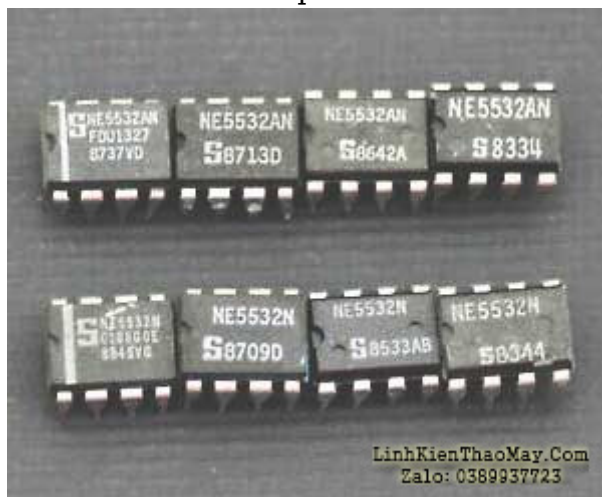


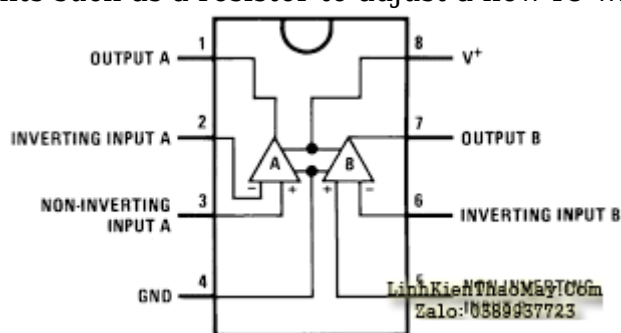
Various types and advantages of each offered by each component manufacturer to captivate the hearts of audio lovers. This is often done by audio hobbyists. Fiddling with and experimenting mutually components to get the best sound possible.

In the market, there are many choices of components, from the cheap to very expensive. The endpoint is a personal taste that determines the choice. Unfortunately, more and more standard components have decreased in quality. Instead of improving but getting worse. Finding quality components is difficult and expensive.



Prioritize replacing active components that directly process audio signals such as ICs and transistors. Because the upgrade effect is likely to sound more real. After that, it is just a passive component that does not directly process signals such as power supply, tin, resistor, condensator, transformer, and others. The effect on sound repairs is very small or even the difference is not heard directly.

Do not let you get stuck to replace passive components with prices that are so expensive while the main IC that processes electronic signals is ignored. Don't also get caught up in suggestions. The easiest upgrade is to replace the IC op-amp in the preamp. Because just pull the IC from the socket and install a new IC. Sometimes it needs to be accompanied by changing a few components such as a resistor to adjust a new IC with an existing system.



Not all op-amps have super specifications such as very high slew rates, very wide bandwidth, very low noise, very low THD, and others sound good. For the record, only 2-3V / μ s slew rate is needed for the op-amp so that it can cover all sound frequencies.

It's just that because the sound power is mainly music that is different, it takes at least 3 times the standard.

After all, replacing the standard op-amps like 741, 4558 and LM324 with the better ones, even the "super" ones, actually made a messy sound. Because this type of op-amp requires a special power supply and can be very unstable. For example, a good standard op-amp like NE5532 requires a decoupled supply (usually ceramic or mica) of no more than 2 inches (a super op-amp is a closer). Unlike 4558 which can run quite smoothly without decoupled. So

if you want to replace the IC, you should first look at the PCB design, don't just replace it. Here are some IC op-amps quoted from several sources.

LM833 (dual) = Flat with a pretty good musical dynamics.

4558D (dual) = good but boomy bass, vocals hoarse, treble blunt.

NE5532 (dual) = Flat with good vocals on the ears and clear treble. Details are very good, but for some people, the bass feels less.

TL072 (dual) = Quite noisy, but with good dynamics.

LF353 (dual) = A lot of sound at the middle frequency, but quite natural and detailed. Treble and bass feel soft.

CA3140 (single) = Special amps with MOSFET input. Vocal and treble sounds are pretty good in the ears. Unfortunately, the dual version (CA3240) is only produced for the industrial and military circles.

LM324 (quad) = Noise is quite audible. Poor detail and blunt treble.

OPA2134 (dual) = the favorite op-amp for audiophiles with excellent staging and depth of music, but with less detail and musical dynamics.

