



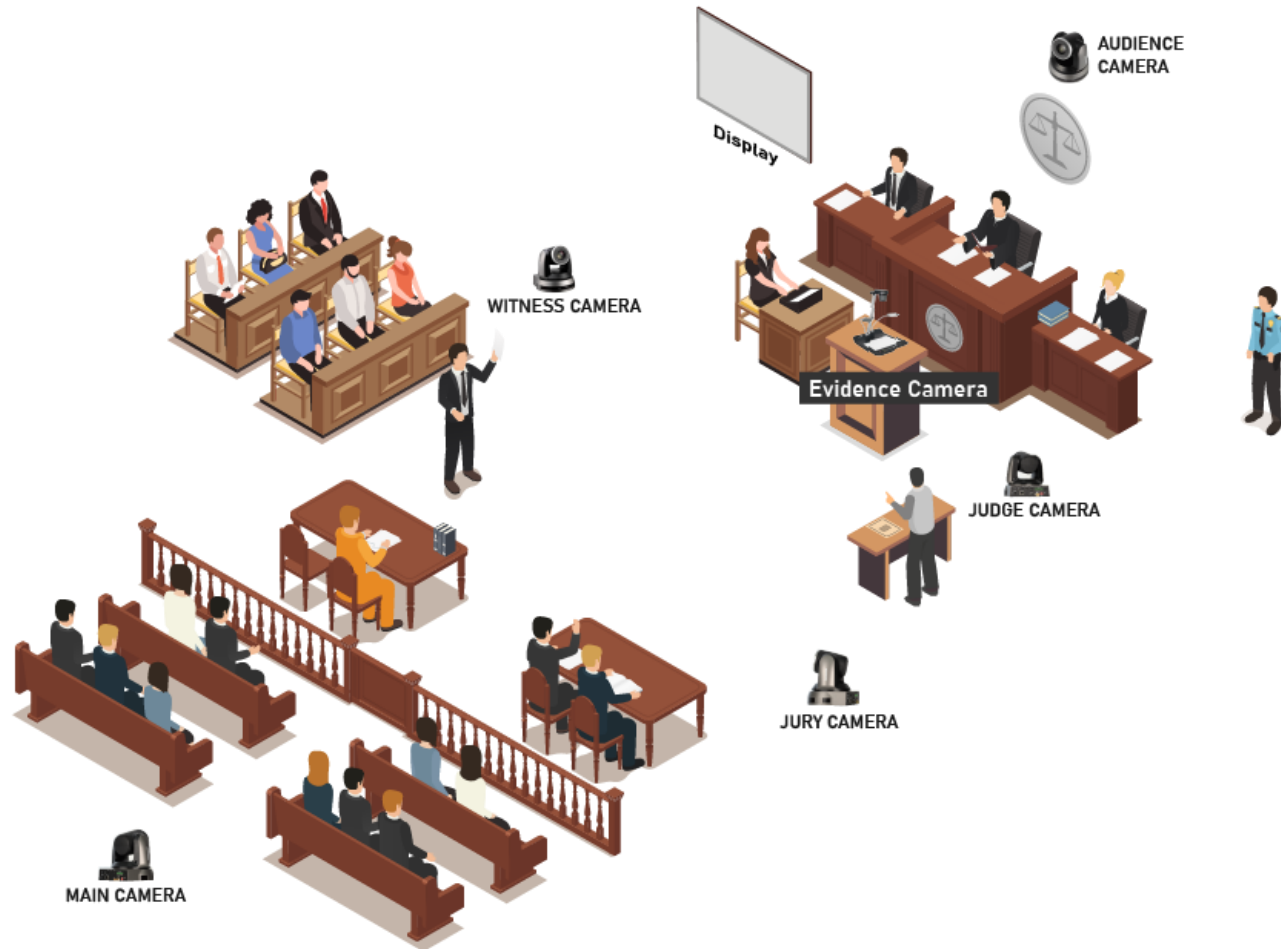
Lumens[®]

OIP-N Bridge Audio Routing Setting Guide

OIP-N Bridge Audio Routing

By integrating audiovisual systems through the **OIP-N Bridge**, customers can reduce equipment costs as well as installation and maintenance expenses, thereby making the **Lumens OIP-N Bridge** solution more attractive and encouraging customers to transition to Lumens OIP-N Bridge system products.

