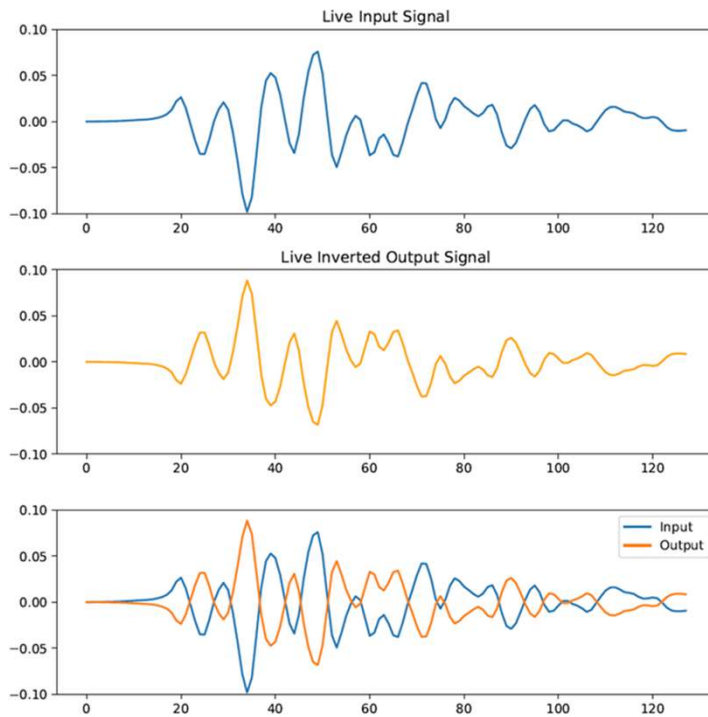


DEVCOM SOLDIER CENTER AUDIO NOISE INVERTER



Component descriptions:

- The Raspberry Pi 5 is an excellent choice for an active noise cancelling (ANC) circuit because it combines a significant increase in raw processing power with a new dedicated I/O architecture that minimizes the delays critical for real-time audio.
- The HiFiBerry DAC2 ADC Pro offers Zero-Latency Offloading: The DSP board intercepts the digital data stream directly on the hardware. This allows you to run complex filters independent of the Raspberry Pi's CPU, reducing round-trip latency to under 1ms.
- The Saramonic SR-XM1 microphone is often favored for active noise cancellation (ANC) or general noise reduction projects due to its combination of high sensitivity and an omnidirectional pickup pattern, which allows it to capture a comprehensive "noise profile" of an environment.
- The TSA3111B amplifier is an excellent choice for active noise cancellation (ANC) systems, particularly in DIY and specialized hardware applications, due to its Class D architecture, integrated Bluetooth capabilities, and high efficiency.
- Visaton FR10WP-4 Outdoor 4" Full-Range speaker: Each 4 Ohm speaker has a rated power of 20 Watts (RMS) and a maximum power of 30 Watts.
- The Anker Prime 27,650mAh (250W) power bank will power a Raspberry Pi 5 and TSA3111B AMP setup for approximately 7 to 15 hours, depending on how aggressively the active noise cancelling (ANC) system is working.

