
User Guide

V1.1 May 2011

APU2

High Pass Filter Unit



APU2

The APU2 has been designed specifically to enhance the reliability of your AIWX series loudspeaker. It features a high pass filter and a current sensing fuse to protect the loudspeaker from being over-driven and potentially damaged. If the APU2 senses excessive drive current from your amplifier, it will automatically reduce the sound level from the speaker until the amplifier volume is reduced to a safe level.

Please read this document carefully before operating your APU2.



IMPORTANT:

- Ensure that the APU2 is set for the correct model of AIWX series loudspeaker. Failure to do so may result in speaker damage. See the label on the underside of the APU2 for model designation.
 - NEVER connect more than one AIWX loudspeaker to each output channel.
 - Be sure that all connections are made in accordance with this guide.
 - It is not recommended you use amplifiers with power outputs far greater than the power rating of the AIWX loudspeaker.
 - Do not intentionally cause the APU2 to automatically protect the loudspeakers by deliberately over-driving them.
 - If your APU2 automatically reduces audio volume from the loudspeaker frequently, it may suggest the amplifier is too powerful or the layer of plaster applied to the AIWX series loudspeaker is too thick. In either case please consult with your dealer or Amina Technologies Ltd.
 - Install this product in a cool, dry and clean place - away from direct sunlight, heat sources, vibration, dust and moisture.
 - Do not expose this unit to sudden temperature changes or locate it in an environment with high humidity. This is to prevent condensation forming inside which may cause damage to the unit and possibly other devices connected to it.
 - Do not clean this unit with chemical solvents as this may damage the finish. Use a clean, dry or damp cloth.
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APU2: Positioning

- The APU2 is designed to be free-standing or permanently fixed to a suitable structure using the two mounting holes.
- The APU2 does not require ventilation and therefore its installation position is not critical. However, the product should ALWAYS be installed in a dry environment that will not exceed 35 degrees Centigrade (95 degrees Fahrenheit).
- Do not place equipment on top of the APU2.
- Where possible, do not position the APU2 adjacent to mains power cables.

APU2: Internal jumper settings

The APU2 will be configured for the model of AIWX loudspeaker it has been supplied with. Please read the following if these settings need to be changed.

- The APU2 is a low voltage, passive device, however ALWAYS disconnect it from all speakers and amplifiers before adjusting the internal jumpers (ensure all equipment is turned off at this point).
 - The circuit board inside the APU2 is composed of two separate audio channels. Each channel features three sets of pins and one connecting jumper.
 - There is an area on the product serial number label where the individual channel designation can be marked once the jumpers have been set.
 - Set the jumpers as follows depending on the speaker model being connected:
 - AIW1X / AIW2X: set jumper to J3
 - AIW3X / AIW4X: set jumper to J2
 - AIW5X: set jumper to J1
- (See next page for internal diagram)



WARNING:

No more than one jumper should be used per bank of 3 pins

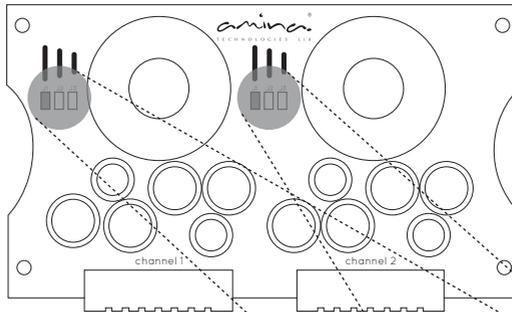
APU2: Setting the internal jumpers

Inside the APU2

To change the jumpers, the APU2 housing must be opened by carefully unscrewing the four screws on the underside of the unit. These are located on the base of the APU2.

The jumpers (J1, J2 and J3) for each channel are positioned as indicated in the below diagram:

The PCB



Important

- Ensure that the jumpers are fully pushed down onto the pins.
- ONLY remove and replace the housing fixing screws by hand. Always use the correct tool and DO NOT overtighten.
- The jumper setting for each channel, as set by the factory, is shown on the label located on the underside of the APU2. If the jumpers are changed, please clean the label with isopropyl alcohol and mark the new setting with a ball-point pen.

