

Observe all safety information both on the equipment and in this leaflet.

For all other user documentation please scan the QR code or go to

<https://www.zenitel.com/product/transportation-solutions/public-address-voice-alarm/asl-pava-systems>

Search or browse to select the product.

WEIGHT



The VAIA / VAIA-AC weighs approximately 10 kg.

Move and handle with care to avoid strain or impact injuries.



Do not use the handles to lift or carry the unit. The handles are designed for sliding the unit into and out of the equipment rack, and not to support its weight.

Use the underside edges to lift and carry it.

INSTALLATION



The VAIA / VAIA-AC is designed for professional use only and must be installed in a restricted access location and such that there is no operator access to the internals of the VAIA / VAIA-AC or its wiring.

ENVIRONMENTAL



Always ensure that adequate ventilation is provided for the VAIA / VAIA-AC by fitting 1U ventilation panels above and below the equipment and do not block ventilation holes or air flow.



The temperature and humidity ranges shown in the specifications for the VAIA / VAIA-AC must not be exceeded.



The VAIA / VAIA-AC should not be installed at altitudes exceeding 2000 m.



The VAIA / VAIA-AC should not be used in tropical environments.



The VAIA / VAIA-AC must not be installed in an area that is subject to a corrosive atmosphere, excessive moisture or may allow water or other liquids to come into contact with the unit or its external connections.



Objects containing liquids should not be placed upon the VAIA / VAIA-AC.

LED AND LASER COMPONENTS

The VAIA / VAIA-AC is a Class 1 LED product.

The VAIA / VAIA-AC with fibre optic modules is a Class 1 Laser product.

EMC

In the close proximity of some radio frequency transmitters, the signal to noise ratio of the VAIA / VAIA-AC may be reduced. If this occurs, re-location of the VAIA / VAIA-AC or the signal cables is recommended.

ESD



The VAIA / VAIA-AC contains static-sensitive devices. Observe ESD precautions when handling this product with the cover removed.



GROUND LOOPS

It is possible to form a ground loop (earth loop or hum loop) when connecting pieces of audio equipment using unbalanced connections that provide alternative earth connections via their cable screens. Such ground loops result in audible “hum” from the system.



Never disconnect the mains earth from the plug to attempt to cure a ground loop. In the event of a fault, the VAIA / VAIA-AC casing could become live.

POWER CONNECTIONS

Ensure that the power supply cabling is adequately rated for the unit’s operating current and temperature and is protected against short-circuit by a correctly rated fuse or circuit breaker.



This is particularly important for supply feeds from the VAIA’s 24V backup batteries which can deliver short-circuit currents exceeding 1000 Amps.

Using too thin a cable can cause a safety hazard and will give excessive voltage drop and operational failure.



Always ensure that the VAIA / VAIA-AC is correctly earthed by connection to an AC mains supply with a protective earthing connection.



If the VAIA / VAIA-AC is connected as a system which is permanently connected to the mains, then an all-pole mains isolator with a separation of 3 mm in each pole shall be incorporated in the electrical installation.



The VAIA / VAIA-AC is protected from overload by single pole phase fusing. If connected to an unpolarised mains supply, the building installation must provide double pole phase/neutral fusing of appropriate rating.

SERVICING AND INSTALLATION



Servicing and installation work should be carried out by qualified personnel only. Service Access is permitted only to those with the necessary training and expertise and who can take responsibility for their own safety when working on the VAIA / VAIA-AC.

The VAIA / VAIA-AC contains wiring that is energised to 230 V AC mains and 100 V RMS audio signals at up to 20 kHz.



Terminals marked with the ⚡ symbol are hazardous, and the external wiring connected to these terminals requires installation by qualified personnel.



The VAIA may be energised after operation of a fuse or power off by the front panel MAINS and BATTERY switches.



Caution! Electrical shock hazard. Disconnect all power supplies.



Always isolate the mains and battery supplies for the VAIA by switching off the rack mains and battery supply isolation switches before installation, servicing or maintenance.

In installations where the rack mains and/or battery supply isolation switches are not accessible, unplug the power supply cables from the VAIA.



Use caution when working with the VAIA / VAIA-AC. The equipment case may get hot.

