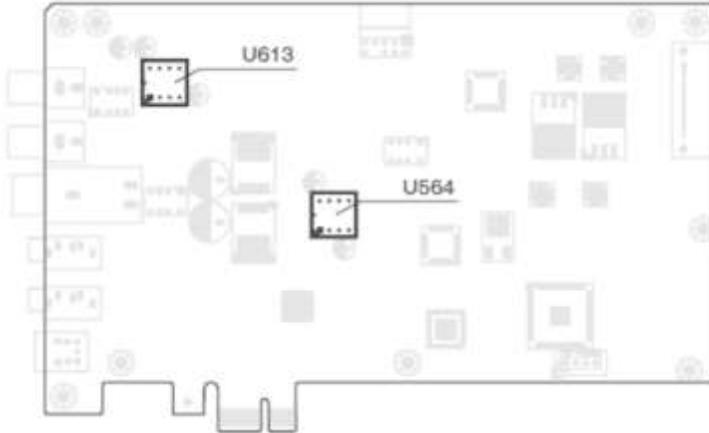


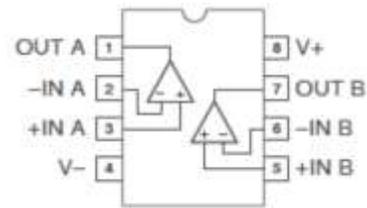
OP-Amp Rolling Guide

OP-Amp Rolling

A great feature of the EVGA NU Audio Pro Cards is the capability for future upgrades and modification by swapping op-amps, sometimes referred to as 'OP-Amp Rolling'. For this we have provided two sockets on the NU Audio Pro Card, U613 and U564, as shown on the plain view:



The pre-installed op-amps, AD8056 (U613) and LT1469 (U564), were selected, first and foremost, to create a lush, vivid and immersive soundscape for gaming and music. Both of these op-amps have the standard 8 pin dual op-amp layout:



However, the AD8056 op-amp is a very specialized IC and has a maximum operating voltage of 6V (symmetrical +6V, -6V), which means it can only operate in the 5V environment of the Line amplifier, which is socket U613.



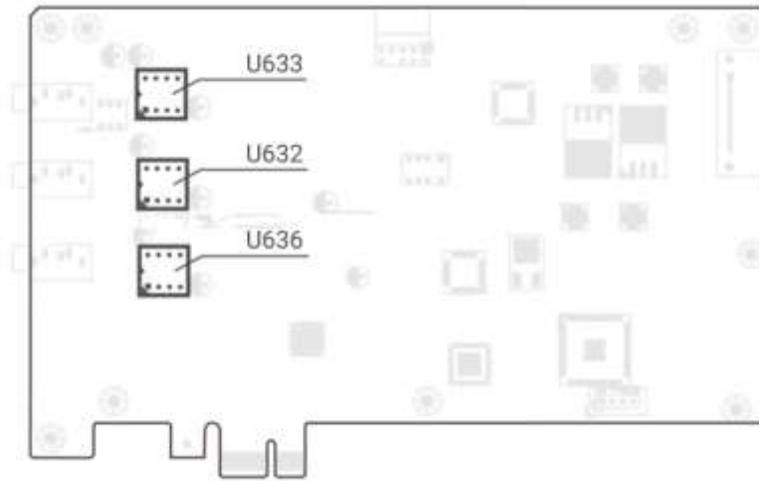
PLACING AD8056 in U564 WILL DAMAGE THE OP-AMP AND POSSIBLY OTHER CONNECTED ELECTRONICS - INCLUDING YOUR HEADPHONES OR Speakers!

Socket voltage specification

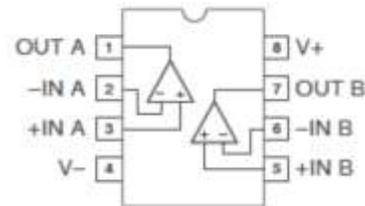
- U613: +5V, -5V symmetrical, three stage regulated
- U564: +14.5V, -14.5V symmetrical, two stage regulated

Remember, the AD8056 op-amp will be damaged or destroyed if it is placed in the U564 socket!

The NU Audio Pro Surround Card also has the capability for future upgrades and modification through OP-Amp Rolling. This audio card features three sockets, U633, U632, and U636, as shown on the plain view:



The pre-installed op-amps, OP275 (U633, U632, and U636), were selected to create a lush, vivid and immersive soundscape for gaming and music. Each of these op-amps have the standard 8 pin dual op-amp layout:

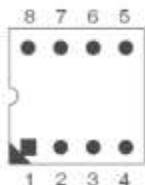


However, the OP275 op-amp is a very specialized IC and has a maximum operating voltage of 22V (symmetrical +22V, -22V), and a minimum operating range of 4.5V (symmetrical +4.5V, -4.5V) which means it can operate in both the 5V environment of the Line amplifier and 14.5V environment of the Headphone amplifier of the NU Audio Pro Card, which is socket U564.



PLACING AN INCOMPATIBLE OP-AMP in U613, U632, and/or U636 CAN DAMAGE THE OP-AMP AND POSSIBLY OTHER CONNECTED ELECTRONICS - INCLUDING YOUR SPEAKERS OR SUBWOOFER!

Furthermore, when experimenting with ANY op-amp replacement, extreme care must be taken to ensure the IC is inserted in the correct orientation, and that all the pins are inserted properly. If care is not taken, it is easy to bend a pin when inserting the IC.



Pin assignment			
1	Out A	8	Positive Input Voltage
2	-IN A	7	Out B
3	+IN A	6	-IN B
4	Negative Input Voltage	5	+IN B

Socket voltage specification

- U613: +5V, -5V symmetrical, three stage regulated
- U632: +5V, -5V symmetrical, three stage regulated
- U636: +5V, -5V symmetrical, three stage regulated

TIP: Although sockets are provided for 'OP-Amp Rolling' not all op-amps will work satisfactorily or provide better audio quality. EVGA and Audio Note will endeavor to help wherever possible, but we cannot guarantee against poor performance or damage caused by swapping op-amps.