

USER'S MANUAL

AUDIO MATRIX

RIO200

I/O Remote Module



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SAFETY RELATED SYMBOLS



The symbol is used to indicate that some hazardous live terminals are involved within this apparatus, even under the normal operating conditions.



The symbol is used in the service documentation to indicate that specific component shall be only replaced by the component specified in that Documentation for safety reasons.



Protective grounding terminal.



Alternating current /voltage.



Hazardous live terminal.

ON: Denotes the apparatus turns on.

OFF: Denotes the apparatus turns off, because of using the single pole switch, be sure to unplug the AC power to prevent any electric shock before you proceed your service.

WARNING: Describes precautions that should be observed to prevent the danger of injury or death to the user.



Disposing of this product should not be placed in municipal waste and should be separate collection.

CAUTION: Describes precautions that should be observed to prevent danger of the apparatus.

WARNING

• Power Supply

Ensure the power voltage matches the voltage of the power supply before turning ON the apparatus.

Unplug this apparatus during lightning storms or when unused for long periods of time.

• External Connection

The external wiring connected to the output hazardous live terminals requires installation by an instructed person, or the use of ready-made leads or cords.

• Do not Remove any Cover

There are maybe some areas with high voltages inside, to reduce the risk of electric shock, do not remove any cover if the power supply is connected.

The cover should be removed by the qualified personnel only.

No user serviceable parts inside.

• Fuse

To prevent a fire, make sure to use fuses with specified standard (current, voltage, type). Do not use a different fuse or short circuit the fuse holder.

Before replacing the fuse, turn OFF the apparatus and disconnected the power source.

• Protective Grounding

Make sure to connect the protective grounding to prevent any electric shock before turning ON the apparatus.

Never cut off the internal or external protective grounding wire or disconnect the wiring of protective grounding terminal.

• Operating Conditions

This apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on this apparatus.

SPECIFICATIONS

RIO200 -- Remote Audio I/O

Inputs

- Active Balanced
- Connectors: 3-pin female XLR, RCA
- Input Impedance: 5.1 k Ω
- THD+N: < 0.01 % typ 20-20k Hz, 0dBu
- Maximum Input: 20.0 dBu
- Frequency Response: 20Hz~20KHz, 0dB \pm 1.5dB
- Dynamic Range: -126dB max, A weighted
- Crosstalk: -87dB max, A weighted

Outputs

- Active Balanced
- Connectors: Euroblock 2 x 3-pin, 5 mm pitch
- Impedance: 240 Ohm
- Maximum Output: +20.0 dBu
- Frequency Response: 20Hz~20KHz, 0dB \pm 1.5dB
- Dynamic Range: -107dBu max, A weighted
- Crosstalk: -87dB max, A weighted

Indicators

- Signal: -30dBu Green LED, peak-reading
- Overload: +17dBu Red LED, peak-reading

Ports

- RD net to Matrix: RJ45, 100 m CAT 5e cable (150 m with ground connection)

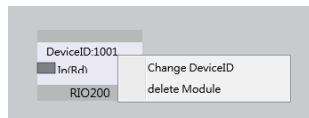
Dimensions

- L x H x D: 147 x 86 x 47 mm

SOFTWARE CONTROL

Please use high rated network cable to connect the Ethernet port of PC and the LAN port of serve host device. Then run MatrixSystemEditor, make sure the IP is linked rightly by the remarks given by dialogs. At the main interface, you can drag the device in the left column to the right area, it is the operation to add a device. Please make sure the device you added is physically linked, or there would be no effects even if all settings are saved. Double click for specific operation, here we add a RIO200.

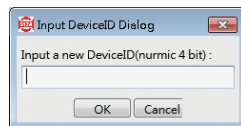
If the device is connected properly, the gray rectangle in the left middle would turn to green.



ID modification

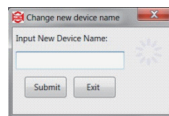
Right click on the “DeviceID” position, the function menu popped up as shown; click “Change DeviceID”, then enter the number(4 bit) you wanted in the text box, finally click OK to save and to take effect.