AD823 (dual) = Very detailed and very natural, great dynamics, with very clear bass and treble.

And some other types of op-amp ic that you can try with the advantages and disadvantages.

CA3080 = Dual Transconductance (LM3080). (8 pins)

CA3130T = Single op-amp MOSFET uncompensated. (8 pin)

CA3130E = Single op-amp MOSFET/bipolar/compensated. (8 pin)

CA3140E = MOSFET LM741 pin compatible. (8 pin)

CA3160E = Single op-amp. (8 pin)

CA3240E-1 = Dual op-amp. (14 pin)

CA5130E = Single op-amp. (8 pin)

CA5160E = Single op-amp. (8 pin)

ICL7611D = Single low-power op-amp. (8 pin)

ICL7641E = Quad low-power op-amp. (14 pin)

ICL7642E = Quad low-power op-amp. (14 pin)

ICL7650S = Chopper stabilised op-amp. (14 pin)

ICL7652C = Chopper stabilised op-amp. (14 pin)

LF347N = Quad high-performance op-amp. (14 pin)

LF351N = Single high-performance op-amp. (8 pin)

LF353N = Dual high-performance op-amp. (8 pin)

LF355N = Single high-performance op-amp. (8 pin)

LM10CLN = Dual Low-voltage compensated with reference. (8 pin)

LM301N = Single general-purpose op-amp. (8 pin)

LM301AN = General purpose uncompensated. (8 pin)

LM308N = Single low-drift op-amp. (8 pin)

LM324N = Quad low-power compensated. (8 pin)

LM358N = Dual low-power compensated. (8 pin)

LM614 = Quad Operational Amplifier and Adjustable Reference. (16 pin)

LM741 = Single General purpose uncompensated. (8 pin)

LM833N = Dual low-noise Hi-Fi Audio compensated. (8 pin)

LM1360N = Dual transconductance. (16 pin)

LM1458N = Dual general-purpose compensated. (8 pin)

LM3900N = Norton Quad Current Differencing. (14 pin)

LM627CN = Precision low-noise. (8 pin)

NE531N = Single high-performance. (8 pin)

NE5532 = Dual low-noise. (8 pin)

NE5534P = Single Low-noise high-output. (8 pin)

NE5539 = Single wide-band. (14 pin)

OP27 = Low-noise precision (8 pin)

RC4558P = Dual high-performance. (8 pin)

TL061CP = Single low-power. (8 pin)

TL062CP = Dual low-power. (8 pin)

TL064CN = Quad low-power. (14 pin)

TL071CP = Single low-noise. (8 pin)

TL072CP = Dual low-noise. (8 pin)

TL074CN = Quad low-noise. (14 pin)

TL081CP = Single high-performance. (8 pin)

TL082CP = Dual high-performance. (8 pin)

TL084CN = Quad high-performance. (14 pin)

TLC251 = Low-voltage Power CMOS. (8 pin)

UA4136 = GP low-noise. (14 pin)

741 = Single General purpose uncompensated. (8 pin)

741S = Single High-speed. (8 pin)

747 = Dual general-purpose. (8 pin)

748 = Single general-purpose. (8 pin)

LM759 = Power op-amp. (4 pin)

Of all the ic above there are some that have the same pinout. There are also a few different ones. So please check the datasheet before you install it. So that the IC op-amp can work according to its function. Maybe some of them are rare and difficult to get. You can search for other types of IC that have the same character.

Các bài viết tương tự:

1. [200W HiFi Discrete UcD Class-D Amplifier](#)
2. [Cách điểm test để kiểm tra trước khi chạy Class-D Amplifier D2K Pro Dual Feedback](#)
3. [DIY Class T Power Amplifier Tripath TA2022](#)
4. [DIY Class-D Amplifier Fullbridge D2K 2500W RMS - Bản hoàn thiện](#)
5. [High Power Class-D Amplifier D4K5](#)
6. [Mạch bộ tiền khuếch đại micro radio 11 mét \(CB\)](#)
7. [Mạch thích ứng micrô điện](#)
8. [Power Amplifier Class-AB AX-BLAME 90VDC](#)
9. [Power Amplifier Class-D UcD SuperLite v2 Final](#)
10. [Simple tone control 2 transistor treble, bass, volume](#)
11. [Tạo âm ly âm thanh với TDA2030, TDA2040 hoặc TDA2050](#)
12. [TDA7294 subwoofer amplifier PCB layout](#)