

# Operation Manual

## Audio Over Ethernet **AOE-212N**



\* Rack mount products in the Western Hemisphere(North America, South America, and the Caribbean) do not have handles installed due to customer preference.

**interM**

# Welcome

## A personal welcome to you from the management and employees of Inter-M

All of the co-workers here at Inter-M are dedicated to providing excellent products with inherently good value, and we are delighted you have purchased one of our products.

We sincerely trust this product will provide years of satisfactory service, but if anything is not to your complete satisfaction, we will endeavor to make things right.

Welcome to Inter-M, and thank you for becoming part of our worldwide extended family!

	<b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN	
<p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK.</p> <p>DO NOT REMOVE COVER (OR BACK).</p> <p>NO USER-SERVICEABLE PARTS INSIDE.</p> <p>REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>		



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying the appliance.

Caution: To prevent electric shock do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

Attentions: Pour prévenir les chocs électriques ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant ou une autre sortie de courant, sauf si les lames peuvent être insérées à fond sans en laisser aucune partie à découvert.

## WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

\*WARNING FOR YOUR PROTECTION PLEASE READ THE FOLLOWING-WATER AND MOISTURE: Unit should not be used near water(e.g. near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc). Care should be taken so than objects do not fall and liquids are not spilled into the enclosure through openings.

\*CLASS 2 WIRING (Adjacent to speaker terminal): The speaker output of this apparatus can exceed 10 Watts and could be a shock injury. Connection to speakers should be performed by a skilled person.

\*Do not install this equipment in a confined space such as a book case or similar unit.

\*This apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such vases, shall be placed on the apparatus.

\*This apparatus shall be connected to a mains socket outlet with a protective earthing connection.

\*It has heed to be easy to disconnect the device. To disconnect the device from power, separate AC input cable from inlet or unplug the AC Cord.

## CAUTION

\*These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

## NOTE

\*This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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FOR EACH TYPE	USER NOTICE
Class 'A' device (Broadcast device for business purpose)	This device is business purpose (Class 'A') and seller or user should (Broadcast device for business purpose) be aware of it, and it is to use in other than home.

## Unpacking

Although your AOE-212N is neither complicated nor difficult to operate, we recommend you take a few minutes to read this brief manual and familiarize yourself with the important information regarding product features, setup and operation.

As with most electronic devices, we strongly recommend you retain the original packaging. In the unlikely event the product must be returned for servicing, the original packaging (or reasonable equivalent) is required.

## Installation

### Environment

Never place this product in an environment which could alter its performance or reduce its service life. Such environments usually include high levels of heat, dust, moisture, and vibration.

## 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 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 the third prong are provided for your safety. If the provided plug does not fit into 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 from 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 service personnel. Servicing is required when the apparatus has been damaged in any way, such as 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.



## Features

THE AOE AUDIO OVER ETHERNET NETWORK IS AN EASY TO USE SOLUTION FOR TRANSPORTING AUDIOSIGNALS OVER ETHERNET TCP/IP BASED LOCAL AND WIDE AREA NETWORKS (LAN/WAN), AS WELL AS THE INTERNET.

- **REAL TIME 2 CHANNEL AUDIO SIGNAL TRANSCEIVER (TRANSMITTER/RECEIVER)**  
ETHERNET TO 2CHANNEL ANALOG AUDIO SIGNAL REAL TIME TRANSMITTER, RECEIVER.
- **FULL-DUPLEX DATA COMMUNICATION TO ETHERNET NETWORK.**  
CONTACT: FUNCTION OF IN/OUT CONTACT DATA TRANSCEIVER  
(TRANSMITTER/RECEIVER). (EACH OF THE 8 CHANNELS)  
COMMUNICATION: FUNCTION OF SERIAL DATA TRANSCEIVER  
(TRANSMITTER/RECEIVER). (RS-232C, RS-422)
- **EXPANSION OF DEVICE**  
MULTICAST (1:70) (THIS FUNCTION IS PLANNED TO UPGRADE)  
UNICAST (1:20) (THIS FUNCTION IS PLANNED TO UPGRADE)

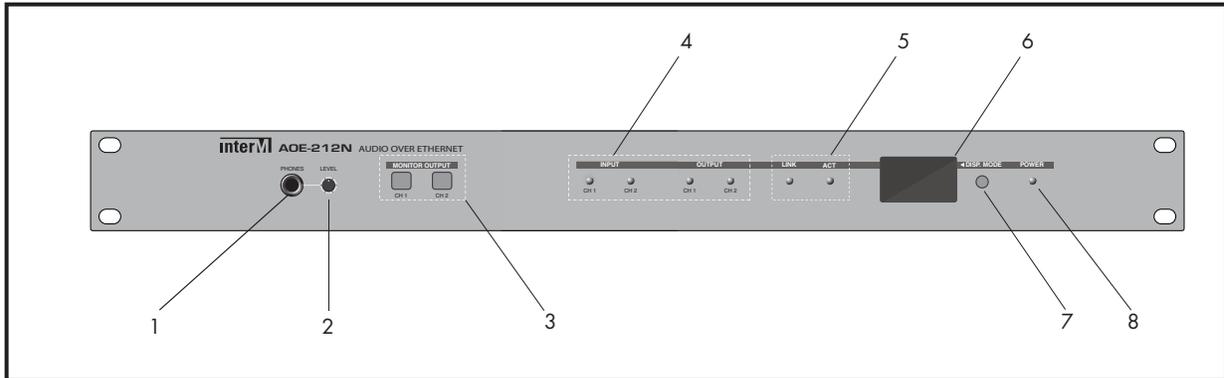
## Composition and accessory

1. AOE-212N main set x1
2. AC power cord x 1
3. 3P terminal block x 4
4. 4P terminal block x 2
5. 16P terminal block x 2
6. RS-232C cable x 1
7. Rack mount screw x 4
8. Lan cable x 1

※ Network setting

- AOE-212N SET can be set to dynamic IP, or static IP.
- AOE-212N SET use the 5454~5474 port, we need for 5454~5474 port is required for port forwarding or DMZ setting.
- Used under authorized to provide Internet service providers assign a static IP or dynamic IP in case of WAN network.
- LAN/WAN use is recommended to use a dedicated network configuration.

## Front Panel



### 1. MONITOR TERMINAL

Terminal monitoring the output signal of selected channel by using 3.5  $\Phi$  earphone terminal.

### 2. MONITOR VOLUME

Control the monitor output volume.

### 3. MONITOR OUTPUT SWITCH

Switch selecting the desired channel output to monitor.

### 4. SIGNAL LED

LED displaying the input and output audio signals for each channel.

### 5. LINK / ACT

LED displaying the network status and data status of equipment.

### 6. LCD

LCD displaying the network (IP, Mac Address, S/W Version, etc.) settings and server connection status in the set.

