

User Manual

iA240X / iA360X Power amplifier



Safety instructions

When using this electronic device, basic precautions should always be taken, including the following:

- 1 Read all instructions before using the product.
- 2 Do not use this product near water (e.g., near a bathtub, washbowl, kitchen sink, in a wet basement or near a swimming pool etc).
- 3 Use this device when you are sure that amplifier has a stable base and it is fixed securely.
- 4 This product, in combination with loudspeakers may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult with otorhinolaryngologists.
- 5 The product should be located away from heat sources such as radiators, heat vents, or other devices that produce heat.
- 6 The product should be connected to a power supply that is described in the operating instructions or are marked on the product.
- 7 The power supply should be undamaged and never share an outlet or extension cord with other devices. Never leave device plugged into the outlet when it is not being used for a long period of time.
- 8 Care should be taken that objects do not fall into liquids and liquids would not be spilled on the device.
- 9 The product should be serviced by qualified service personnel if:
 - The power supply or the plug has been damaged.
 - Objects have fallen into or liquid has been spilled on the product.
 - The product has been exposed to rain.
 - The product has been dropped or the enclosure damaged.
- 10 There are some areas with high voltage inside, to reduce the risk of electric shock do not remove cover of the microphone receiver or power supply. The cover should be removed by the qualified personnel only.


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|  <p>CAUTION</p> <p>RISK OF ELECTRIC SHOCK DO NOT OPEN</p> | <p>To reduce the risk of electric shock, do not remove screws. No user-serviceable parts inside. Refer servicing to qualified service personnel. To reduce the risk of fire, electric shock or product damage, do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.</p> |
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Before you start

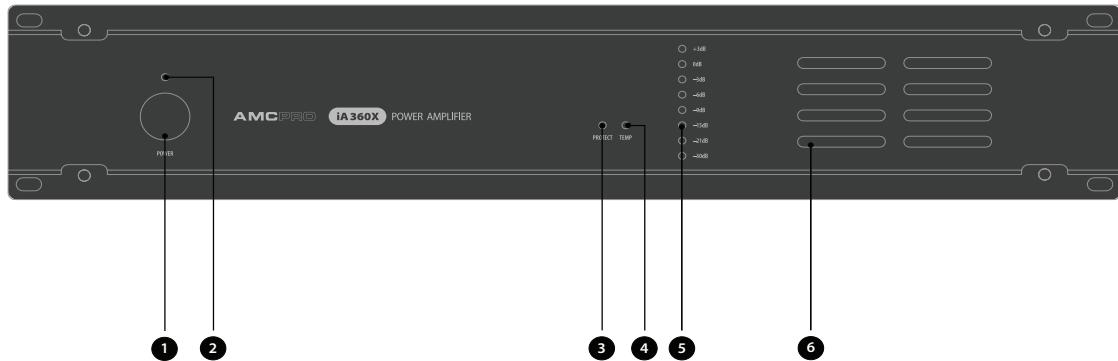
iA is a group of 100 V amplifiers with different output power configuration for professional contractor market. Fan powered cooling system, rack mount. iA amplifiers are designed to work under hard conditions and required minimum maintenance after installation. Used in a medium and large public address or voice evacuation systems.

FEATURES

- Balanced XLR inputs
- HPF filter
- Input gain control
- LINK output
- Ground lift
- Phoenix output connectors
- DC 24V external power supply input
- DC 24V link connector
- Power, signal, protect and temp indicators

