MANUAL

1U fan unit with thermostat

1U Fan Unit   V1

Ordercode: D7681

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Warning

⚠️ **For your own safety, please read this user manual carefully before your initial start-up!** ⚠️

Unpacking Instructions

Immediately upon receiving this product, carefully unpack the carton and check the contents to ensure that all parts are present, and have been received in good condition. Notify the dealer immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows signs of mishandling. Save the carton and all packing materials. In the event that a device must be returned to the factory, it is important that the device is returned in the original factory box and packing.

Your shipment includes:
- DAP Audio 1U Fan Unit
- IEC powercable 1,5m
- Sensor cable 1,6m
- Mounting pins
- User manual
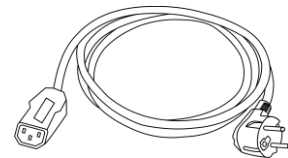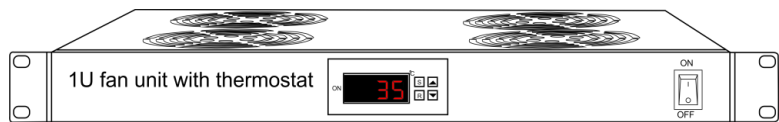
⚠️ **CAUTION!**
Keep this device away from rain and moisture!
Unplug mains lead before opening the housing! ⚠️

Safety Instructions

Every person involved with the installation, operation and maintenance of this system has to:
- be qualified
- follow the instructions of this manual

⚡ **CAUTION! Be careful with your operations.**
With a dangerous voltage you can suffer
a dangerous electric shock when touching the wires! ⚡

Before you initial start-up, please make sure that there is no damage caused by transportation. Should there be any, consult your dealer and do not use the system.

To maintain perfect condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

Please consider that damages caused by manual modifications to the system are not subject to warranty.

This system contains no user-serviceable parts. Refer servicing to qualified technicians only.

IMPORTANT:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the system.

- Always let the device cool down before cleaning or servicing.
- Always disconnect power from the mains, when system is not used. Only handle the power cord by the plug. Never pull out the plug by tugging the power cord.
- Always operate the unit with the AC ground wire connected to the electrical system ground.
- Avoid flames and do not put close to flammable liquids or gases.
- Do not connect this device to a dimmer pack.
- Do not drive the inputs with a signal level higher than required to drive the equipment to full output.
- Do not insert objects into air vents.
- Do not open the device and do not modify the device.
- Do not open this device. Risk: hazardous radiation exposure.
- Do not switch the system on and off in short intervals, as this would reduce the system's life.
- Do not put your equipment next to TV, radio, etc., because of interference or distortion.
- If the external cable is damaged, it has to be replaced by a qualified technician.
- If device is dropped or struck, disconnect mains power supply immediately. Have a qualified engineer inspect for safety before operating.
- If the system has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your system. Leave the system switched off until it has reached room temperature.
- If your Dap Audio device fails to work properly, discontinue use immediately. Pack the unit securely (preferably in the original packing material) and return it to your Dap Audio dealer for service.
- Make sure that the available voltage is not higher than stated on the rear panel.
- Make sure that the power cord is never crimped or damaged. Check the device and the power cord from time to time.
- Make sure that the core diameter of extension cords and power cords is sufficient for the required power consumption of the device.
- Make sure you do not use the wrong kind of cables or defective cables.
- Never let the power cord come into contact with other cables! Handle the power cord and all connections with the mains with particular caution!
- Never modify, bend, mechanically strain, put pressure on, pull or heat up the power cord.
- Never strain the cable insert or the female part in the device. There must always be sufficient cable going to the device. Otherwise, the cable will be damaged, which can cause serious damage.
- Never use the device during thunderstorms, unplug the device immediately.
- Never leave various parts of the packaging (plastic bags, polystyrene foam, nails, etc.) within children's reach, as they are potential sources of danger.
- Never remove warning or informative labels from the unit.
- Never use anything to cover the ground contact.
- Only use device indoors, avoid contact with water or other liquids.
- Please read this manual carefully and keep it for future reference.
- Strictly distinguish the sensor down-lead, power cable and output relay interface from another, prohibit wrong connections or overloading the relay.
- Sensor down-lead and power cable should be kept for a proper distance to avoid possible interferences.
- Please turn off the power switch, when replacing the power cord, signal cable or selecting the input mode switch.
- This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.
- The user is responsible for correct positioning and operating of this product. The manufacturer will not accept liability for damages caused by the misuse or incorrect installation of this device.
- Repairs, servicing and electric connection must be carried out by a qualified technician.
- WARRANTY: Till one year after date of purchase.

DAP
AUDIO

Operating Determinations

This system is not designed for permanent operation. Consistent operation breaks will ensure that the system will serve you for a long time without defects.