### 7. DISPLAY SWITCH

Switch checking out the setting on the display.

When the power switch is ON, the indicator will be it.

Display contents are as below.

1) Inter-M logo + IP Address



## 2) MAC Address + Bandwidth + S/W Version

```

Inter-M:01:05:08
Ver. 1.0.0.1
TX: 3 kbps
RX: 2 kbps

```

## 3) Audio state

```

Audio
Server On, 1
Client On
192.168.1.99

```

- (1) Sever on/off state
- (2) Sever on, Quantity of Client access device
- (3) Client on/off state
- (4) Accessed server IP

## 4) RS-232 state

```

RS-232
Server Off
Client Off

```

- (1) Server on/off state
- (2) Client on/off state

## 5) RS-422 state

```

RS-422
Server Off
Client Off

```

- (1) Server on/off state
- (2) Client on/off state

## 6) PIO state

```

PIO
Server Off
Client Off

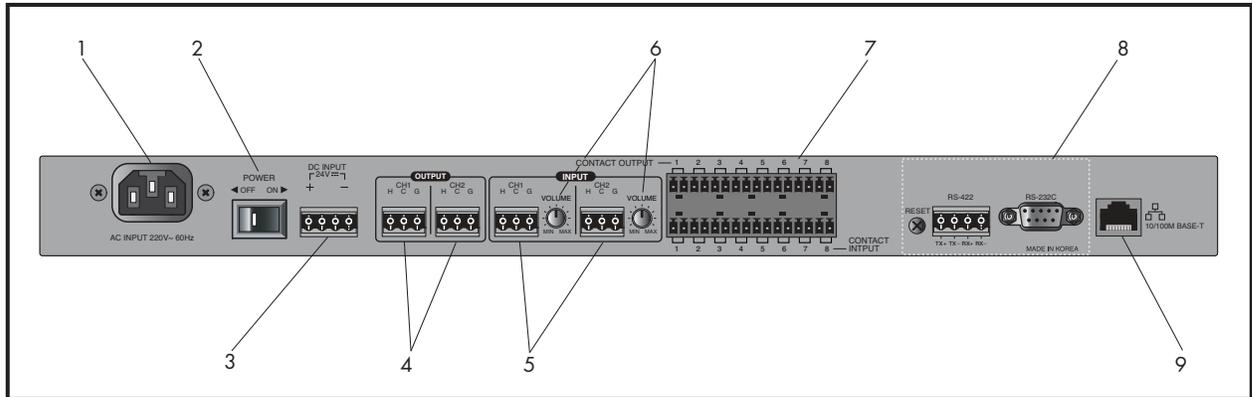
```

- (1) Server on/off state
- (2) Client on/off state

**8. Power LED**

LED displaying the power supply status of set.

## Rear Panel



### 1. AC INLET

Terminal which inputs the AC power.

### 2. POWER SWITCH

Switch turning On/Off the AC Power.

### 3. DC INPUT TERMINAL

Backup battery(24DC) connecting terminal. In case of black out of AC power, connected backup battery supplies the power to the device. DC 24V input supplies the power to the set regardless of switch On/Off.

### 4. AUDIO OUTPUT TERMINAL

It consists of 2-channel with balance outputs (Hot, Cold, GND) with transmitted audio output terminal.

### 5. AUDIO INPUT TERMINAL

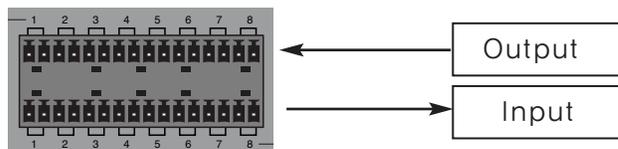
It consists of 2-channel with balance outputs (Hot, Cold, GND) with audio output terminal to be transmitted.

### 6. AUDIO INPUT VOLUME

Control the volume of input audio signal.  
Control level is (-10dB ~ +10dB)

### 7. CONTACT POINT INPUT AND OUTPUT TERMINALS

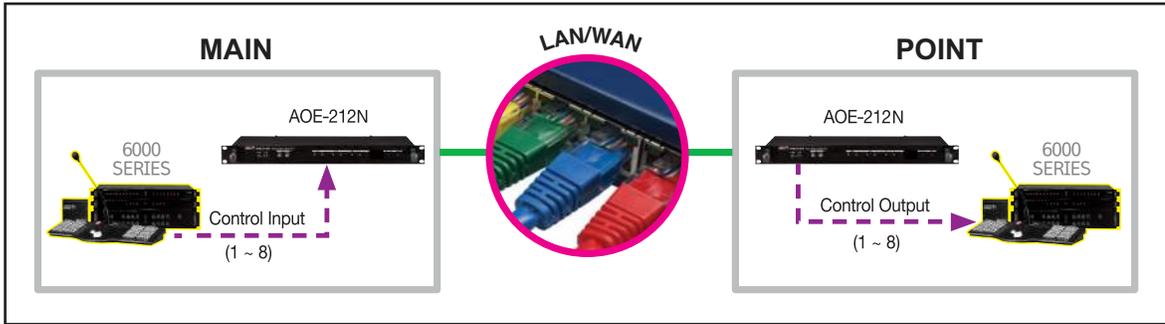
If contact point signal is inserted in each contact point terminal of transmit AOE-212N device, contact point signal will be transmitted from the contact point output terminal of transmit AOE-212N device.



Input contact point: Contact point signal can be inserted if pin of each channel is short.

Output contact point: Same signals with input signal will be transmitted on the input contact point of transmitter.

- ※ Caution: Contact point signal is only transmitted when AOE-212N is operated under normal conditions, and please input the signal after checking out the equipment operation status. Because data is transmitted in real times, signal will not be transmitted when device is off.



- ※ Example: Connect the device to be controlled to the contact point terminal of AOE-212N from point 'A', and insert the control signal from the main building, then device of point 'A' can be controlled.

**8. RS-232C/RS-422 communication terminal**

Display the signals inserted in RS-232C or RS-422 terminal on the rear of AOE-212N on the RS-232C and RS-422 terminals of AOE-212N. For example, if signals, 'A B C D' are inserted in the transmitter, signals 'A B C D' will be displayed on the receiver.



RS-232C communication: No. 1 pin (Rx), No. 3 pin (Tx), No. 5 pin (GND)

RS-422 communication: Tx+, Tx-, Rx+, Rx-

- ※ Transmit and receive data communication using RS-232C/RS-422 ports supports 1:1
- ※ Example: Connect the device to be controlled to the RS-232/RS-422 terminal of AOE-212 from point 'A', and insert the control signal from the main building, then device of point 'A' can be controlled.

**9. Network terminal**

It is network connecting terminal (RJ-45) and supports 10/100 Base-Tx.

# Equipment setting using AOE-212N internal CGI server

It provides the web-page to check the status and control of AOE-212N.

