

NAU8220 User Manual

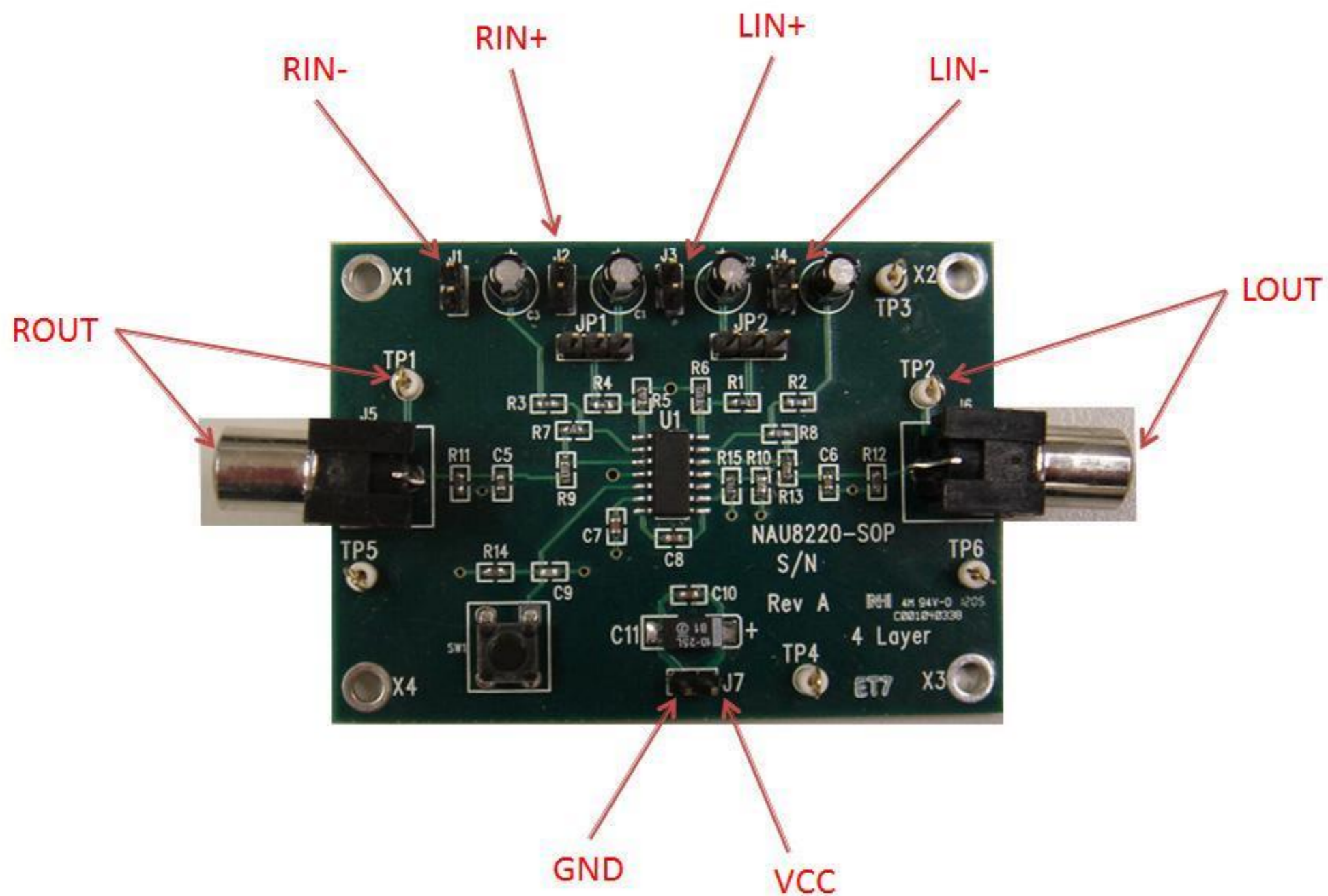


DESCRIPTION:

The NAU8220 demo board is a high quality 2Vrms line driver. It provides a constant gain of 2. The picture below illustrates all the I/O and power pins.

