



## **SPA2060, SPA2120, SPA2240 amplifier**

### **User Manual**

User manual, **SPA-10UMS01-V01R03**

Delivering Your Message

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## 2. Welcome:



Thank you for choosing ATEİS SPA amplifiers. We (at ATEİS) hope you will enjoy using this exciting piece of technology as much as we enjoy developing and building it.

This manual is intended to provide users the necessary understanding to safely uses SPA amplifiers as well as guide users through all configuration procedures.

This manual can be updated at any time without prior notice in order to keep this manual up to date.

In case of errors in this manual or not clear process description, feel free to submit us mistakes, suggestions or questions by sending an [email](#).

This document intends to be a complete manual and ATEİS hopes that this Help file manual will provide you all information or answers needed. However if you have any questions, feel free to contact us.

### Ateis Presentation

With more than twenty years of experience, ATEİS has quickly established itself as a leading manufacturer of Public Address, Voice Alarm systems and counter intercoms. The constant growth of market share in Europe provides confirmation of the quality of ATEİS's commercial and technical approach.

## **Products:**

The company now offers a full range of sound equipment: microphones, preamplifiers, digital processors, digital audio matrixes, loud-speaker monitoring systems, amplifiers, etc. ATEİS designs and manufactures leading products in the voice alarm systems market which have been certified EN60849 compliant by the TÜV.

## **Development:**

Thanks to a development team that includes thirty engineers, and to constant investment, we are able to respond rapidly to the demands of our various markets with specific solutions and cutting edge technology. We have distributors in more than fifteen countries in Europe and the Middle East, with whom we have carried out major projects. In choosing ATEİS, you are guaranteed a trustworthy partner that can be counted on for the long term.

## **ATEİS Field:**

ATEİS's audio systems have been installed in the following markets:

- Railways
- Subways
- Airports
- High raise buildings
- Hotels
- Restaurants
- Shopping malls
- Theme parks
- Places of worship
- Stadia.
- Museums.
- Industrial buildings
- Industrial plants
- Commercial buildings

### 3. EC Declaration of conformity

#### 3.1. DIVA8

Documentation CE marking. This needs to be added to each commercial/technical document



###

#### EC DECLARATION OF CONFORMITY

Ateis, as manufacturer having sole responsibility, hereby declares that our delivered version of the following product complies with the applicable directives. In case of alterations of the product, not agreed upon by Ateis, this declaration is no longer valid.

EN54-16:2008

Voice Alarm Control and Indicating Equipment (VACIE)

Product: **DIVA8 System VACIE**

#### **Certified options:**

Audible warning

Manual reset of the voice alarm condition

Voice alarm condition output

Indication of faults related to the transmission path of the CIE

Indication of faults related to voice alarm zones

Voice alarm manual control

Interface to external control device(s)

Emergency microphones

Redundant amplifiers

#### **Ancillary functions:**

Commercial paging

Background music distribution

#### **Certification Body:**

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### 3.2. IDA8

Documentation CE marking. This needs to be added to each commercial/technical document



###

#### EC DECLARATION OF CONFORMITY

Ateis, as manufacturer having sole responsibility, hereby declares that our delivered version of the following product complies with the applicable directives. In case of alterations of the product, not agreed upon by Ateis, this declaration is no longer valid.

EN54-16:2008

Voice Alarm Control and Indicating Equipment (VACIE)

Product: **IDA8 System VACIE**

#### **Certified options:**

- Audible warning
- Manual reset of the voice alarm condition
- Voice alarm condition output
- Indication of faults related to the transmission path of the CIE
- Indication of faults related to voice alarm zones
- Voice alarm manual control
- Interface to external control device(s)
- Emergency microphones
- Redundant amplifiers

#### **Ancillary functions:**

- Commercial paging
- Background music distribution
- Audio and data networking

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## 4. Product Description:

The SPA (Security Power Amplifier) is designed for perfect integration into the SINAPS system, but thanks to its flexibility, it can also be used for any Public Address application.

The SPA amplifiers were specifically developed to meet the requirements of EN 60849 for safety installations. Each amplifier module is fitted with its own 220 VAC/24 VDC power supply for increased system reliability. To avoid handling errors, the volume output is set using the potentiometer located at the back of the apparatus. In addition to standard protection via fuses, SPA amplifiers also have electronic and thermal protection to protect them from all potential hazards.

