



# **A-16D Pro**

## **A-Net Distributor**

# User Guide

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Part Number 9310 1005 0001



# WARNING!



TO REDUCE THE DANGER OF ELECTRICAL SHOCK DO NOT REMOVE COVERS.

NO USER SERVICEABLE PARTS INSIDE

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL ONLY

To reduce the risk of fire or electrical shock, do not expose this product to rain or other types of moisture.

To avoid the hazard of electrical shock, do not handle the power cord with wet hands.

Operating Temperature: 10°C to 50°C (50°F to 122°F)



## CAUTION

Risk of electric shock!  
Do Not Open

AVIS: Risque de choc électrique!  
Ne pas ouvrir



## WARNING!

To reduce the risk of fire or electric shock do not expose this product to rain or moisture.

## CAUTION

- Using any audio system at high volume levels can cause permanent damage to your hearing.
- Set your system volume as low as possible.
- Avoid prolonged exposure to excessive sound pressure levels.

## **IMPORTANT:**



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications to the product not expressly approved by Aviom, Inc. could void the user's FCC authority to operate the equipment.

# **READ THIS FIRST**

## **Important Safety Instructions**

1. Read these instructions.
2. Keep these instructions
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or third prong are provided for your safety. If the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. No on/off power switches are included in the A-16 system. The external power supply should be used to control power to an Aviom A-16 device. This power supply should remain readily operable.
16. The solid line over dashed line symbol (  ) indicates that the input voltage must be a DC voltage.
17. The box within a box symbol (  ) indicates that the external power supply is double insulated.



# **Aviom, Inc. Limited Warranty**

Aviom, Inc. warrants this product against defects in materials and workmanship for a period of **one year** from the date of the original retail purchase.

This warranty does not apply if the equipment has been damaged due to misuse, abuse, accident, or problems with electrical power. The warranty also does not apply if the product has been modified in any way, or if the product serial number has been damaged, modified, or removed.

If a defect is discovered, first write or call Aviom, Inc. to obtain a Return Authorization number. No service will be performed on any product returned without prior authorization. Aviom, Inc. will, at its option, repair or replace the product at no charge to you. The product must be returned during the warranty period, with transportation charges prepaid to Aviom, Inc., 1157 Phoenixville Pike, Suite 201, West Chester, PA 19380. You must use the product's original packing materials for shipment. Shipments should be insured for the value of the product. Include your name, address, phone number, description of the problem, and copy of the original bill of sale with the shipment. The Return Authorization number should be written on the outside of the box.

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# Warranty Information

Please record the following information for future reference:

Your Authorized Aviom Dealer:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_

Serial Numbers of Your Aviom Products: \_\_\_\_\_

\_\_\_\_\_

Date of Purchase: \_\_\_\_\_

Your Authorized Aviom Dealer is your primary source for service and support. The information recorded above will be helpful in communicating with your Authorized Aviom Dealer should you need to contact Aviom Customer Service. If you have any questions concerning the use of this unit, please contact your Authorized Aviom Dealer first. For additional technical support, or to find the name of the nearest Authorized Aviom Repair Station, check the Aviom web site at [www.aviom.com](http://www.aviom.com).

To fulfill warranty requirements, your Aviom product should be serviced only at an authorized Aviom service center. The Aviom serial number label must appear on the outside of the unit, or the Aviom warranty is void.

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A-Net is a trademark of Aviom, Inc.

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# Welcome

Thank you for purchasing the **Aviom A-16D Pro A-Net Distributor** for use with your **Personal Monitor Mixing System™** or distributed audio network system. This User Guide is designed to familiarize you with your new product and to have you up and running in no time.