Operation

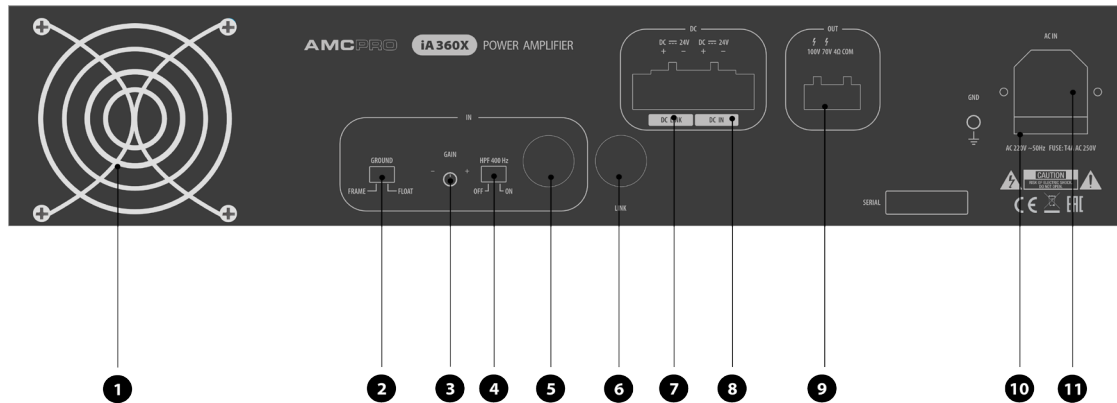
Front Panel



1. Power switch | 2. Power indicator | 3. Protect indicator | 4. Temp indicator | 5. Signal indicator | 6. Cooling vent

Operation

Rear Panel



1. Cooling vent | 2. Ground lift switch | 3. Input gain control | 4. HP filter switch | 5. Balanced XLR input | 6. Link output
7. Link for DC 24V power supply | 8. Input for DC 24V power supply | 9. Amplifiers output | 10. AC fuse holder | 11. Main power connector

Operation

Front panel operation

POWER SWITCH

Use this switch to power on or off the amplifier. The power LED in the front panel lights up if the amplifier is powered on.

POWER INDICATOR

This LED indicates status of the main power. The LED lights up if the amplifier is powered on.

PROTECT INDICATOR

This LED lights up for a few seconds after the iA240X or iA360X is powered on and then turns off if the amplifier is not damaged. It is normal for the protection LED to fade slowly when the amplifier is powered off.

TEMP INDICATOR

This LED indicates if amplifier's temperature reached the critical level. To prevent overheating don't block cooling vents and keep clean amplifier from the dust.

SIGNAL INDICATOR

LED in the front panel indicates audio signal of the amplifier.

COOLING VENTS

Cool air is pulled in through the front panel fan filters and eliminated through the rear panel vents.

Operation

Rear panel operation

GROUND LIFT SWITCH

To eliminate a ground loop, set ground switch to FLOAT position and otherwise to connect a ground to amplifiers chassis.

INPUT GAIN CONTROL

This control allows you to precisely adjust the input level of the signal arriving at the rear-panel input connectors. At their fully counterclockwise position, the signal is attenuated by -80 dB. At their fully clockwise position, the signal is no attenuated. When 0dBu of signal arrives at the input and the input level controls are set to their fully clockwise position (0dBu), the Amplifier delivers full power.

HP FILTER SWITCH

HPF reduce low frequency in audio signal.

COOLING VENTS

Cool air is pulled in through the front panel fan filters and eliminated through the rear panel vents.

BALANCED XLR INPUT

Connect audio signal to electronically balanced XLR. Please note that the iA240X iA360X needs at least 0 dBu to achieve maximum power.

LINK OUTPUT

Connect outgoing audio signal from balanced XLR connectors to additional amplifier. Input and link connectors are connected with each other directly.

LINK FOR DC 24V POWER SUPPLY

This connector is designed to link the DC 24V power to additional amplifier. DC IN and DC LINK connectors are connected with each other directly, inside the amplifier.

INPUT FOR DC 24V POWER SUPPLY

This connector is designed to power up amplifier when the main power is unavailable. Use only 24V power supply or batteries and take attention to polarity during the wiring. If both, AC and DC power are connected, amplifier will use main AC power.

PHOENIX OUTPUT

Use this connector to connect amplifier to the loudspeakers.