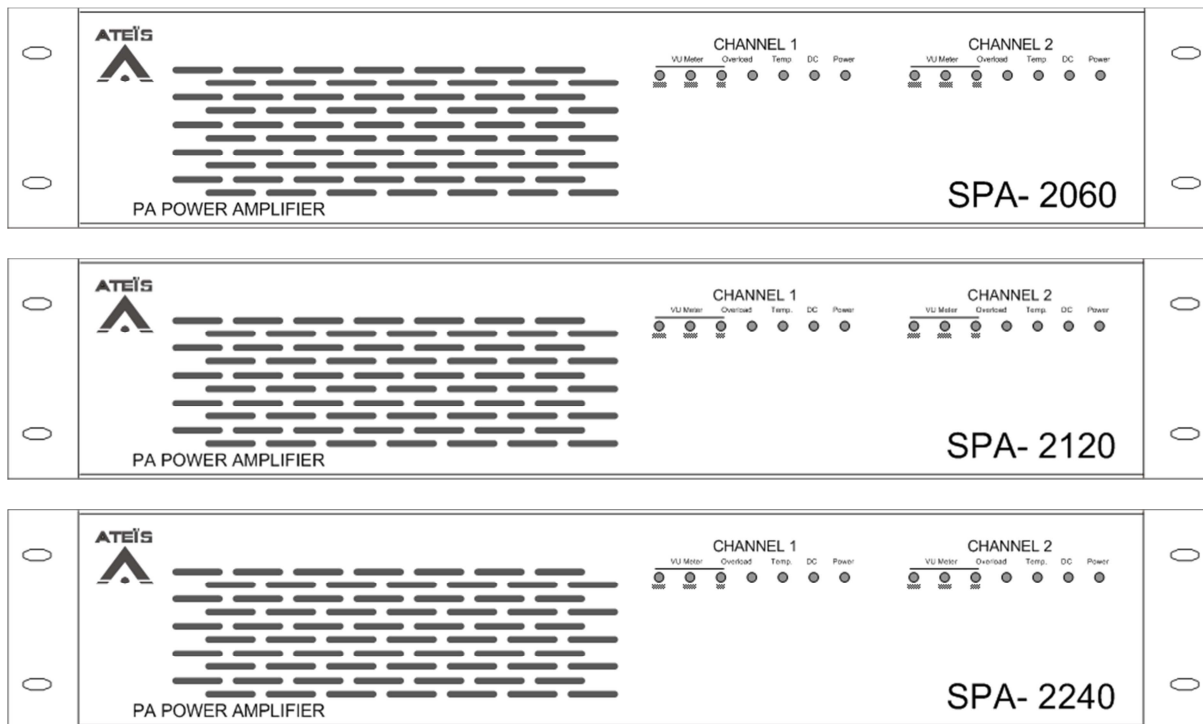
A fan provides forced cooling for the final power shelves and internal parts of the apparatus. It starts up automatically when the temperature reaches a certain threshold, and stops when it returns to normal values.

Four LEDs display the status of each amplifier: AC or DC power supply, Line Overload and Temperature overload. Furthermore, a three LEDs Vu-Meter indicates the presence and level of audio signal.

A surveillance circuit continuously monitors the temperature and the presence of AC and DC power supplies for both amplifiers. In case of a problem, the overload LEDs will be switched ON and the Fault relay will be activated.

SPA series can be ordered with optional 115V power supply. Please contact your local dealer or your regional Ateis branch office.

## 5. SPA Series Front Panel Features:



For each amplifier channel, there are indicators LEDs in order to indicate the amplifier status.

### VU Meter:

The VU-meter is composed of three LEDs that represent three different level thresholds: -40dB, -20dB and 0dB. When the input signal reaches those thresholds, the corresponding LED will blink.

### Overload:

The overload LED will blink as soon as the output power exceeds the nominal value. If the Overload LED is blinking, check that the output load is well connected and still in good condition as well as checking the level of the input signal.

**Temp.:**

If the device internal temperature exceeds 95 degrees C, the TEMP LED will light and the pre-amp will stop working until the temperature falls below 95 degrees C. The pre-amp will come back to a working state automatically. To avoid temperature failure, please insert an external fan to the rack system.

