

APUiC Install Guide

ANALOG LOUDSPEAKER PROTECTION DEVICES

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An APUi is a single channel protection unit consisting of a self-resetting overload protection circuit to be used with low impedance Amina invisible loudspeakers. When positioned between the amplifier output and loudspeaker, it can provide protection from accidental overdriving for the lifetime of the Amina invisible loudspeaker. Please note that there are specific APUi variants designed to work with each Amina Invisible Loudspeaker product. Please consult the table, below, to ensure you are using the correct APUi variant for the speaker being installed.

APUi Variation	Compatible Speaker
APUi10 (legacy)	iQ1 (legacy)
APUi30C	Mobius3i, Edge3i, Mobius Duali (x2)
APUi50C_2	Mobius5i, Mobius5i/S200, Edge5i
APUi70C_2	Mobius7i, Edge7i

APUi is designed to be installed bi-directionally, meaning that there is no specific input or output. Either end can be connected to the amplifier output or the loudspeaker cable.

APUi comes with 300mm un-terminated cable on each end, allowing connection directly to a single amplifier output channel, or spliced into the loudspeaker cable and dressed back within a standard cable management system.

It is crucial that APUi should be positioned close to the amplifier and be easily accessible. It should never be positioned in the wall/ceiling where it cannot be accessed easily.

APUi's must not be used as a volume limiter or for gain reduction. Amplifiers must be appropriately specified and / or the channel power output must be properly configured to the speaker it is driving. It is not good practice for the system configuration to allow multiple trip events - this will result in a poor user experience and can degrade the thermal fuse over time.

When an APUi activates, the impedance on that channel increases dramatically, causing a 20+ dB reduction in SPL and introducing high levels of distortion. Do not under any circumstances attempt to compensate for this volume drop by increasing volume.

APUi's are passive, analog devices which provide effective protection in the vast majority of cases. Being an analog device there is an almost instantaneous opportunity for severely excess power to pass through the APUi before the thermal fuse has a chance to heat up and activate, meaning system events like an amplifier going in to high frequency oscillation or any scenarios where a sudden burst of extreme power is sent to the speaker may escape the APUi momentarily. For this reason, Amina strongly recommends setting a low to moderate start-up volume.

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