AC FUSE HOLDER

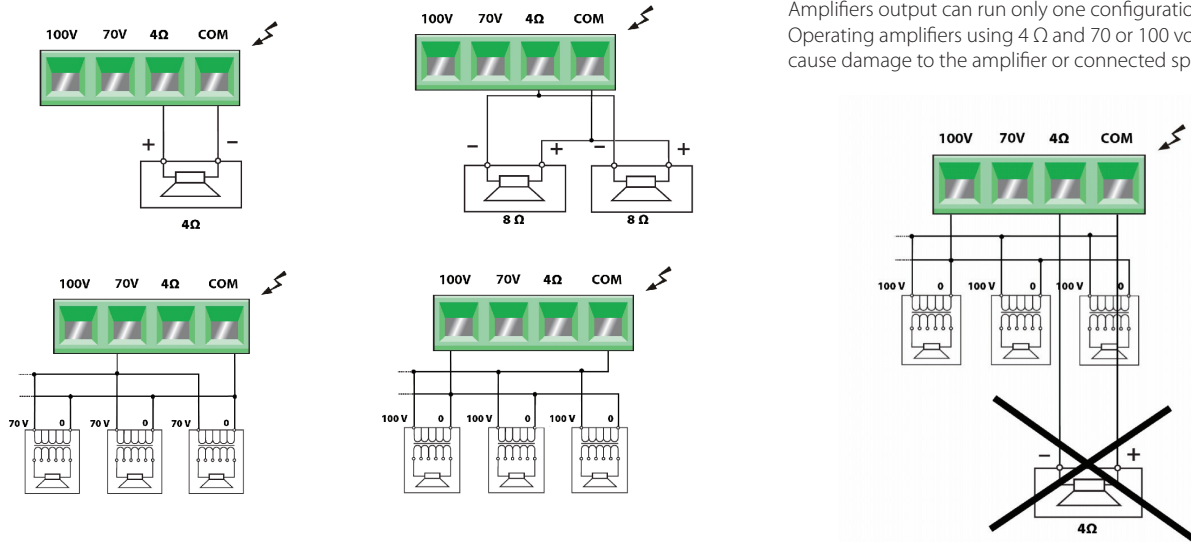
Please use 3,15A, 250V fuse for amplifier iA240X and 4A, 250V fuse for amplifier iA360X

MAIN POWER CONNECTOR

Power connector is designed for main powers connecting to amplifier. This connector is combined with fuse holder.

Operation

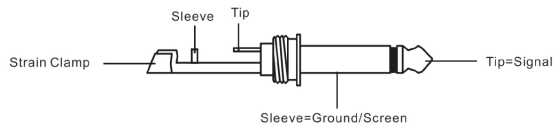
Output terminal



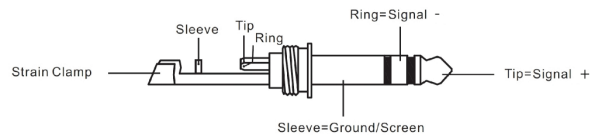
Amplifiers output can run only one configuration at the same time. Operating amplifiers using 4 Ω and 70 or 100 volt concurrently may cause damage to the amplifier or connected speakers.

Controls and connections

Connectors



TS connector

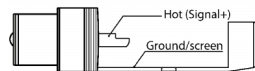


TRS connector



XLR male connector

RCA connector



XLR female connector

Cable wiring examples



Cable to balanced input from balanced output. TRS connectors.



Cable to unbalanced input from balanced output. TRS and TS connectors.



Cable to balanced input from unbalanced output. TS and TRS connectors.



Cable to unbalanced input from unbalanced output. TS connectors.

Controls and connections



Cable to balanced input from balanced output. XLR connectors.



Cable to unbalanced input from balanced output. XLR and TS connectors.



Cable to balanced input from unbalanced output. TS and XLR connectors.



Cable to balanced input from balanced output. TRS and XLR connectors.



RCA cable.



Cable to unbalanced input from RCA output. RCA and TS connectors.



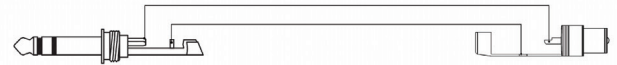
Cable to balanced input from RCA output. RCA and XLR connectors.