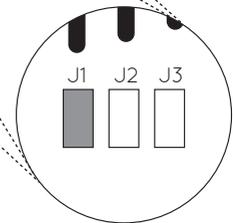
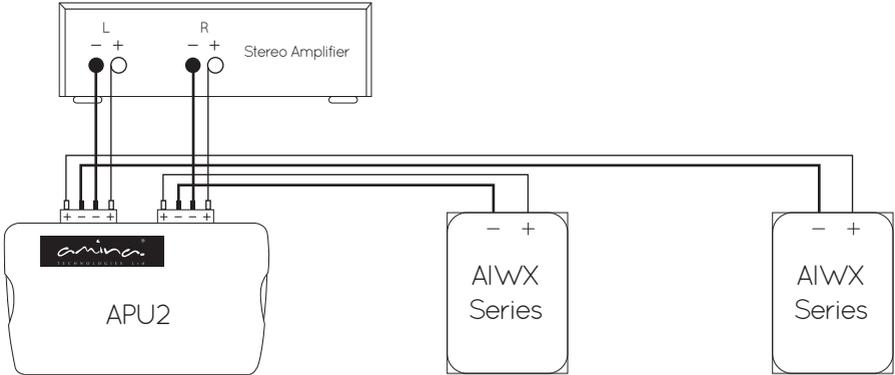


Diagram shows the jumper settings for the AIW5X loudspeaker (J1).

APU2: Connecting

APU2 wiring schematic



Note:

Red levers on the Springcon® plugs are used for the "+" loudspeaker connections.

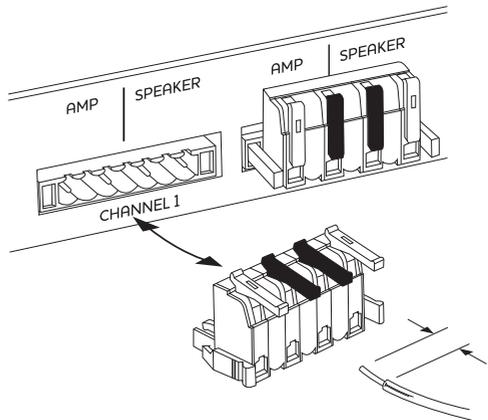
Black levers on the Springcon® plugs are used for the "-" loudspeaker connections.

Springcon® plugs connection

Note:

Ensure the cables are securely clamped when the Springcon® levers are closed.

To remove the plugs from the connecting header squeeze the two clips on either side to release.



Strip cable back by 6 - 8mm
(1/4" - 5/16")

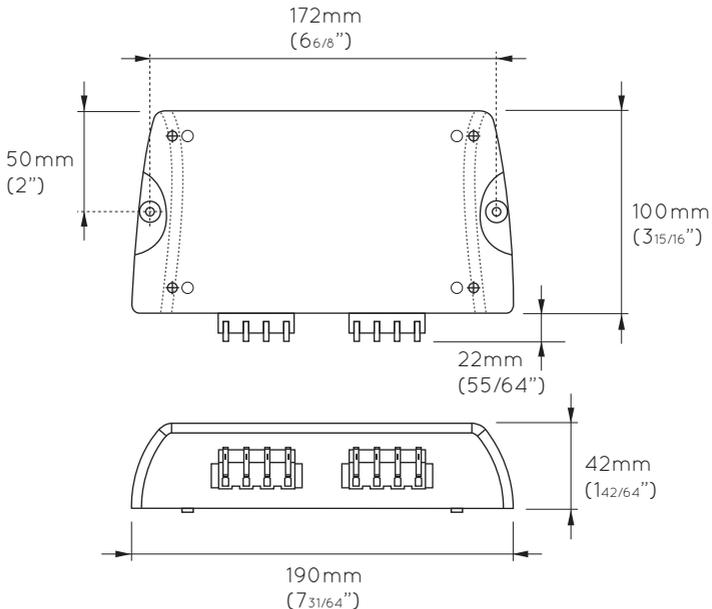


WARNING: Always switch your amplifier off whilst connecting / disconnecting speakers

APU2: Specifications

Model Number	APU2
Dimensions	190 x 100 x 42mm (7 ¹ / ₂ x 4 x 1 ⁵ / ₈ "
Weight	0.5kg (1.1lbs)
Filter type	Passive 3rd order high pass, 20dB/octave slope, -3dB at approx. 70Hz with AIW _X connected
Fuse protection	Self-resetting, current sensing type. Fuse threshold set via internal jumpers
Compatibility	Suitable for use with Amina AIW1X, AIW2X, AIW3X, AIW4X and AIW5X only
Number of channels	2
Connection type	1x Springcon® 4 pole connector per channel (supplied). Connector carries input and output for each channel
Maintenance requirements	Protection fuses can be set by the installer if necessary. Repeated tripping of fuses may require fuse replacement by the manufacturer to ensure optimal speaker performance

APU2: Dimensions



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