CONTENTS OF THE KIT:

- The NAU8220 EVB
- User's guide



HARDWARE CONNECTIONS:

- Install jumpers to shorten pin1/pin2 of JP1 and JP2, respectively.
- Apply 3.0-3.6V (typical 3.3V) supply to J7, whose pin1 and pin2 are for VCC and GND, respectively.

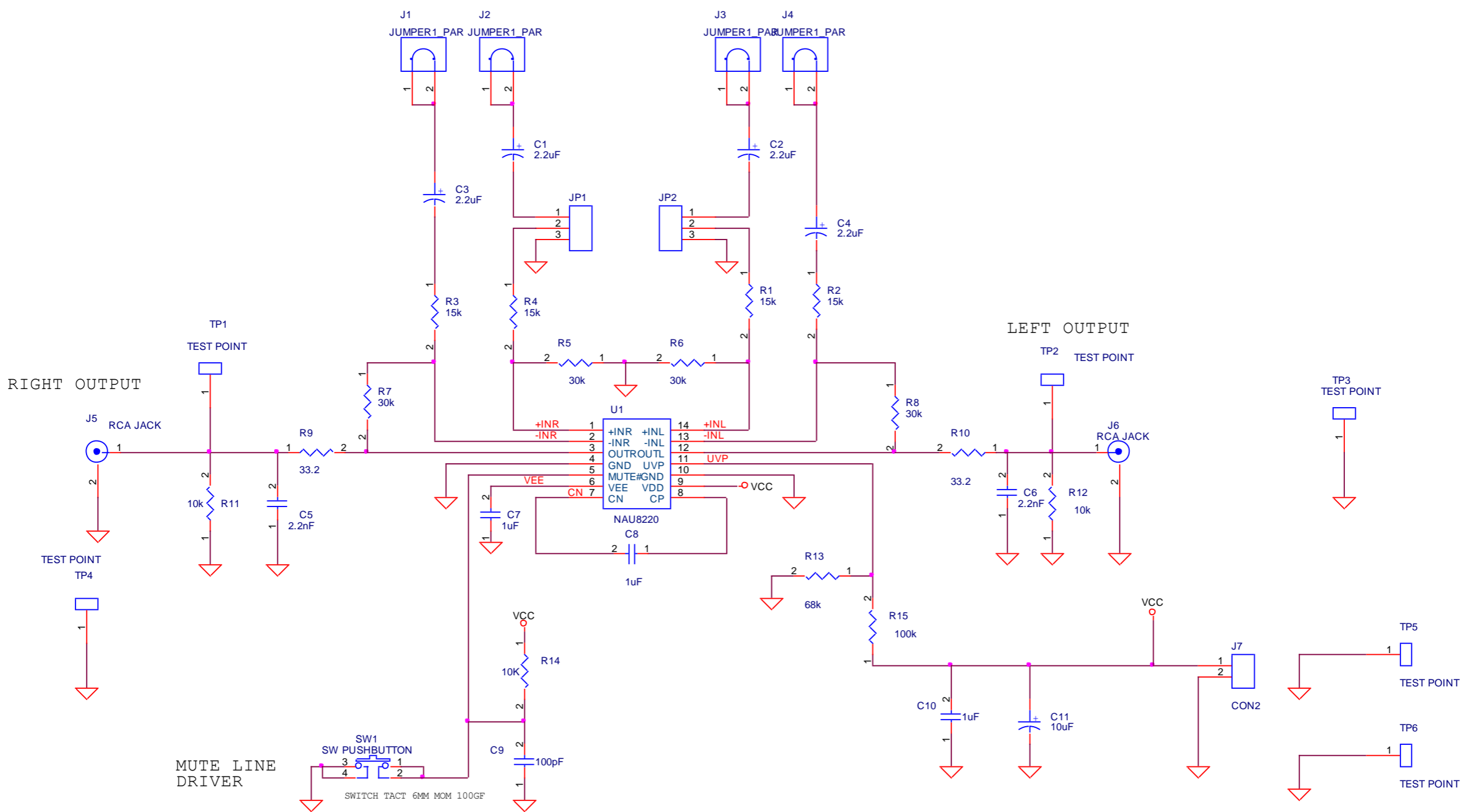
OPERATIONS:

General Operations:

1. Amplify: Apply analog input signals across J1/J2 for right channel or J4/J3 for left channel (restriction: $-1.5V \sim +1.5V$ for common mode). Then the output signals can be not only got at RCA jack J5 (right) or J6 (left), but also measured at TP1 (right) or TP2 (left). (Remark: TP3~TP6 are GND)
2. Mute: Press switch SW1, the output would be zero.
3. UVP (Under Voltage Protection): (Cont. 1) Decrease VCC gradually (say, 0.1V per step), the output would remain the same at the beginning, but abruptly go to zero when VCC is slightly less than 2.5V. Now increase VCC gradually, the output would not vibrate until VCC is about 3.0V. (Note: Do Not apply more than 3.6V at VCC)

For other technical details on NAU8220, please refer to the datasheet at: <http://www.nuvoton.com>

SCHEMATIC:



BILL OF MATERIALS

Item	Qty	Reference	Part Value	Part Descripton	Part Number	Footprint	Vendor
1	4	C1, C2, C3, C4	2. 2uF	CAP ALUM 2. 2UF 50V 20% RADIAL	604-1124-ND	CAP_P_5X2	Digikey
2	2	C6, C5	2. 2nF	CAP CER 2200PF 50V 5% X7R	478-6205-1-ND	603	Digikey
3	3	C7, C8 C10	1uF	CAP CER 1UF 16V 10% X7R	587-1241-1-ND	603	Digikey
4	1	C9	100pF	CAP CER 100PF 50V 5% NP0	490-1427-1-ND	603	Digikey
6	1	C11	10uF	CAP TANT 10UF 25V 10% 2312	399-3734-1-ND	6032P	Digikey
7	2	JP2, JP1	CON3	CONN HEADER 2POS .100 VERT TIN	A32701-40-ND	SIP-3P	Digikey
8	4	J1, J2, J3, J4	JUMPER1_PAR	TEST POINT PC LOW PRO W/OUT BASE	5021K-ND	HEADER2X100	
9	2	J5, J6	RCA JACK	CONN RCA JACK R/A BLACK PCB	CP-1418-ND Mfg. P/N RCJ-041	RCJ-04X	Digikey
10	1	J7	CON2		WM4111-ND	CON2_1X2	Digikey
11	4	R1, R2, R3, R4	15k	RES 15. 0K OHM .25W 1%	541-15. 0KSCT-ND	603	Digikey
12	4	R5, R6, R7, R8	30k	RES 30. 0K OHM 1/10W 1%	541-30. 0KHCT-ND	603	Digikey
13	2	R10, R9	33. 2	RES 33. 2 OHM .25W 1%	541-33. 2SCT-ND	603	Digikey
14	3	R12, R11. R14	10k	RES 10. 0K OHM 1/10W 1%	P10. 0KHCT-ND	603	Digikey
15	1	R13	68k	RES 68. 0K OHM 1/10W 1%	541-68. 0KHCT-ND	603	Digikey
17	1	R15	100k	RES 100K OHM .25W 1%	541-100KSCT-ND	603	Digikey
18	1	SW1	SW PUSHBUTTON	SWITCH TACTILE SPST-NO 0. 05A 24V	SW400-ND Mfg. p/n B3F-1000	SW400-ND-SWITCH-PUSHBOTTON	Digikey
19	4	TP1, TP2, TP3, TP4	TEST POINT	TEST POINT PC MULTI PURPOSE WHT	5012K-ND	TP_90R63 (0. 063" (1. 60mm) Hole Diameter)	Digikey
20	2	TP5, TP6	TEST POINT	TEST POINT PC MINI . 040"D WHITE	5002K-ND	TP_62R42_MINI (0. 040" (1. 02mm) Hole Diameter)	Digikey
21	1	U1	NAU8220	Nuvoton part		TSSOP14	Nuvoton