Cable to balanced input from RCA output. RCA and TRS connectors.



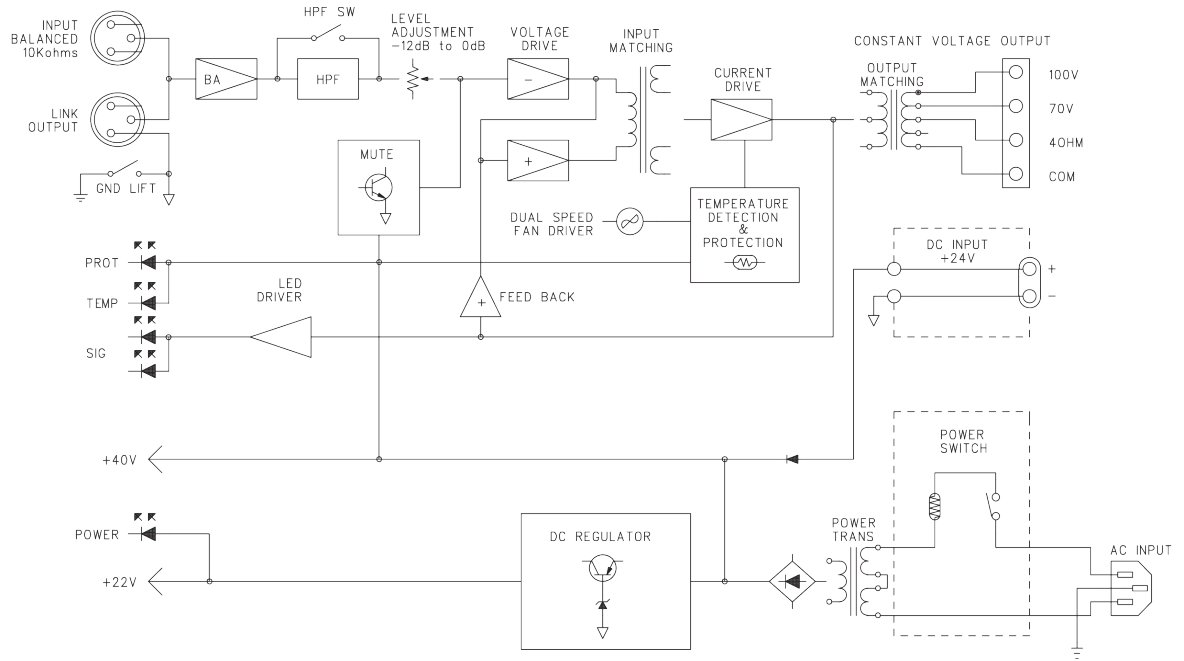
Cable to RCA input from balanced output. RCA and XLR connectors.



Cable to RCA input from balanced output. RCA and TRS connectors.

Controls and connections

Block diagram



General Specifications

iA240X

iA360X

| | | |
|----------------------------|---------------------------------|-------|
| Power supply | AC 220/110 V 50/60 Hz or DC 24V | |
| Output power | 240 W | 360 W |
| AC power consumption | 500 W | 700 W |
| Total harmonic distortions | < 1 % | |
| Input sensitivity | 0 dBu | |
| S/N ratio | 90 dB | |
| Frequency response | 60 Hz – 20 kHz | |
| HP filter | 3dB at 100Hz | |

| | | |
|------------|--|-------|
| Protection | Short circuit, thermal, current limit, DC offset, current inrush, RF protection, Turn on/Turn off muting | |
| Cooling | Fan forced air | |
| Indicators | Power, protection, signal, temp | |
| Controls | Power switch, input gain, ground lift, HP filter | |
| Output | 100 V, 70 V, 4 Ω | |
| Weight | 17,5 kg | 19 kg |
| Dimensions | 88 mm (H) x 482 mm (W) x 377 mm (D) | |

The specifications are correct at the time of printing this manual. For improvement purposes, all specifications for this unit, including design and appearance, are subject to change without prior notice.