## 1. Accessing AOE-212N Web-page

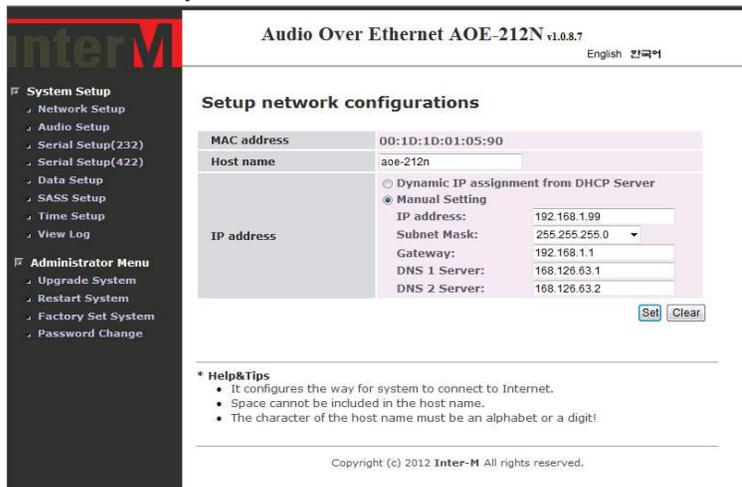
- 1.1 Access to the web-page by using internet browser (Explorer, Chrome, FireFox, etc.)
- 1.2 Insert the IP address displayed on the front LCD of AOE-212N. If it is connected normally, user verification window will pop-up.
- 1.3 User verification is required to access the AOE-212N web-page.

Default value for factory setting is as below.

User name: admin, password: 1 (number).

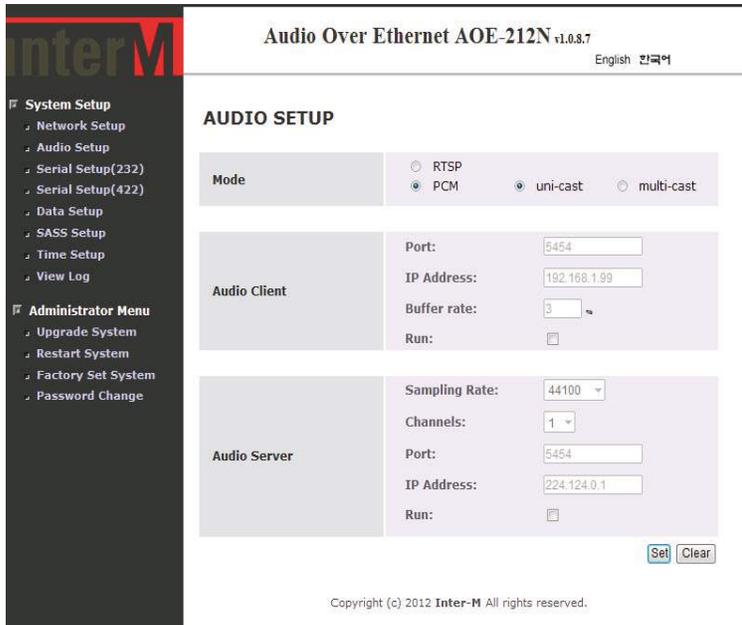
※ Please be sure to change the password after the connection you use.

## 2. Network Setup



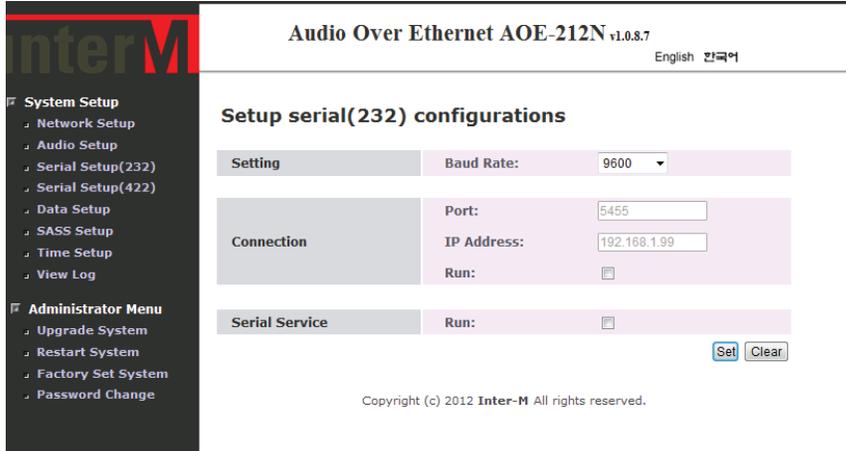
Content	Default	Sample Value
MAC address	Display the MAC address the device.	00:1D:1D:NN:NN:NN
Host name	Displays the name of device. If it displays the location of device, management will be convenience. Text only (Incl. digits, no space) is applicable.	aoe-212n
IP address	Setup the IP address of device. There are two ways “: Dynamic IP assignment from DHCP Server” and “Manual Setting”	Manual Setting
IP address	Setting a Static IP address	192.168.1.99
Subnet Mask	Setting to the Subnet mask.	255.255.255.0
Gateway	Setup the gateway of network connected to the gateway.	192.168.1.1
DNS 1 server	Setup the address of DNS1 server.	168.126.63.1
DNS 2 server	Setup the address of DNS2 server. Follow the setup of property setup of device.	168.126.63.2
Set	Apply and save the changed contents by using the <input type="button" value="Set"/> button after changing the setup of SET device.	
Clear	Restore all setups to default values by using <input type="button" value="Clear"/> button	

### 3. Audio Setup



Content	Default	Value
Mode	Setup the audio transmission mode.	PCM, uni-cast
Audio Client	Setup to receive the audio from another AOE-212N.	
Port	Setup the connecting port value to receive the audio.	5454
IP Address	Setup the IP address to receive the server address audio.	192.168.1.99
Buffer rate	The buffer rate is set according to the receiver's network.	3%
Run	Check to activate audio receiving.	
Audio sever	Transmitting audio to other AOE-212N.	
Sampling Rate	Set the sample rate of the audio signal.	44100
Channels	INPUT CH 1 is selected; the sender channel 1 is transmitted to the receiver AOE-212N and is outputted on the receiver's CH1 audio output. INPUT CH 2 is selected; the sender channel 2 is transmitted to the receiver AOE-212N and is outputted on the receiver's CH2 audio output. π	1
Port	Setup the connecting port value to transmit the port audio.	5454
Sever Address	Set the server address for Multi-cast audio transmission mode.	224.124.0.1
Run	Sets 'Run' to begin audio transmission. The equipment list of equipment being sent to the serial communication serial server run-time will be displayed.	
Set	Apply and save the changed contents by using the <b>Set</b> button after changing the setup of SET device.	
Clear	Restore all setups to default values by using <b>Clear</b> button.	