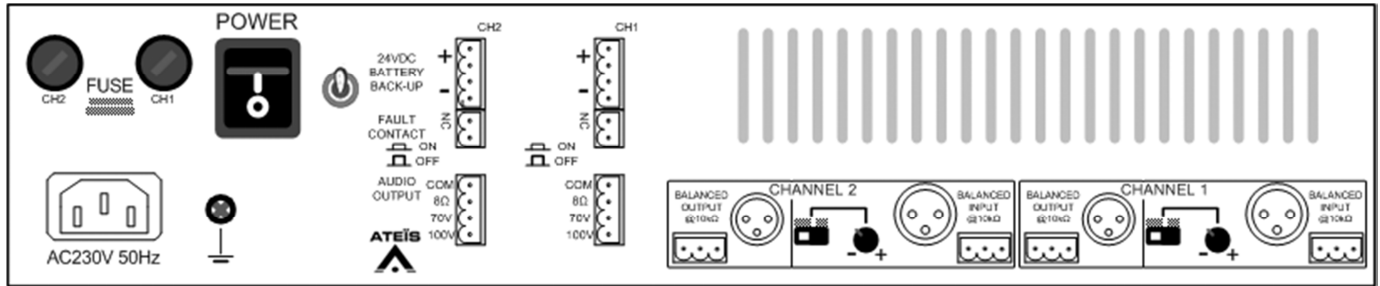
**DC:**

The DC LED indicates that the SPA amplifier is powered by a 24VDC power supply.

**Power:**

The Power LED indicates the ON/OFF status of the SPA amplifier.

## 6. SPA Series Rear Panel Features:

**AC Power Inlet:**

The 3 pin IEC connector is located on the left of the amplifier's rear panel. It accepts a standard mains power lead fitted with an IEC connector.

**DC Fuse Receptacles:**

Two DC fuse receptacles are located on the left of the amplifier's rear panel. To access each fuse, unscrew the cap with a screwdriver. For 115 V operations please use T2.5A fuses. For 230 V operations please use T1.25A fuses.

**Power Switch:**

The power switch is located at the left of the rear panel and is a two position switch. Pushing up the power switch (I is pushed) will power on the device, pushing it down (0 is pushed) will power it off. When the power switch is on the I position, the front panel power LED will be lit.

**Indicator switch:**

The small switch besides the Power switch is added to disable the local indicators on the SPA's front. Disabling the indicators is mandatory to make the total system compliant to the EN54-16.

**Channel 1/2 24VDC battery backup connector:**

The SPA amplifier can be operated with battery backup. Use the channel 1 and channel 2 "24VDC Battery Backup" connector to do so. These connectors are located on the upper part of the channel connectors on the rear panel. This 24VDC power supply can be used where no AC power is available. When in use, the front panel Power LED will be lit as well as the front panel DC LED.

**Fault Contact:**

The fault contact indicates an amplifier fault by an opening contact.

**Channel 1/2 Audio Output:**

For each amplifier channel, there is a dedicated Audio Output connector for connection of either 8 Ohm speakers, 75V speakers or 100V speakers. For the 8 Ohm connection and if you are using more than 1 speaker, please ensure that speakers are wired in a way that the total impedance load is between 8 Ohm and 16 Ohm. The Com point is the – terminal and 8 Ohm, 75V and 100V are the + terminals.

**Channel 1/2 Inputs:**

For each channel, there is an XLR balanced input and a Euro-terminal block balanced input. Each input can be gain adjusted to suit the user's needs. The On/Off gain switch can instantaneously bypass the gain controller and set the channel gain amplifier to maximum.