If this system is operated in any other way, than the one described in this manual, the product may suffer damages and the warranty becomes void.
Any other operation may lead to dangers like short-circuit, burns, electric shock, etc.

You endanger your own safety and the safety of others!

Connection with the mains

Connect the device to the mains with the power-plug.
Always pay attention, that the right color cable is connected to the right place.

International	EU Cable	UK Cable	US Cable	Pin
L	BROWN	RED	YELLOW/COPPER	PHASE
N	BLUE	BLACK	SILVER	NEUTRAL
⏚	YELLOW/GREEN	GREEN	GREEN	PROTECTIVE GROUND

Make sure that the device is always connected properly to the earth!

Improper installation can cause serious damage to people and property!

⚠ Return Procedure ⚠

Returned merchandise must be sent prepaid and in the original packing, call tags will not be issued. Package must be clearly labeled with a Return Authorization Number (RMA number). Products returned without an RMA number will be refused. Highlite will not accept the returned goods or any responsibility. Call Highlite 0031-455667723 or mail aftersales@highlite.nl and request an RMA prior to shipping the fixture. Be prepared to provide the model number, serial number and a brief description of the cause for the return. Be sure to properly pack fixture, any shipping damage resulting from inadequate packaging is the customer's responsibility. Highlite reserves the right to use its own discretion to repair or replace product(s). As a suggestion, proper UPS packing or double-boxing is always a safe method to use.

Note: If you are given an RMA number, please include the following information on a piece of paper inside the box:
01) Your name
02) Your address
03) Your phone number
04) A brief description of the symptoms

Claims

The client has the obligation to check the delivered goods immediately upon delivery for any short-comings and/or visible defects, or perform this check after our announcement that the goods are at their disposal. Damage incurred in shipping is the responsibility of the shipper; therefore the damage must be reported to the carrier upon receipt of merchandise.
 It is the customer's responsibility to report and submit claims with the shipper in the event that a fixture is damaged due to shipping. Transportation damage has to be reported to us within one day after receipt of the delivery.
Any return shipment has to be made post-paid at all times. Return shipments must be accompanied with a letter defining the reason for return shipment. Non-prepaid return shipments will be refused, unless agreed otherwise in writing.
Complaints against us must be prepared in writing or sent by fax within 10 working days after receipt of the invoice. After this period complaints will not be handled anymore.
Complaints will only then be considered if the client has so far complied with all parts of the agreement, regardless of the agreement from which the obligation is resulting.

Description of the device

Features

The DAP 1U Fan Unit is used for controlling temperature of your rack. The device has four built-in fans which can be switched on and off by the programmable temperature settings.

- Power supply: 230V AC (±10%), 50/60 Hz
- Resolution: ±1 °C
- Capacity of connective of relay: 7A/250V AC
- Sensor error delay time: 1 min.
- Relative humidity: 20-85% (no condensate)
- Power consumption: 60W max.
- Temperature controlling range: 0°C-50°C
- Input: PTC (10kOhm) (included)
- Dimensions: 483 x 290 x 44 mm (LxWxH)
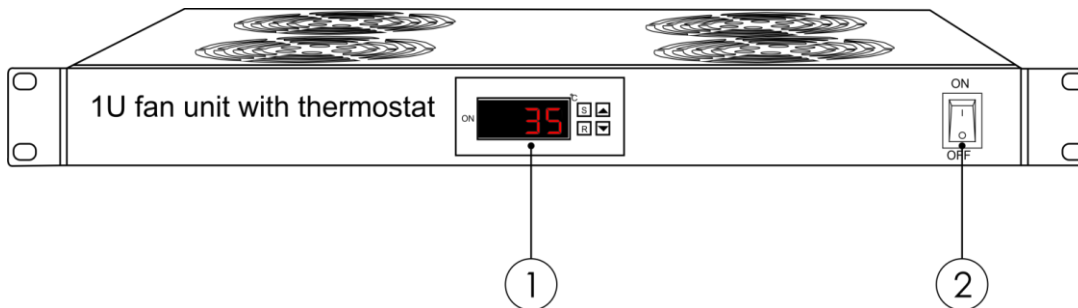   19" x 1HE (LxH)
- Weight: 4,8 kg

Frontside

Fig. 02

① **Control unit**
Temperature controller: press the control buttons to adjust the maximum temperature and temperature limit. For more information see page 8.