#### 4. Serial Setup(232)



Content	Default	Value
Setting	Setup the property of serial communication (RS-232C).	
Baud Rate	Setup the communication speed of serial port. Scope is 2400bps~115200bps.	9600
Connection	Connection setup to transmit the serial communication.	
Port	Default port value to transmit the serial communication.	5455
IP Address	Setup the IP address to receive the serial communication.	192.168.1.99
Run	Setup the Run of serial communication receiving.	
Serial service	Setup to transmit the serial communication to other AOE-212N.	
Run	Sets 'Run' to begin serial communications transmission. The equipment list of equipment being sent to the serial communication serial server run-time will be displayed.	
Set	Apply and save the changed contents by using the <input type="button" value="Set"/> button after changing the setup of SET device.	
Clear	Restore all setups to default values by using <input type="button" value="Clear"/> button.	

## - Serial Setup(422)

Content	Default	Value
Setting	Setup the property of serial communication (RS-422) port.	
Baud rate	Setup the communication speed of serial port. Scope is 2400bps~115200bps.	9600
Connection	Connection setup to transmit the serial communication.	
Port	Default port value to transmit the serial communication.	5456
IP address	Setup the IP address to receive the serial communication	192.168.1.99
Run	Select ' Run' to begin serial communication receiving.	
Serial Service	Setup to transmit the serial communication to an other AOE-212N.	
Run	Sets 'Run' to begin serial communications transmission. The equipment list of equipment being sent to the serial communication serial server run-time will be displayed.	
Set	Apply and save the changed contents by using the <input type="button" value="Set"/> button after changing the setup of SET device.	
Clear	Restore all setups to default values by using <input type="button" value="Clear"/> button.	

## 5. Data Setup

The screenshot shows the 'Data Setup' page of the Inter-M AOE-212N interface. On the left is a navigation menu with categories like 'System Setup' and 'Administrator Menu'. The main area is titled 'DATA SETUP' and contains two sections: 'Data Client' and 'Data Service'. The 'Data Client' section includes fields for 'Port' (set to 5457), 'IP Address' (set to 192.168.1.99), and a 'Run' checkbox. The 'Data Service' section includes a 'Run' checkbox. At the bottom right of the form are 'Set' and 'Clear' buttons. A copyright notice '(c) 2012 Inter-M All rights reserved.' is centered at the bottom of the page.

Content	Default	Value
Data Client	Setup data transmit (Contact point).	
Port	Set the default data transmit port value.	5457
IP Address	Setup the IP address to receive data.	192.168.1.99
Run	Set 'Run' to activate data receiving.	
Data Service	Setup to transmit data to other AOE-212N.	
Run	Sets 'Run' to activate the data transmission. A list of available data transmission equipment being will be displayed.	
Set	Apply and save the changed contents by using the <input type="button" value="Set"/> button after changing the setup of SET device.	
Clear	Restore all setups to default values by using <input type="button" value="Clear"/> button.	

## 6. SASS Setup



**Audio Over Ethernet AOE-212N v1.0.8.7**  
 English 한국어

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**System Setup**

- └ Network Setup
- └ Audio Setup
- └ Serial Setup(232)
- └ Serial Setup(422)
- └ Data Setup
- └ SASS Setup
- └ Time Setup
- └ View Log

**Administrator Menu**

- └ Upgrade System
- └ Restart System
- └ Factory Set System
- └ Password Change

### Setup SASS Configurations

Enable/Disable	<input type="text" value="Disable"/>
Server address	<input type="text"/>
SASS Port	<input type="text" value="1665"/>
Audio Port	<input type="text" value="5454"/>
Serial(232) Port	<input type="text" value="5455"/>
Serial(422) Port	<input type="text" value="5456"/>
Data Port	<input type="text" value="5457"/>
Period for try	<input type="text" value="5"/> min. (1~60)

\* **Help&Tips**

- Set address and port number properly to use SASS

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Content	Default	Value
Enable/Disable	Setup to enable/disable SASS.	Disable
Server address	Server address to update the information of device by using DDNS.	None
SASS Port	Setup to SASS port.	1665
Audio Port	Set the audio transmit port.	5454
Serial(232) port	Set the serial (RS-232C) communication transmit port.	5455
Serial(422) port	Set the serial (RS-422) communication transmit port.	5456
Data port	Set the data transmit the port.	5457
Period for try	Time period to access the server. Scope is 1~60 minutes.	5 minutes
Set	Apply and save the changed contents by using the <input type="button" value="Set"/> button after changing the setup of SET device.	
Clear	Restore all setups to default values by using <input type="button" value="Clear"/> button.	

## 7. Time Setup

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**Time and Date Setup**

Time Zone: (GMT+09:00) Seoul

Current Time: 1970/01/25 06:02:48

Time Setup:

- Manual Setup: month, day, year, hh, mm, ss
- Automatic time synchronization: Server address: time.bora.net
- GMT Change

**\* Help&Tips**

- There can be a couple of difference between the current time of this system and real time due to Internet connection delay.
- This system must be connected to Internet to use automatic time synchronization.

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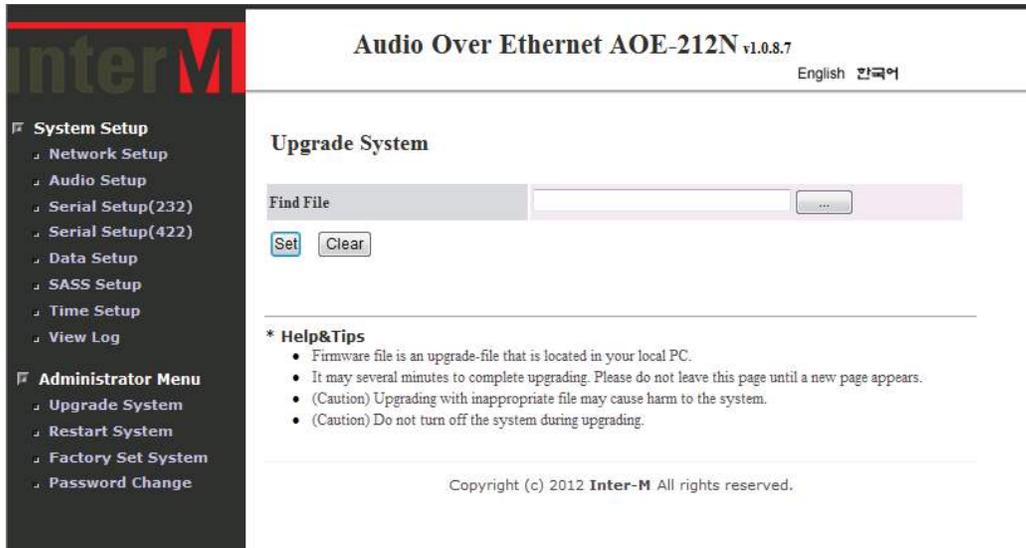
Content	Default	Value
Time Zone	Set the time in accordance with GMT.	GMT+09:00
Current Time	Current time in accordance with set GMT.	1970.01.01
Time Setup	Setup the time for AOE-212N.	
Manual Setup	Setup the time manually by user.	
Automatic time synchronization	If device is connected to internet, time can be synchronized automatically by using the time server.	Time server address : Time.bora.net
GMT Change	Change the GMT.	
Set	Apply and save the changed contents by using the <input type="button" value="Set"/> button after changing the setup of SET device.	