## Features

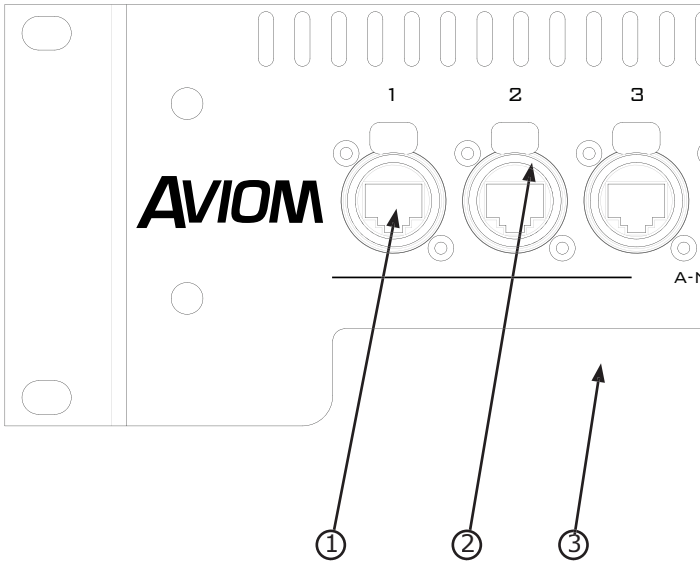
The A-16D Pro is designed to distribute the A-Net Signal from either an A-Net input module or another A-16D Pro Distributor. Each A-16D Pro accepts one A-Net input signal and provides eight simultaneous A-Net outputs using Category 5 Cables. The A-16D Pro A-Net Distributor enables parallel connection of A-Net devices, simplifying stage and studio setups.

### **A-16D Pro Features:**

- Easily distribute A-Net from a central location
- One A-Net input, eight A-Net outputs
- EtherCon connectors throughout
- Supplies DC power for connected A-Net devices via the Cat-5 cable
- 2U high, rack mountable
- Built-in isolated power supplies for each A-Net output
- A-Net activity LED on the main input
- Multiple A-16D Pro Distributors can be used in a system
- Convenient cable pass-through channel

# A-16D Pro Front Panel

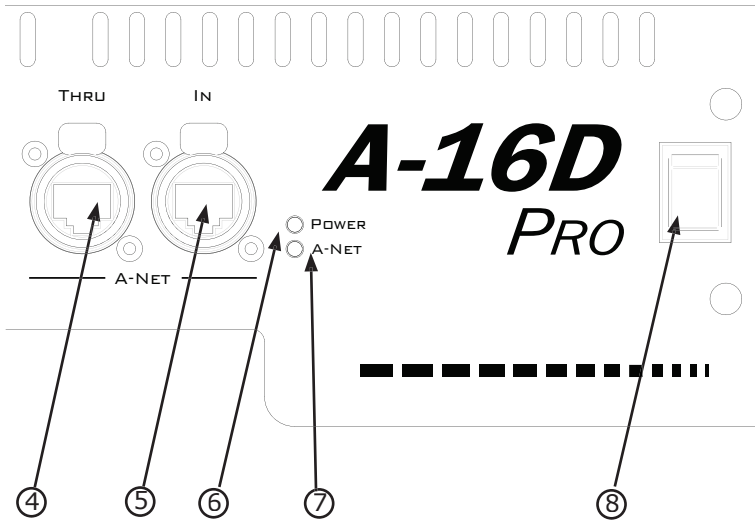
## Left side



1	A-Net Output, with DC power
2	EtherCon Cat-5 connector; press to release
3	Cable pass-through channel - cables can pass under the unit
	to reach connections in the rear of a rack

# A-16D Pro Front Panel

## Right side

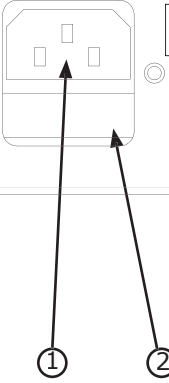


4	A-Net Thru, EtherCon
5	Main A-Net Input, EtherCon
6	Power LED indicator
7	A-Net LED indicator
8	AC power on/off switch

# A-16D Pro Rear Panel

100-240 VAC ~  
50/60 Hz 300W

Conceived, designed, and manufactured by Aviom, Inc.