Note: The first time to use the whole system, initial work to assign ID for each device is necessary for its functioning.



Device rename

Double click on the device block, and the click the “CHANGE DEVICE NAME” on the shown dialog, another window popped up, enter the name you wanted to textbox and click “Submit” button to save.(Please make sure the name can only consist of alphabets, numbers and common symbols.)



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

Do not use this apparatus near water. Install in accordance with the manufacture-r's instructions. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat. Do not block any ventilation openings.

No naked flame sources, such as lighted candles, should be placed on the apparatus.

IMPORTANT SAFETY INSTRUCTIONS

- Read these instructions.
- Follow all instructions.
- Keep these instructions.
- Heed all warnings.
- Only use attachments/accessories specified by the manufacturer.

• Power Cord and Plug

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.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

• Cleaning

When the apparatus needs a cleaning, you can blow off dust from the apparatus with

a blower or clean with rag etc.

Don't use solvents such as benzol, alcohol, or other fluids with very strong volatility and flammability for cleaning the apparatus body. Clean only with dry cloth.

• Servicing

Refer all servicing to qualified personnel. 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 .

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.

The mains plug is used as the disconnect device, the disconnect device shall remain readily operable.

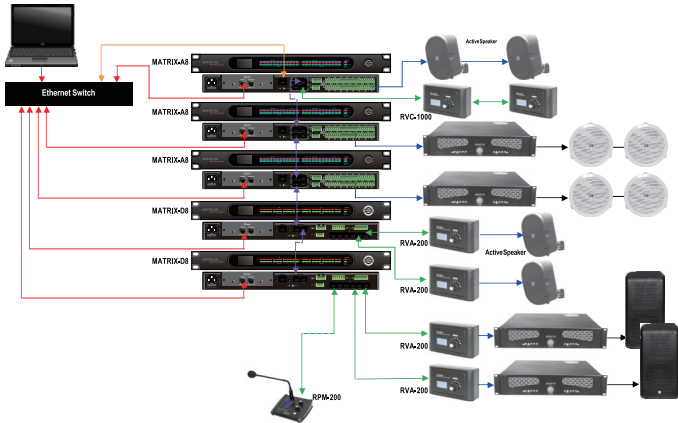
FOREWORD

Thanks to purchase the product of our company, please read this manual carefully before any operation.

Note: This guide contains all the information needed for the product. There might be some differences between the item and its description; please refer to the real product for the features.

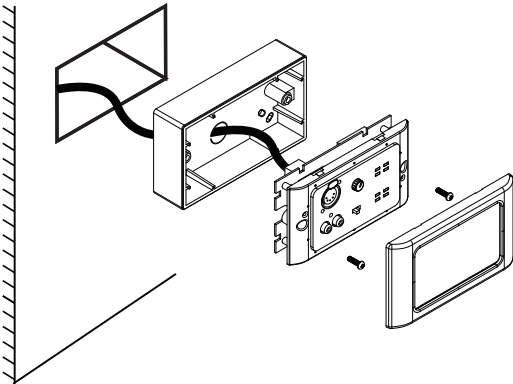
AUDIO MATRIX

Audio Matrix is a system which contains multiple signal inputs and outputs; each input can be assigned to any output like matrix in mathematics. Parameters controls are available for all the inputs and outputs, and are easily changeable; all the configurations can be backed up and restored, easy to copy and to extend. Audio Matrix gives the ability to build complex audio setup in one device providing an instinctive operating interface for both professional and beginner.



INSTALLATION

Pass cables through inner wall rear case, insert the cable to the RJ45 port, and insert the phoenix terminal to dedicated port; then fix panel with crews and clip the decorated frame.