## 8. View Log

The screenshot shows the 'View Log' page of the AOE-212N v1.0.8.7 web interface. The sidebar on the left contains a menu with 'View Log' selected. The main content area is titled 'View log file' and displays a log entry: '[1970/01/25 05:15:37] Log file is not found. Make Dummy File' followed by '----- End of log file -----'. A 'Clear Log' button is located at the bottom of the log display area.

Content	Default	Value
View Log	Check the system information such as setup of device and upgrade information, etc. Recorded information is recorded with time and date.	
Delete Log	Press the delete log button to erase the log, the log records will be deleted.	

## 9. Upgrade System



Content	Default	Value
Find File	Select the file to upgrade the AOE-212N. Select the file you want if file explorer is opened by pushing the  button next to the text box. Only *.tar file can be selected.	
SET	<p>Upgrade the  device after selecting the file</p>  <p>Go to next step if confirm is pushed.</p>  <p>It will take about 1 minute to upgrade the system. System will restart after upgrading.</p>  <p>Processing, please wait...</p>	

## 10. Restart System

The screenshot shows the 'Restart Mode : Restart System' configuration page. The page title is 'Audio Over Ethernet AOE-212N v1.0.8.7' with language options for 'English' and '한국어'. A sidebar on the left contains a menu with 'System Setup' (expanded) and 'Administrator Menu'. Under 'System Setup', 'Restart System' is selected. The main content area features a 'Set' button, a 'Help&Tips' section stating 'Restart will reboot the system.', and a copyright notice: 'Copyright (c) 2012 Inter-M All rights reserved.'

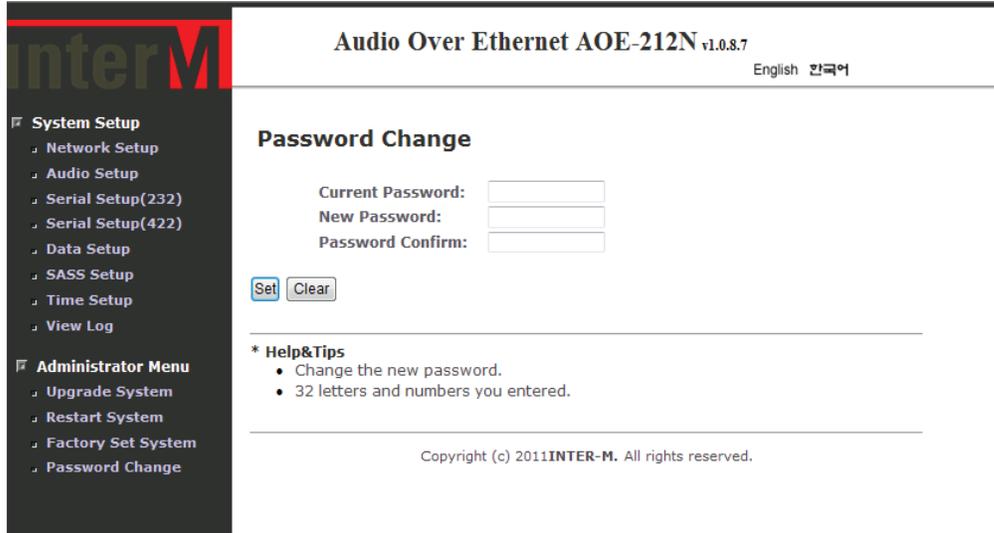
Content	Default	Value
Restart System	Restart the device.	
Set	Restart the device by using the <input type="button" value="Set"/> button.	

## 11. Factory Set System

The screenshot shows the web interface for the 'Factory Set System' of the Audio Over Ethernet AOE-212N v1.0.8.7. The interface includes a navigation menu on the left with options like System Setup, Administrator Menu, and Factory Set System. The main content area displays the title 'Restart Mode : Factory set System' and a 'Set' button. A help tip states: '\* Help&Tips' followed by 'Factory set will Initialization the device.' The footer contains the copyright notice: 'Copyright (c) 2012 Inter-M All rights reserved.'

Content	Default	Value
Factory Set System	Restore the device to factory setting. All information will be deleted.	
Set	Restart the device by using the <input type="button" value="Set"/> button.	

## 12. Password Change



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**System Setup**

- Network Setup
- Audio Setup
- Serial Setup(232)
- Serial Setup(422)
- Data Setup
- SASS Setup
- Time Setup
- View Log

**Administrator Menu**

- Upgrade System
- Restart System
- Factory Set System
- Password Change

**Password Change**

Current Password:

New Password:

Password Confirm:

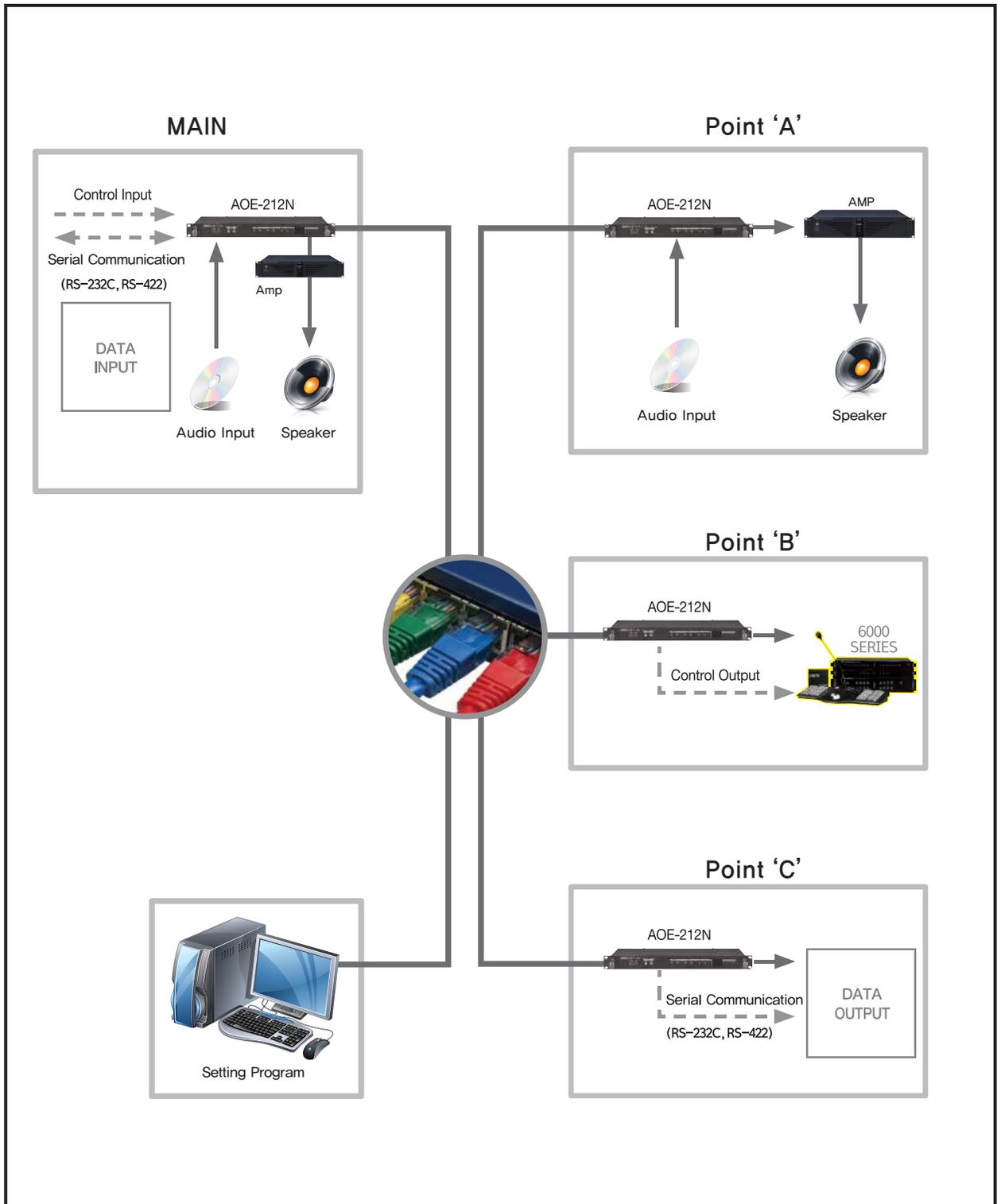
**\* Help&Tips**

- Change the new password.
- 32 letters and numbers you entered.

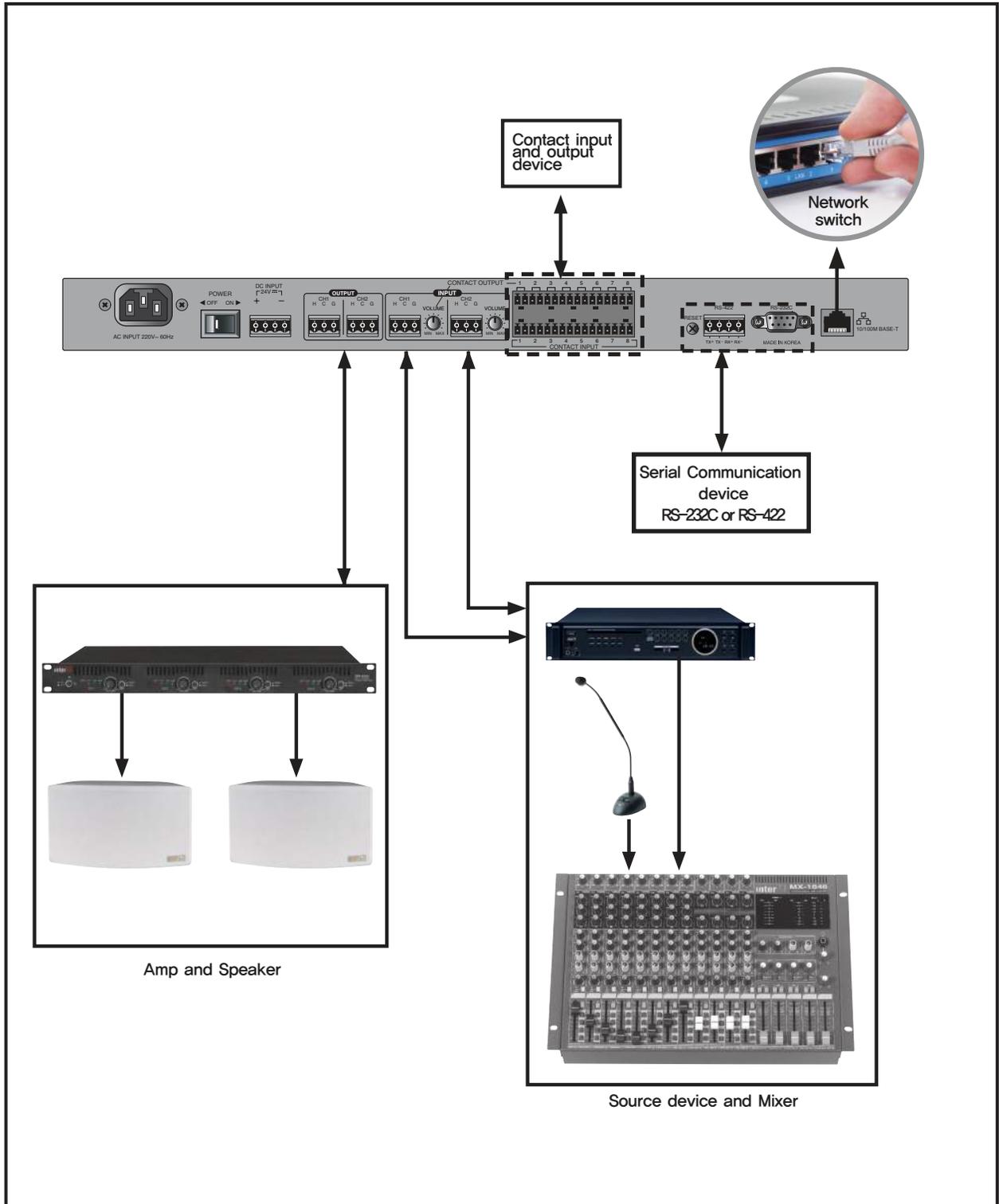
Copyright (c) 2011INTER-M. All rights reserved.

Content	Default	Value
Password Change	Change the administrator' s password.	
Set	Apply and save the changed contents by using the <input type="button" value="Set"/> button after changing the setup of SET device.	
Clear	Restore all setups to default values by using <input type="button" value="Clear"/> button.	