**CAUTION:** Replace fuse with same type fuse and rating.  
250VAC~ F 8A L

 <b>CAUTION</b> Risk of electric shock! Do Not Open <b>AVIS: Risque de choc électrique!</b> Ne pas ouvrir	 <b>WARNING!</b> To reduce the risk of fire or electric shock do not expose this product to rain or moisture
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1	AC Power connection, IEC
2	Fuse holder

# Connecting the A-16D Pro

The A-16D Pro is designed to create a network of A-Net devices. The A-Net signal appearing at the input of the A-16D Pro is distributed to each of the eight outputs on the front panel. Devices are connected in parallel rather than in serial fashion.

## Connections on the A-16D Pro Front Panel

There are two sets of A-Net connectors on the front of the A-16D Pro A-Net Distributor. They are marked **Input** and **Output**.

The **Input** section accepts the A-Net signal coming from *any* A-Net device. This is likely to be an A-Net input module in typical audio systems. You can expand a Personal Monitor Mixing System by using as many A-16D Pro A-Net Distributors as required.

The **Output** section sends an exact copy of the input signal in parallel to each of the eight outputs.

An A-Net Thru jack allows multiple A-16D Pro Distributors to be daisy chained together.

The connections on the A-16D Pro front panel can use standard Category 5 cables or cables equipped with the Neutrik EtherCon Cat-5 connector. The EtherCon connector is an XLR-style connector similar to a mic connector. They offer a locking mechanism and increased protection for the Cat-5 connections.

## Front Panel LED Indicators

The front panel's A-Net Input jack contains two LEDs. The red LED indicates that the A-16D Pro is powered on. The green LED blinks to indicate that a valid A-Net signal is plugged into the Input jack.

## Connecting an A-16D Pro

In a simple system containing one input module and a number of Personal Mixers, the A-16D Pro A-Net Distributor sits between the input module and the Personal Mixers.

## **A-Net Input**

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You can connect a Personal Monitor Mixing System in a variety of ways. In a typical system, audio inputs will be connected to the Input jacks on the rear of the A-Net Input Module, such as an AN-16/i, or routed internally in the digital domain from a mixer's control surface when using a Y1 Yamaha Output Card. From the input module, the A-Net output is connected to the first Personal Mixer in the system. Each subsequent Personal Mixer is connected by running a cable from the Mixer's A-Net Output to the A-Net Input on the next Personal Mixer. This type of connection is called a *daisy chain*.

When using the A-16D Pro A-Net Distributor, the daisy chain linking of Personal Mixers is optional. Up to eight Personal Mixers can be connected directly to the A-Net outputs on the front of the A-16D Pro.

To connect the A-16D Pro:

- Connect the A-Net Output on the input module to the A-Net Input on the A-16D Pro A-Net Distributor using a Category 5 cable. .
- As with all A-Net compatible devices, the cable length between compatible components can be up to 500 feet (150 meters) long.

## **A-Net Thru**

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The A-Net Thru jack provides an easy way to expand a system. The A-Net signal appearing at the Thru jack is an exact copy of the input signal. There is no power supplied to this jack, however.

## **A-Net Outputs**

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The eight A-Net Outputs on the A-16D Pro A-Net Distributor all carry the same signal. You can use any output to connect a Personal Mixer.

To connect a Personal Mixer:

- Connect a standard Category 5 cable from A-Net Output #1 on the A-16D Pro A-Net Distributor to the first Personal

Mixer in your system.

- DC power is supplied automatically to the first connected Personal Mixer - no external DC power supply is required.

At this point the Personal Mixer is connected to the A-Net signal chain. Any audio connected to the A-Net input module should be available for mixing in the Personal Mixer. Refer to the Personal Mixer User Guide for additional information about using the mixing features of the Personal Monitor Mixing System.

Connect additional Personal Mixers using Category 5 cables from an available Output on the A-16D Pro A-Net Distributor to the A-Net Input on the Mixer.

The A-Net outputs on the A-16D Pro can be connected to any A-Net compatible device, allowing flexible routing and system configurations as well as virtually unlimited system expansion.

## **Connections on the A-16D Pro Rear Panel**

The rear of the A-16D Pro A-Net Distributor contains the standard IEC power input for the unit. The main power supply in the A-16D Pro is a switching type, compatible with the variety of electrical systems in use worldwide.

