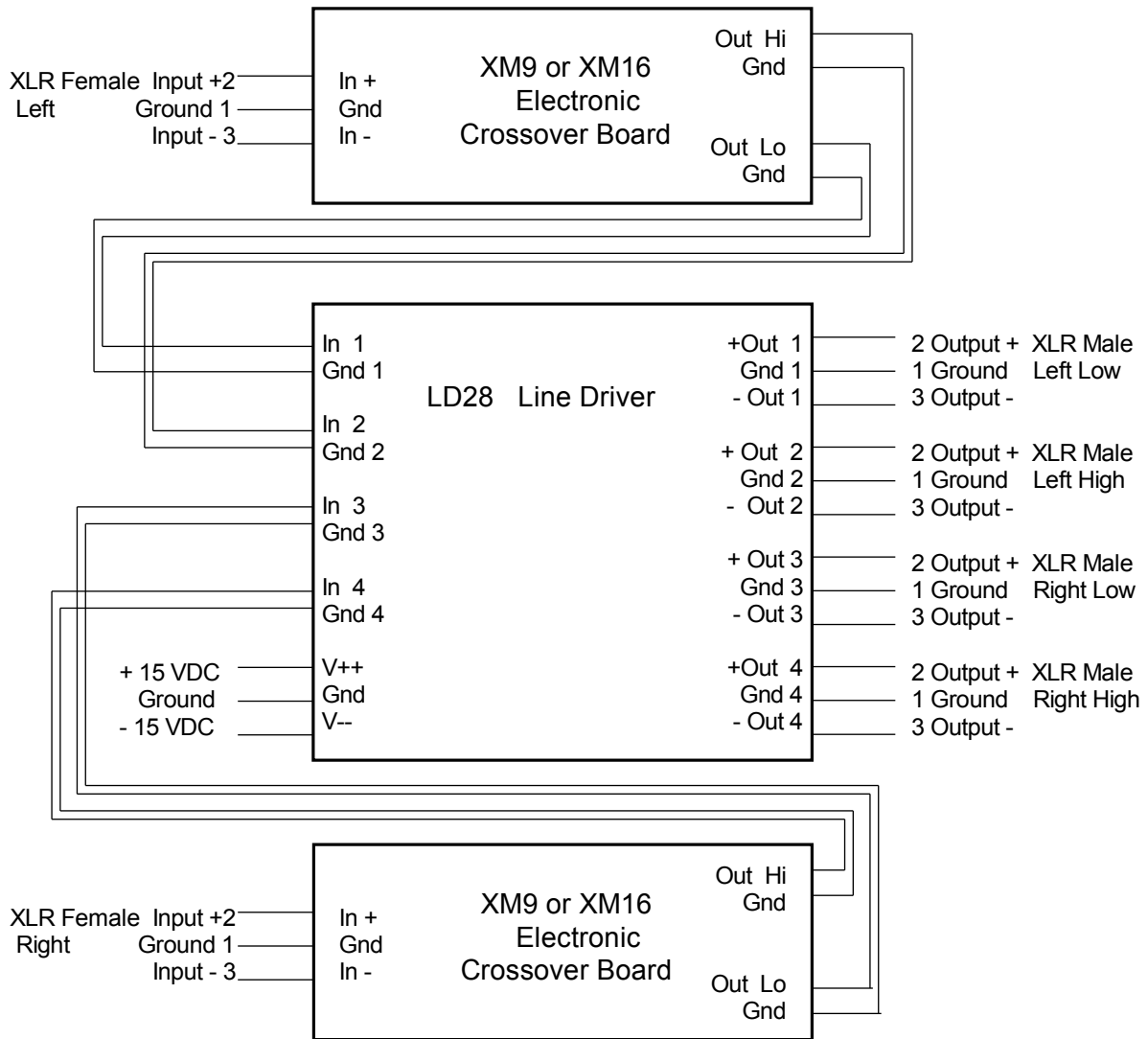
The LD28 kit contains the following parts:

Count	Value	Description
8	48.7 Ohm	1% ,1/4W, Metal Film
16	4.99K	1% ,1/4W, Metal Film
10	10.0K	1% ,1/4W, Metal Film
1	1M00	1% ,1/4W, Metal Film
2	220uF, 25V	Aluminum Electrolytic
12	0.10uF	Axial Ceramic
1	0.22uF	Stacked Film
2	1N4937	1A Diode
1	1N4148	Signal Diode
1	1N5232	5.6V Zener Diode
1	MPSA92	PNP Transistor
1	PN2222	NPN Transistor
6	OPA2134	Dual Op-Amp
4	24V,DPDT	Relay
1	11 pos	terminal strip
1	12 pos	terminal strip
6	8 pin DIP	IC socket
1	LD28	Circuit board





LD28 balanced line driver
Schematic part 2
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Wiring diagram for installing the LD28 balanced driver board in an XM9 or XM16 crossover