## Device structure block



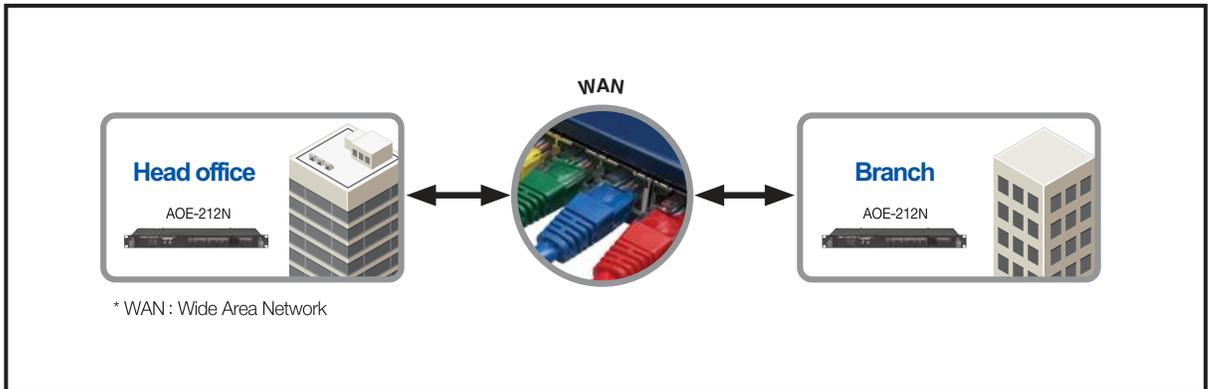
## How to connect



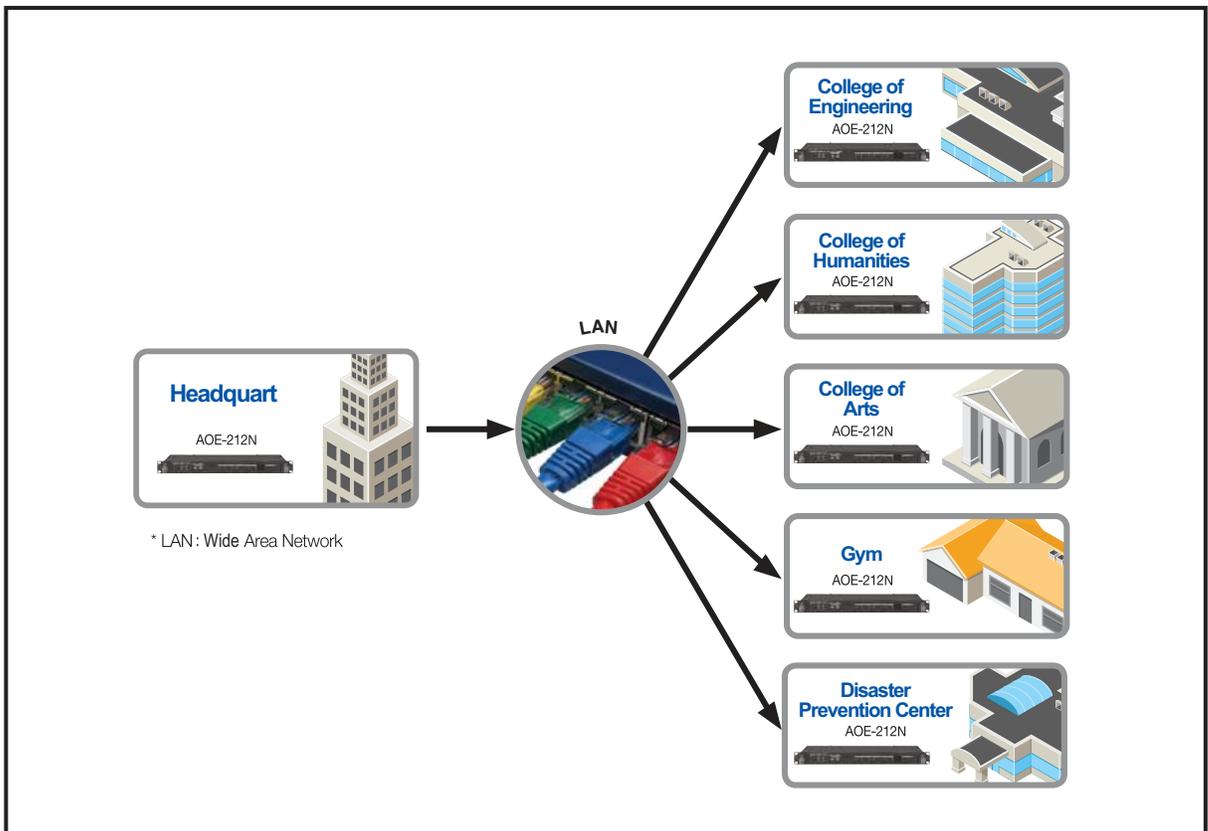
# Applications

Education institute, commercial facility, business facility, religion facility, gym, exhibition room, facility, leisure facility, them park, etc. 1:1 or 1: N functions are flexible to use in any space.