The A-16D Pro can operate with input voltages from 100 to 240 volts and at rates from 50 to 60 Hz. Replaceable IEC cables for AC power systems throughout the world are available from many electronics dealers. Avoid using cable adapters whenever possible. Replacement cables must provide an earth ground connection.

## **Powering a Personal Mixer Remotely**

There are a number of advantages to adding power for a Personal Mixer at the A-Net distribution point.

- No DC power supply is needed at the performer's location
- Multiple discrete DC power supplies are replaced with a single AC power connection.
- The Distributor can be located near a convenient source of AC power.
- A one-cable solution for supplying A-Net and DC power to a mixing station is possible.

To power a Personal Mixer via the Cat-5 cable:

- Connect the A-Net cables as described previously between system components (from the A-Net input module to the A-16D Pro).
- Connect a Category 5 cable from the powered A-Net output on the A-16D Pro to the A-Net input on the Personal Mixer.
- The Personal Mixer's A-Net Active LED will light to indicate that a valid A-Net signal is present.
- Continue connecting up to eight Personal Mixers in this manner.

**Note:** The DC power supply in the A-16D Pro can power only *one* Personal Mixer. If you start a daisy chain from a Personal Mixer powered from an A-16D Pro, the additional Personal Mixer units will need a source of DC power.

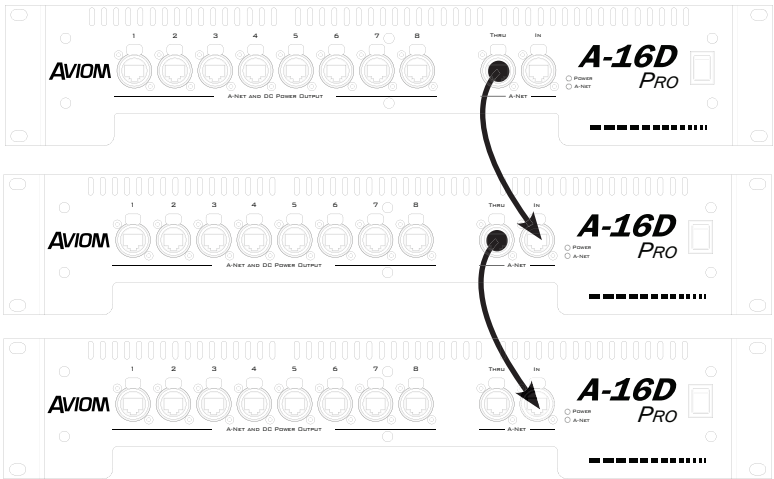
Each Personal Mixer that is powered remotely no longer needs a DC power supply connected to its rear panel. If this happens accidentally, however, note that you cannot harm the system.

## Expanding a System

Any number of A-Net devices can be used in a system. This includes A-16D Pro A-Net Distributors. To expand a system, additional A-16D Pro Distributors can be connected to any available A-Net Output, such as the outputs on Personal Mixers or on other A-16D Pro units.

A dedicated A-Net Thru jack on the front panel of the A-16D Pro allows multiple units to be cascaded.

To add another A-16D Pro to a system, simply connect a standard Cat-5 cable from the A-Net Thru of the first A-16D Pro to the A-Net Input on the second A-16D Pro.



The example shows three A-16D Pro Distributors connected in a daisy chain. This provides twenty-four powered A-Net outputs. Any number of A-16D Pro Distributors can be connected to provide additional expansion by connecting the A-Net Thru jack to the next Distributor's A-Net In jack.

# Warranty Registration

*Please take a moment to fill in this warranty registration form. Return it to Aviom via mail or fax. All information will be kept confidential.*

Model Number ..... Product Serial Number .....

Model Number ..... Product Serial Number .....

Model Number ..... Product Serial Number .....

Model Number ..... Product Serial Number .....

Date Purchased .....

Dealer Name .....

Dealer Location .....

.....

Your Name .....

Address .....

Address .....

City .....

State/Province .....

Zip/Postal Code .....

Country .....

Email Address .....

**Fax this form to Aviom at +1 610-738-9950**

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