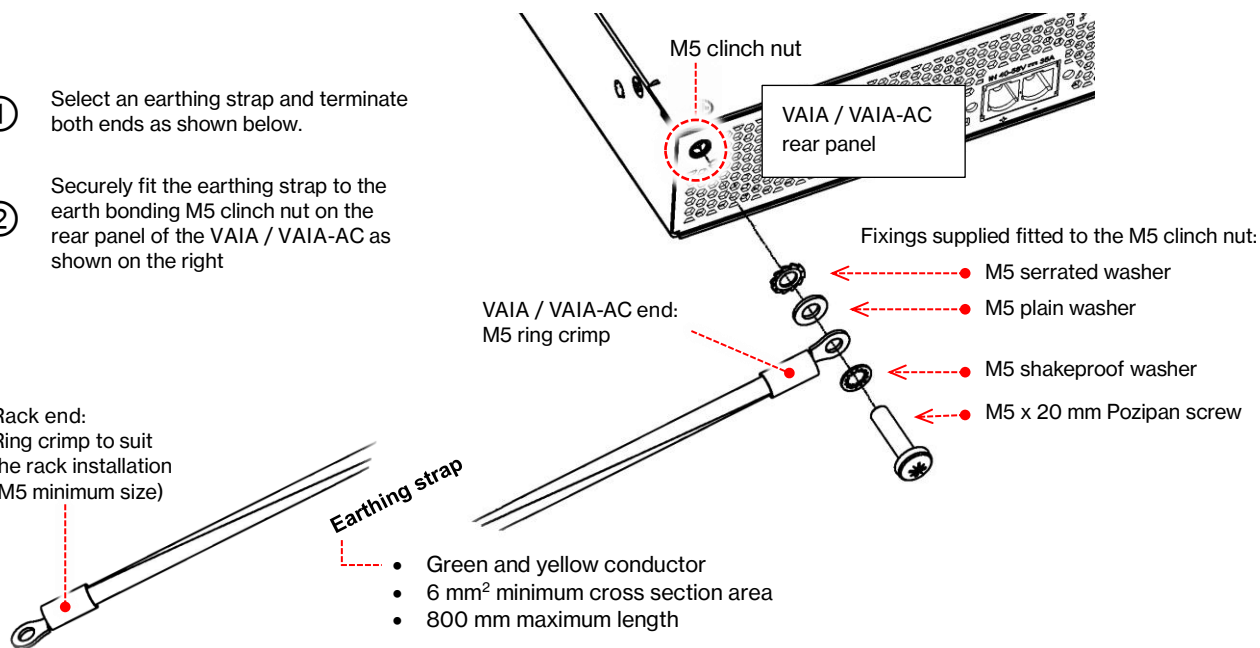


Always ensure that the VAIA / VAIA-AC is correctly connected to a protective earthing connection using an earthing strap as described in the diagram below.

① Select an earthing strap and terminate both ends as shown below.

② Securely fit the earthing strap to the earth bonding M5 clinch nut on the rear panel of the VAIA / VAIA-AC as shown on the right

Rack end:
Ring crimp to suit
the rack installation
(M5 minimum size)



③ Securely connect the earthing strap to the rack at a suitable location using appropriate fixings.

Recommended rack fixings:

- 1 x ring crimp with M5 minimum size.
- 1 x bolt matching the ring crimp size.
- 1 x toothed earthing cage nut matching the ring crimp size.
- 1 x shakeproof washer matching the ring crimp size (to be fitted between the ring crimp and the bolt head)
- 1 x toothed earthing washer matching the ring crimp size (to be fitted between the ring crimp and the rack, with the teeth facing the rack)



The earthing strap connection to the rack must be verified by qualified personnel.

FUSE REPLACEMENT



Always replace blown fuses with the correct type and rating.

VAIA / VAIA-AC INTERNAL BATTERY REPLACEMENT

Caution! Risk of explosion if battery is replaced by an incorrect type.

The VAIA / VAIA-AC contains a lithium battery.



The maximum temperature rating of the battery varies from manufacturer to manufacturer.

The temperature rating of the chosen battery must be greater than 80°C. Suitable replacements include Murata CR2032X, Maxell CR2032 or Panasonic BR2032 (Zenitel/ASL PN 211071).

VAIA EXTERNAL 24 V DC BACKUP BATTERY REPLACEMENT, HANDLING AND STORAGE

Caution! Risk of explosion if battery is replaced by an incorrect type.



Replace the Sealed or Valve Regulated Lead Acid Batteries for the VAIA's battery backup system with Power Sonic PS-12750 FR, PG-12V75T FR, PG-12V65 FR, PG-12V80 FR, or YUASA NPL65-12IFR.

Do not mix battery types with different Ah ratings within a battery backup system.

Caution! Ensure that the battery case flammability rating is correct for the installation.

Batteries are available with cases which are rated to one of these two flammability classifications: UL 94-V0 or UL 94-HB.



Certain site installation policies may require the use of UL 94-V0 rated battery cases in any Rack Built System, otherwise the standard battery casing rating of UL 94-HB can be used. Note that any Power Sonic or Yuasa batteries without FR (V0) product codes are only rated to UL 94-HB flammability.

Zenitel recommend batteries rated to UL 94-V0 flammability. If in doubt, please contact the site installation manager for policy guidance.



Batteries are heavy (max. 25 kg each). Please move and handle with care to avoid personal injuries and/or damage to the batteries.

External 24 V DC batteries connected to this unit can deliver very high currents that could cause fire or burns.



Take care to avoid short-circuits of the battery supply by tools or jewellery.

Insulated battery terminal covers must always be fitted.

Do not allow tools or unconnected cables to rest on top of batteries.

Always use insulated tools.



When reconnecting the battery always ensure that the VAIA's BATTERY switch is OFF before the battery circuit breaker is turned on.



Batteries should not be exposed to temperatures exceeding 25°C or stored for periods of more than a few weeks without charging as this can significantly reduce their service life.

BATTERY DISPOSAL



Dispose of all batteries responsibly by using authorised Waste Contractors and by ensuring all relevant local waste regulations are followed.



Dispose of used batteries according to the instructions.

Never bury in the ground or incinerate at end-of-life.

OPTICAL FIBRE CONNECTOR AND MODULE HANDLING

Optical fibre connectors and modules are precision-made components and must be handled accordingly.

Do not expose optical fibre connectors and modules to impact as damage to the surface of optical connectors may cause higher attenuation impairing the transmission quality.

Always fit optical fibre connectors and modules with protective caps to guard them against mechanical damage and contamination. The protective caps should only be removed prior to installation.

Once the protective caps have been removed, check the surfaces of the optical fibre connectors to ensure that they are clean, and clean them if necessary.

Clean the optical fibre connectors using a special optical fibre cleaning tool or a clean lint-free cloth. Isopropyl alcohol (99%) can be used for cleaning.