② **Power switch ON/OFF**
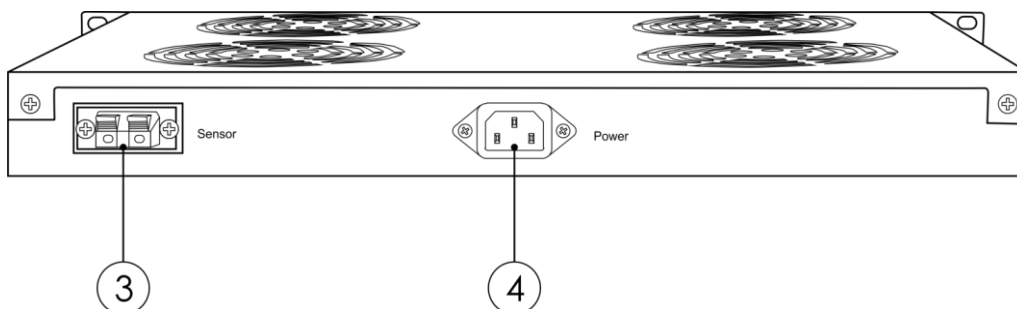Press the button to switch the device ON/OFF.

Backside

Fig. 03

③ **Input sensor cable**
Connect the included sensor cable to the input.

④ **IEC Power connector in**
Connect the device to an appropriate power supply.

Installation

Remove all packing materials from the DAP 1U Fan Unit. Check if all foam and plastic padding is removed. Secure the equipment into a 19" rack if preferred. Connect all cables.
Do not supply power before the whole system is set up and connected properly.
Always disconnect from electric mains power supply before cleaning or servicing.
Damages caused by non-observance are not subject to warranty.

Set Up and Operation

Before plugging the unit in, always make sure that the power supply matches the product specification voltage. Do not attempt to operate a 115V specification product on 230V power, or vice versa.

Before powering up the first time, make sure that the Sensor cable is connected properly!

Damage caused by connecting the device to improper AC voltage is not covered by any warranty!

Connecting Sensor cable

Connect the included sensor cable to the device. The **RED** cable has to be connected with the **RED** input. The **WHITE** cable has to be connected with the **BLACK** input. Move the sensor to an appropriate position outside your rack. Now the device is ready to use.
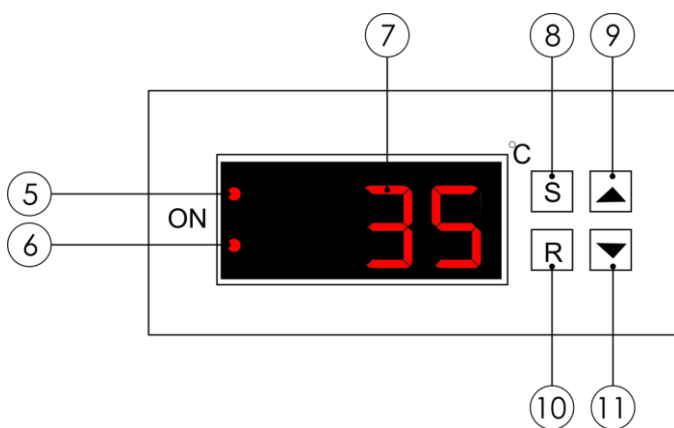
Control panel

Fig. 04

⑤ **LED indicator fans**
 If the fans are working properly the LED will light up.

⑥ **LED indicator temperature limit**
 If you set the temperature limit the LED will light up.

⑦ **LED display**
 The display will show: the measured temperature, the temperature limit, the maximum temperature or the difference between the temperature limit and the temperature at which the fans shut down.

⑧ **Set button**
 Press the button to set the temperature limit or enter the menu.

⑨ **Increase button**
Press the button to increase the temperature limit, check the maximum temperature or scroll through the menu with the increase button.

⑩ **R button**
Press the button to check the exceeding temperature.

⑪ **Decrease button**
Press the button to decrease the temperature limit, check the minimum temperature or scroll through the menu with the decrease button.

Set the temperature limit
01) Press the **Set** button (**8**) for 3 seconds.
02) The **LED indicator** (**6**) will light up.
03) Press the **Increase** (**9**) and **Decrease** (**11**) buttons to adjust the desired temperature limit.
04) If the measured temperature is higher than the temperature limit, the 4 fans will immediately start to work.
05) Press the **Set** button (**8**) again for 3 seconds to return to the normal temperature display status.
06) If no button is pressed for 30 seconds, the display will return automatically to the normal temperature display status.