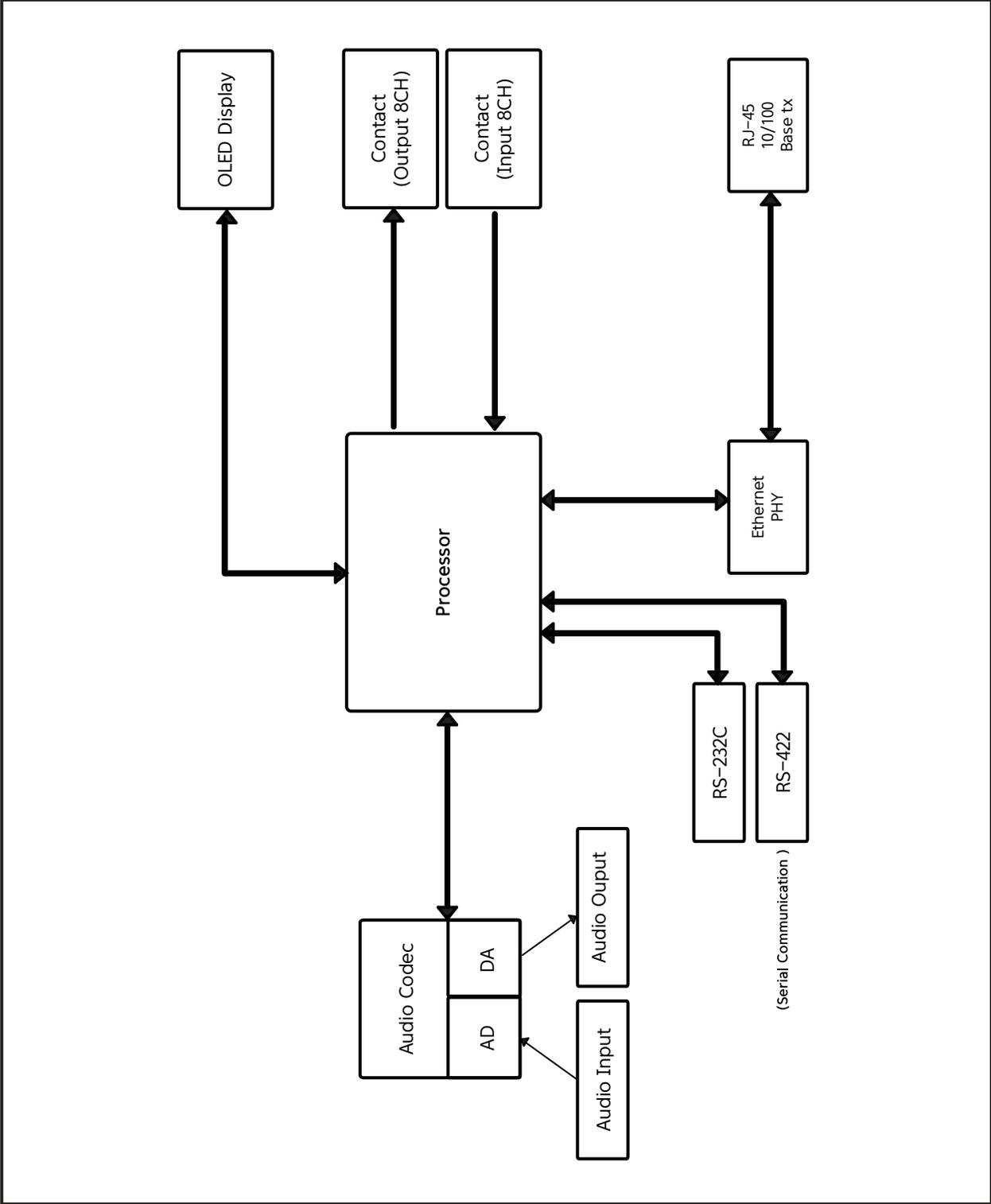
-1:1 Purpose



-1:20 (WAN network) and 1:64 (LAN) purpose (School, resort, theme park, exhibition room, museum, etc.)



# Block Diagram



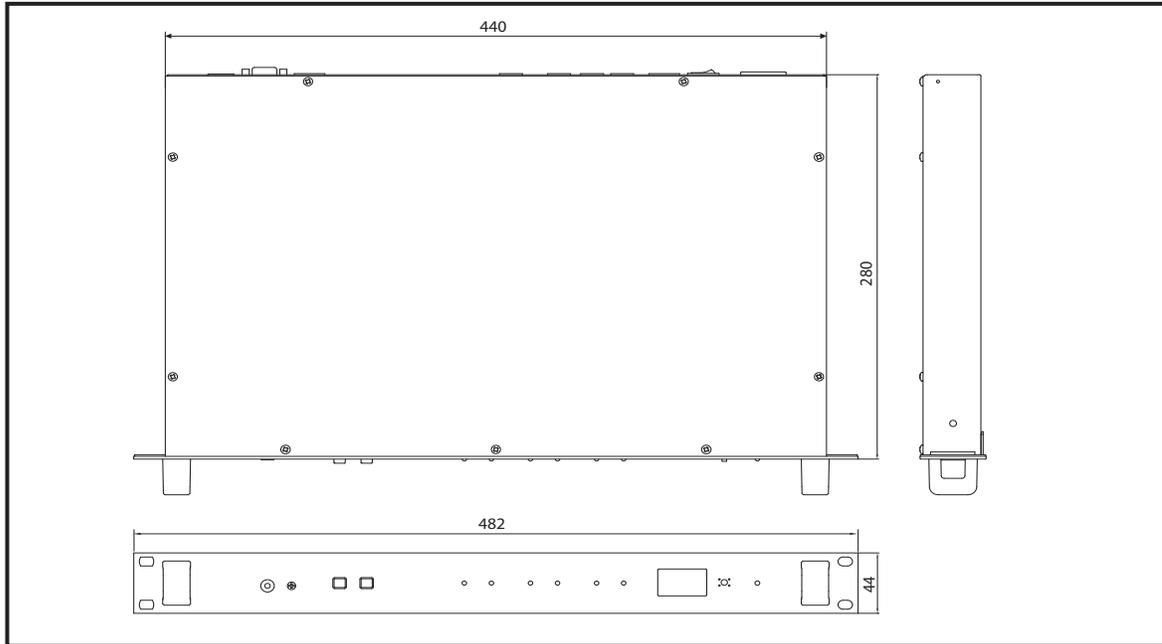
## Specifications

	AOE-212N
AUDIO	
Maximum Input Level	+ 20 dBu
Maximum Output Level	+ 20 dBu
Frequency characteristics (48Khz Sampling, $\pm$ 1dB)	30Hz ~ 20kHz
T.H.D (48Khz Sampling)	0.1% (under)
Support Sampling Frequency	16, 32, 44.1, 48Khz
Quantization bits	24 bit
Data communication	
Communication type	Contact, RS-232C, RS-422
Contact Input, Output	Input 8-Channel, Output 8-Channel
Serial communication rate	2400 bps~115200 bps
ETHERNET(LAN)	10-100 Base-T, (RJ-45)
General characteristics	
Operating temperature	-10 ~ 40° C
Using Power	100-120VAC or 220-240VAC:50/60Hz (Supplied AC mains transformer or DC 24V depends on country requirements)
Power Consumption	28W under
Weight (SET)	3.27kg/7.2lb
Dimension (SET)	482(W)×44(H)×280(D)mm/18.9(W)×1.73(H)×3.14(D)in

※ Specification and performance is subject to be changed without notice.

※ Signal propagation Latency CL2 Switch 1 via to audio : About 1sec/ Data: about 100ms / Contact : about 100ms

\* Dimensions



## Service

### Procedures

Take steps to insure the problem is not related to operator error or other products within the system. Information provided in the troubleshooting portion of this manual may help with this process. Once it is certain that the problem is related to the product contact your warranty provider as described in the warranty section of this manual.

### Schematic

A Schematic is available by contacting your warranty provider.

### Parts List

A Parts List is available by contacting your warranty provider.

## Variations and Options

### Variations

Products supplied through legitimate sources are compatible with local AC power requirements.

### Options

No optional items are available for this product.

## Warranty

Warranty terms and conditions vary by country and may not be the same for all products. Terms and conditions of warranty for a given product may be determined first by locating the appropriate country which the product was purchased in, then by locating the product type.

To obtain specific warranty information and available service locations contact Inter-M directly or the authorized Inter-M Distributor for your specific country or region.







# interM



Inter-M, Ltd. (Korea) began operations in 1983.

Since then, Inter-M has grown to become one of the largest manufacturers of professional audio and commercial sound electronics equipment in the world.

Inter-M has gained worldwide recognition for its own branded products, as well as private label manufacturing of electronics sold under other names (OEM).

The company is no longer just a Korean company, but rather a global company that is truly international in scope, with factories and offices in Korea and China, and sales and marketing operations located in Japan, Europe, and the U.S.A.

With more than 850 employees around the globe, Inter-M is well-poised for further growth and expansion.

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