Scenario - Courtroom



Functional Requirements

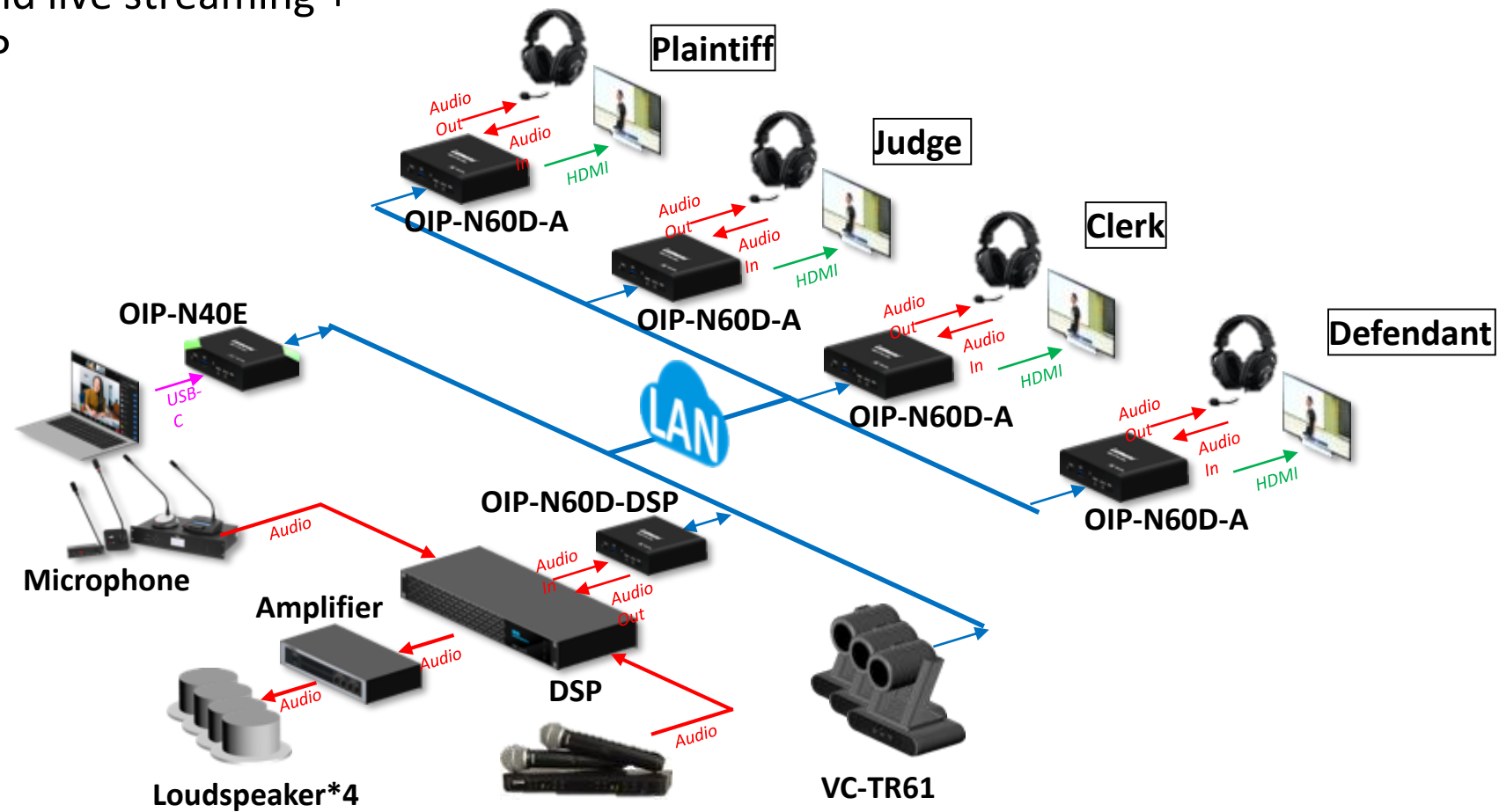
- Multi-channel live streaming and recording, supporting remote court hearings
- Cameras capture judges, witnesses, prosecutors, defense attorneys, and other participants
- Automatic tracking of witnesses and attorneys
- Four channels of simultaneous video recording and audio recording
- **OIP:** Enables one-cable Dante BYOM implementation
- **OIP:** Provides IP-to-HDMI and Audio-to-Dante conversion
- Integration with environmental control systems (room control / automation systems)

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Application:

BYOM + Recording and live streaming +

Non Dante Audio DSP



Courtroom

- How to use:

1. OIP-N40E

Step1: Go to N40E [Stream]=>[Stream Setting], change Stream type to [RTSP or NDI] and Apply.