BASIC OPERATION

RIO200 -- I/O Remote Module

The RIO200 is a remote input and output module providing 2 x analog channels IN and 2 x analog channels OUT. The device includes built-in A/D and D/A converters processing digital audio AES3 signals from and to the MATRIX-A8.

a. 2 Channel Inputs

A & B analog line Inputs assigned to channels 9/10 or 11/12 of MATRIX-A8.

b. Microphone Input

XLR connector for MIC. If connected, it replaces the A channel input.

c. Microphone volume

Button to adjust the MIC input level.

d. Phantom power

48V switchable phantom power for electret MIC.

e. Signal indicators for the Inputs

Channel A (MIC) and B input signal status indicators for signal presence and clip.

f. Signal indicators for the Outputs

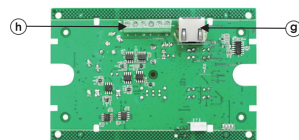
Channel A and B input signal status indicators.

g. RD Port

Connection to MATRIX-A8. The maximum CAT 5e cable length is 100 meters.

h. 2 Channel Outputs

2 channel analog line Outputs assigned to RD port 9/10 or 11/12 of MATRIX-A8.



SYSTEM PREVIEW

Audio Matrix is a system which combines the hardware with software. The core device is Matrix A8 or Matrix D8. The major features are listed below:

1. 12 INPUTS and 12 OUTPUTS

2. In case of extension links, the maximum goes up to 192 inputs and outputs.

3. Broadcast different zones simply by paging unit control.

4. A remote control unit can assign the volume in different zones separately.

5. Control signals are transferred individually with dedicated wires separated from the audio stream, avoiding conflicts and improving the flexibility and the reliability.

6. The transmission for audio stream is based on AES/EBU protocol, while the control signal used a RS-485 format.

There are six members in the MATRIX SYSTEM family:

MATRIX A8 --- Server host;

MATRIX D8 --- Server host (Compared to A8, 8 analog I/O for the A8, 8 digital I/O for D8);

RVC1000 --- Remote volume control with a link port;

RVA200 --- Remote volume control with additional outputs;

RIO200 --- Remote analog inputs and outputs;

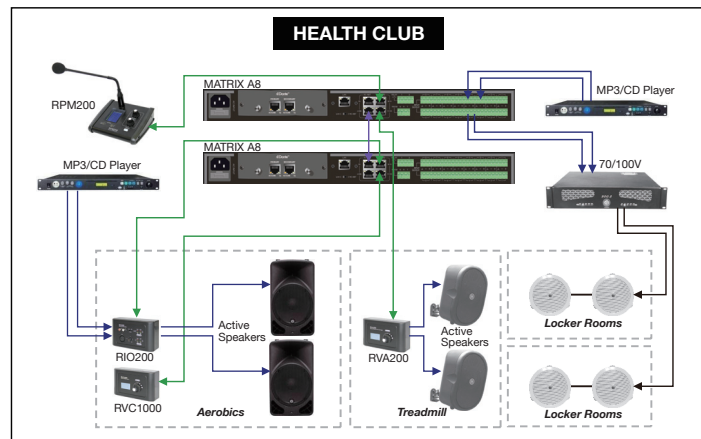
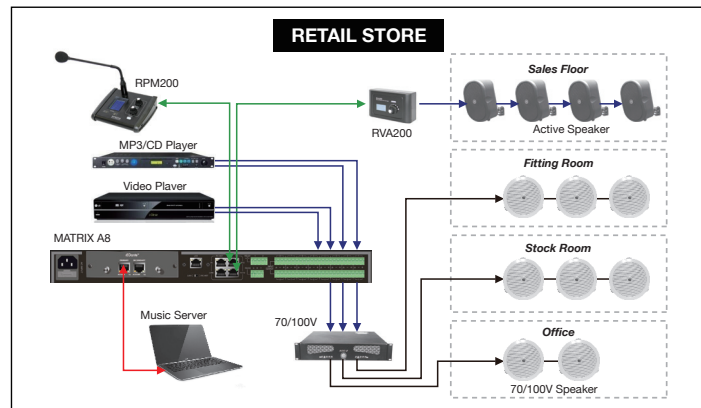
RPM200 --- Remote paging station.

By using a combination of the above six devices, most of the broadcasting or routing requirements can be fulfilled.

This system fits perfectly for schools, middle and small companies, supermarkets, bars and restaurants, health clubs, small libraries ... The friendly and quick implementation of primary and advance parameters makes easy the design of professional as well as simple applications.

Here are some common examples:

SYSTEM PREVIEW



SYSTEM PREVIEW