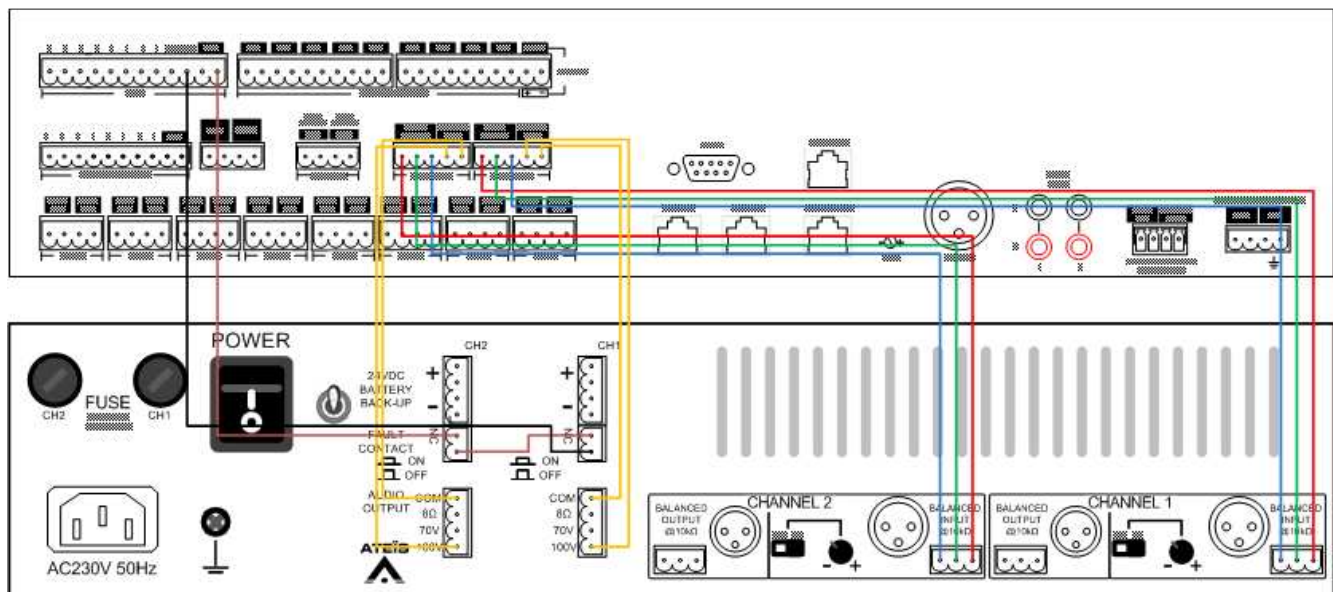
**Channel 1/2 Outputs:**

Each channel outputs a replica of the corresponding balanced audio input signal either on XLR or on Euro-terminal block.

**7. Technical Data Overview:**

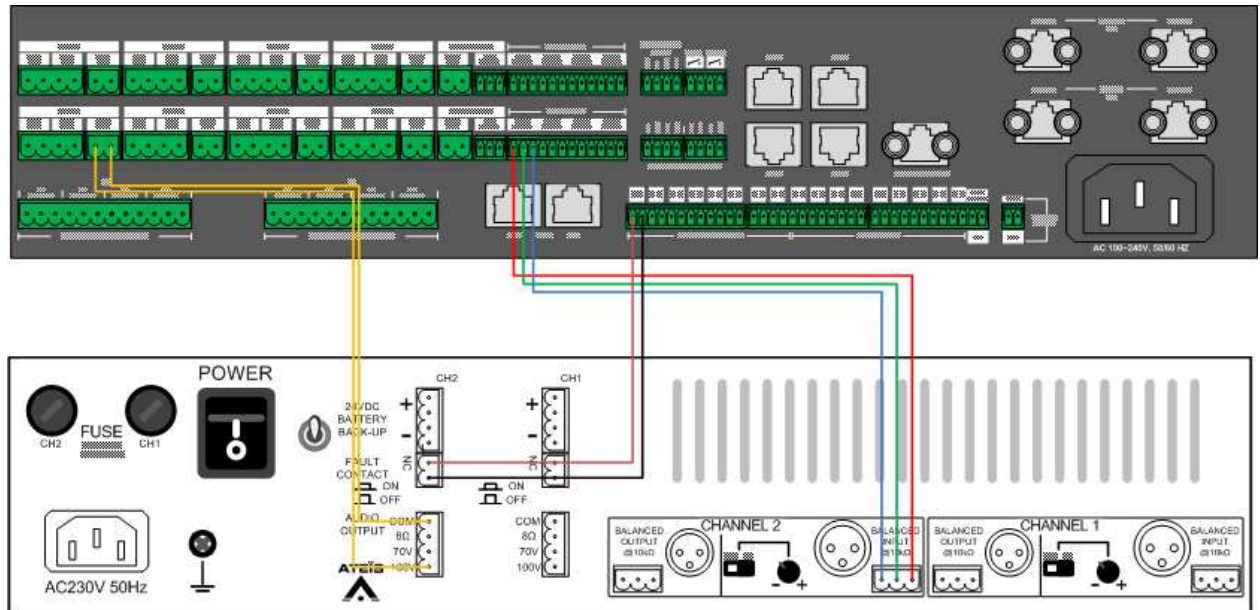
<b>Audio</b>	Frequency response: 40 - 20 000 Hz Distortion at nominal power: < 1% Signal/noise ratio: > 90 dB
<b>Inputs/Outputs</b>	Power output: 100 V Main line input: 770 mV Input impedance: 20 KOhms
<b>Dimensions/Weight</b>	Size SPA2060, SPA2120 (LxHxD): 483 x 88 x 305 mm Size SPA2240 (LxHxD): 483 x 88 x 420 mm Weight: SPA2060 : 10.6 Kg - SPA2120 : 12.3 Kg - SPA2240: 18.5 kg
<b>Power supply</b>	Mains power supply: 230 V +/- 10% 50/60 Hz Continuous external power supply: 21-28 V