Menu mode
01) Press the **Set** (**8**) and **Increase** (**9**) buttons simultaneously for 5 seconds, until the display shows: **F0**.
02) With this option you can set the temperature difference between the temperature limit and the temperature at which the fans shut down.
03) Press the **Set** button (**8**) again to adjust this temperature.
04) Press the **Increase** (**9**) and **Decrease** (**11**) buttons to set the desired temperature (between 0°C-50°C).
05) The default temperature is 1°C.
06) Press the **Set** button (**8**) again until the display again shows: **F0**.
07) Press the **Increase** (**9**) button until the display shows: **F1**.
08) With this option you can set the maximum temperature.
09) Press the **Set** button (**8**) again to adjust this temperature.
10) Press the **Increase** (**9**) and **Decrease** (**11**) buttons to set the desired temperature (between 0°C-50°C).
11) The default temperature is 45°C.
12) Press the **Set** button (**8**) again for 5 seconds to return to the normal temperature display status.
13) If no button is pressed for 30 seconds the display will return automatically to the normal temperature display status.
14) The display shows the measured temperature.

Warnings

The device has some built-in warnings:
01) If the measured temperature is beneath 0ºC, the display will blink and show **LL**. The device will also start its built-in alarm buzzer.
02) If the sensor cable is disconnected, the display will blink and show **E1**. The device will also start its built-in alarm buzzer.
03) If the measured temperature is higher than the temperature limit (see menu mode **F1**), the display will blink and show **E2**. The device will also start its built-in alarm buzzer.

Note: Press any key to shut down the alarm buzzer, the settings and display status will not change.

Maintenance

The DAP Audio 1U Fan Unit requires almost no maintenance. However, you should keep the unit clean. Disconnect the mains power supply, and then wipe the cover with a damp cloth. Do not immerse in liquid. Do not use alcohol or solvents.
Keep connections clean. Disconnect electric power, and then wipe the connections with a damp cloth. Make sure connections are thoroughly dry before linking equipment or supplying electric power.

Troubleshooting

DAP Audio 1U Fan Unit
This troubleshooting guide is meant to help solve simple problems. If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps.
01) If the device does not operate properly, unplug the device.
02) Check power from the wall, all cables, connections, etc.
03) If all of the above appears to be O.K., plug the unit in again.
04) If nothing happens after 30 seconds, unplug the device.
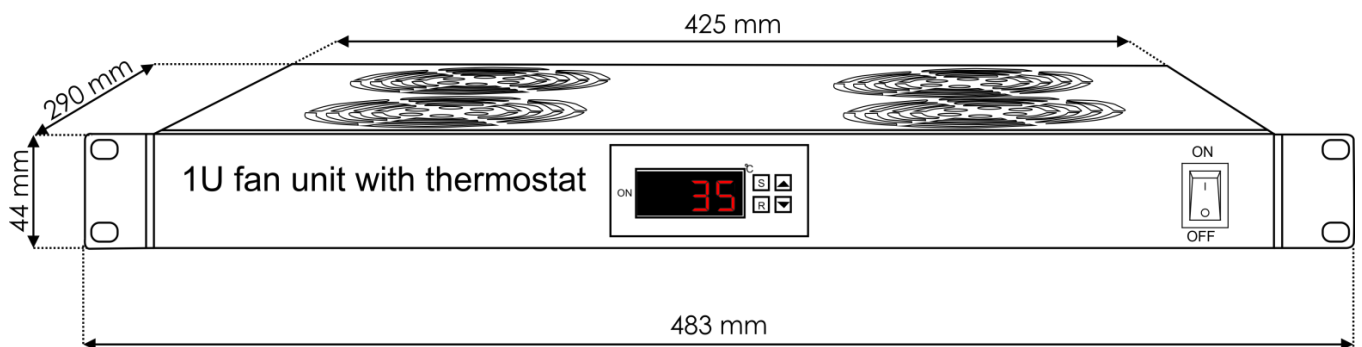05) Return the device to your DAP Audio dealer.

Problem	Probable cause(s)	Solution
Device does not function at all	No power to the device	• Check if power is switched on and cables are plugged in
	Internal fuse blown	• Return the device to your local DAP Audio dealer.
Fan (or fans) cuts out intermittently	Device is too hot	• Allow the device to cool down • Clean the fan • Make sure air vents are not blocked • Turn up the air conditioning
	The power supply settings do not match local AC voltage and frequency	• Disconnect fixture. Check settings and correct if necessary

Product Specifications

Model:	DAP Audio 1U Fan Unit
Power supply:	230V AC (±10%), 50/60 Hz
Power connection:	IEC power connector
Rated power consumption:	60W
Dimensions:	483 x 290 x 44 mm (LxWxH)
	19" x 1HE (LxH)
Weight:	4,8 kg
Inputs & Outputs:	
Input:	PTC (10kOhm) (included)
Features:	
Resolution:	±1 °C
Capacity of connective of relay:	7A/250V AC
Sensor error delay time:	1 min.
Relative humidity:	20-85% (no condensate)
Temperature controlling range:	0°C-50°C
Max. ambient temperature t_a:	50°C

Design and product specifications are subject to change without prior notice.

Dimensions

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