		Current consumption with 28 VDC supply (per channel)				
		Standby	1/8 Nominal Power (Audi Messages)	1/4 Nominal Power (50% Message, 50% Siren)	1/2 Nominal Power Siren	Nominal Power
<b>Power Consumption</b>	<b>SPA2060</b>	0.19 A	1.5 A	1.8 A	2.75 A	3.2 A
	<b>SPA2120</b>	0.25 A	2.9 A	3.9 A	5.5 A	6.4 A
	<b>SPA2240</b>	0.30 A	5.47 A	7.5 A	10.4 A	12.3 A
		Current consumption with 230 AC supply (per channel)				
	<b>SPA2060</b>	0.07 A	0.32 A	0.42 A	0.53 A	0.67 A
	<b>SPA2120</b>	0.12 A	0.65 A	0.89 A	1.15 A	1.4 A
	<b>SPA2240</b>	0.28 A	1.25 A	1.65 A	2.20 A	2.85 A

**8. Wiring examples****8.1. DIVA8**



## 8.2. IDA8



### 8.2.1. Safety Declaration



- Do not expose the SPA to extreme temperatures, direct sunlight, humidity, or dust, which could cause fire or electrical shock hazard.
- Keep away water or other liquids from the SPA. Otherwise fire or electrical shock may result.
- In case of using external power supply, connect the SPA only to an 24 VDC outlet of the type stated in this Owner's Manual. Otherwise fire and electrical shock hazard results.
- When disconnecting the power cord from an AC outlet always grab the plug. Never pull the cord. A damaged power cord is a potential risk of fire and electrical shock hazard.
- Avoid touching power plugs with wet hands. Doing so is a potential electrical shock hazard.
- Take care for correct polarity when operating the SPA from a DC power source. Reversed polarity may cause damage to the unit or the batteries.
- Avoid placing heavy objects on power cords. A damaged power cord is a fire and electrical shock hazard.
- Do not cut, scratch, bend, twist, pull, or heat the power cord. A damaged power cord is a fire and electrical shock hazard. Ask your ATEIS dealer for replacement.
- Turn off immediately the unit, remove the power cord from the AC outlet and consult your ATEIS dealer in any of the following circumstances:
  - Smoke, odor, or noise getting out of the unit.
  - Foreign objects or liquids get inside the SPA.
  - The unit has been dropped or the shell is damaged.

- The power cord is damaged.  
If you continue using the SPA, fire and electrical shock may result.
- Do not drop or insert metallic objects or flammable materials into the unit as this may result in fire and electrical shock.
- Do not remove the SPA's cover, as there are exposed parts inside carrying high voltages that may cause an electrical shock. Contact your ATEIS dealer if internal inspection, maintenance, or repair is necessary.
- Do not try to make any modifications to the SPA. This is a potential fire and electrical shock hazard.



**Caution**

This sign indicates a potentially hazardous situation that can result in moderate or minor personal injury and/or property damage.

- To prevent the unit from falling down and causing personal injury and/or property damage, avoid installing or mounting the unit in unstable locations.
- Operate the SPA in an environment with a free-air temperature of between 0 °C and 40 °C (32 °F and 104 °F).
- Do not use benzene, thinner, or chemicals to clean the SPA. Use only a soft, dry cloth.
- If the SPA is moved from a cold place (e.g., overnight in a car) to a warmer environment, condensation may form inside the unit, which may affect performance. Allow the SPA to acclimatize for about one hour before use.

## 9. International sales and service points



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