Step2: Go to [System]=>[Output]=>[Virtual USB Setting], enable Virtual USB Output and select [Follow Routing] as UAC source.

(Continued on next slide)

Step1

Stream Setting:

Stream Type	RTSP	▼
Codec	H.264	▼
Bit Rate	7000	kbps
Rate Control	CBR	▼
RTSP URL	rtsp://192.168.6.62:8557/h264	
<input type="checkbox"/> Multicast		
<input type="checkbox"/> Authentication		
Account		
Password		
Apply	Cancel	

Step2

Virtual USB Setting

Virtual USB Output	<input checked="" type="checkbox"/>
Codec	MJPEG ▼
UAC Output	Follow Routing ▼

Courtroom

- How to use:

1. OIP-N40E

Step3: Go to [Source], select **VC-TR61** as Source.

Step4: Go to [Audio]=>[Stream Audi], enable “Stream Audio”, select [USB Audio] as Audio source.

Step3

OIP-N40E

Default

Source List: Search New Source Search Mode :

No.	Name	Location	IP Add.	Type	Status	Remark
1	----	----	----	Dante AV-H	OK	For Dante
2	VC-TR61	Default	192.168.6.24	RTSP	OK	8557/h264

☐
☐
☐ +

▲ ▼ Edit Delete Play

Step4

Audio

Audio In/Out Stream Audio Talk Back Audio Dante Audio

Stream Audio ☒

Audio Source USB Audio ▼

Encode Sample Rate 48 KHz ▼

Apply Cancel

Courtroom

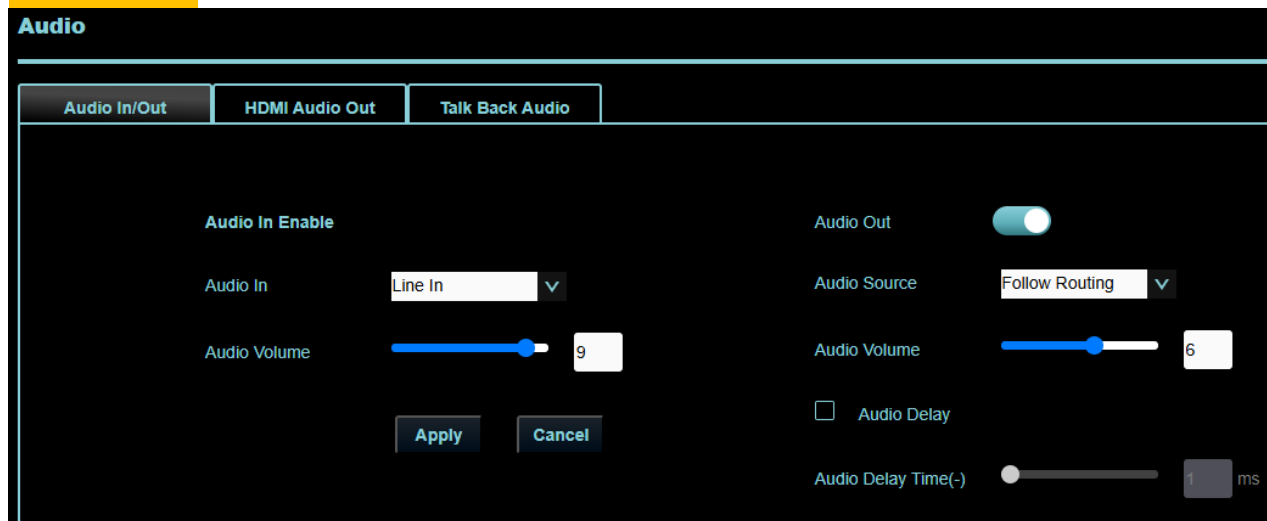
- How to use:

2. OIP-N60D-DSP:

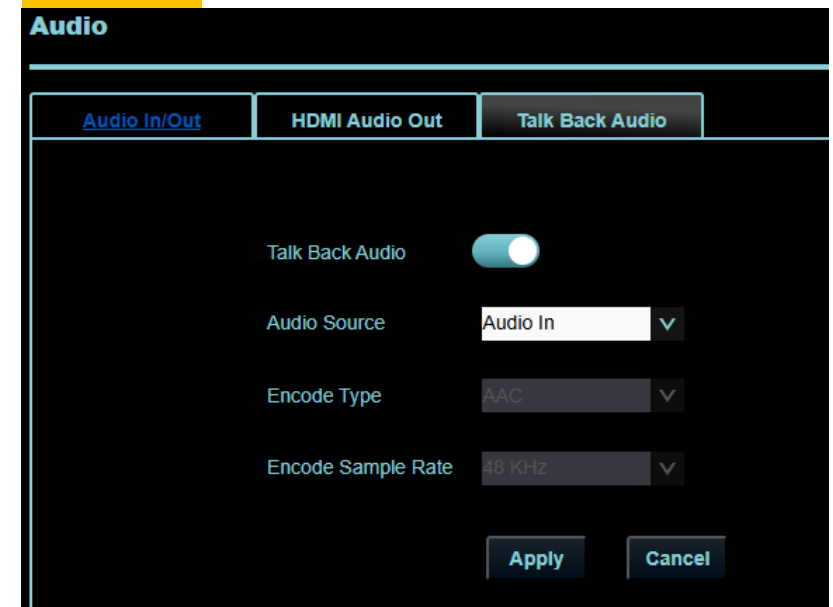
Step1: Go to [Audio]=>[Audio In/Out], [Audio in] select [Line in], [Audio out] enable and select [Follow Routing].

Step2: Go to [Audio]=>[Talk Back Audio], enable and select [Audio in].

Step1



Step2



Courtroom

- How to use:
3. **OIP-N60D-A:** (repeat below steps in setting each OIP-N60D-A)
Step1: Go to [Audio]=>[Audio in/Out], [Audio in] select [Line in], [Audio out] enable and select [Follow Routing].
(Continued on next slide)


Step1


Audio

Audio In/Out HDMI Audio Out Talk Back Audio


Audio In Enable

Audio In Line In ▾


Audio Volume  9

Audio Out 

Audio Source Follow Routing ▾

Audio Volume  6

☐ Audio Delay

Audio Delay Time(-)  1 ms

Apply **Cancel**

Courtroom

- How to use:
3. **OIP-N60D-A**: (repeat below steps in setting each OIP-N60D-A)
Step2: Go to [Audio]=>[Talk Back Audio], enable and select [Audio in].
Step3: Go to [Source], search and select **OIP-N40E** as video source.

Step2

Audio

Audio In/Out HDMI Audio Out Talk Back Audio

Talk Back Audio ☒

Audio Source Audio In ▼

Encode Type AAC ▼

Encode Sample Rate 48 KHz ▼

Apply Cancel

Step3

Source List: Search New Source Search Mode : on

No.	Name	Location	IP Add.	Type	Status	Remark
<input type="checkbox"/>	1	OIP-N40E	Default, 192.168.6.81	192.168.6.81	NDI	Source 1
<input type="checkbox"/>	2	VC-TR61	Default, 192.168.6.49	192.168.6.49	NDI	OK
<input type="checkbox"/>						

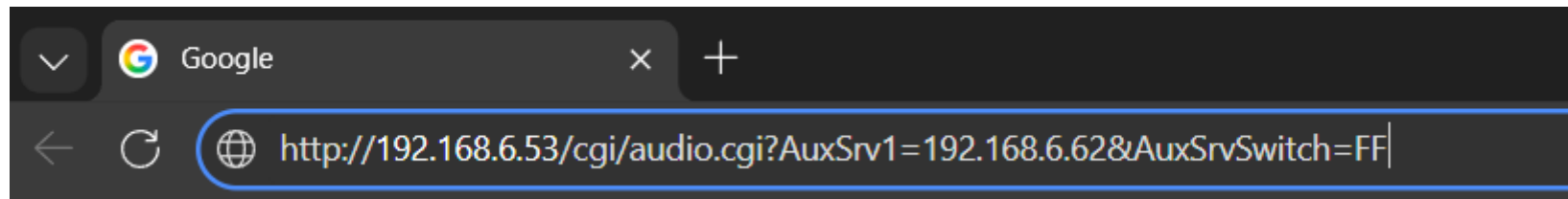
▲ ▼ Edit Delete Source 1 Source 2

Courtroom

- **How to use:**

4. Set Routing Command

- 1) Launch browser (e.g. Chrome, Edge).
- 2) Enter CGI command in Address Bar to each OIP-N device.
(If you have N devices, please repeat sending command N times.)



E.g.:

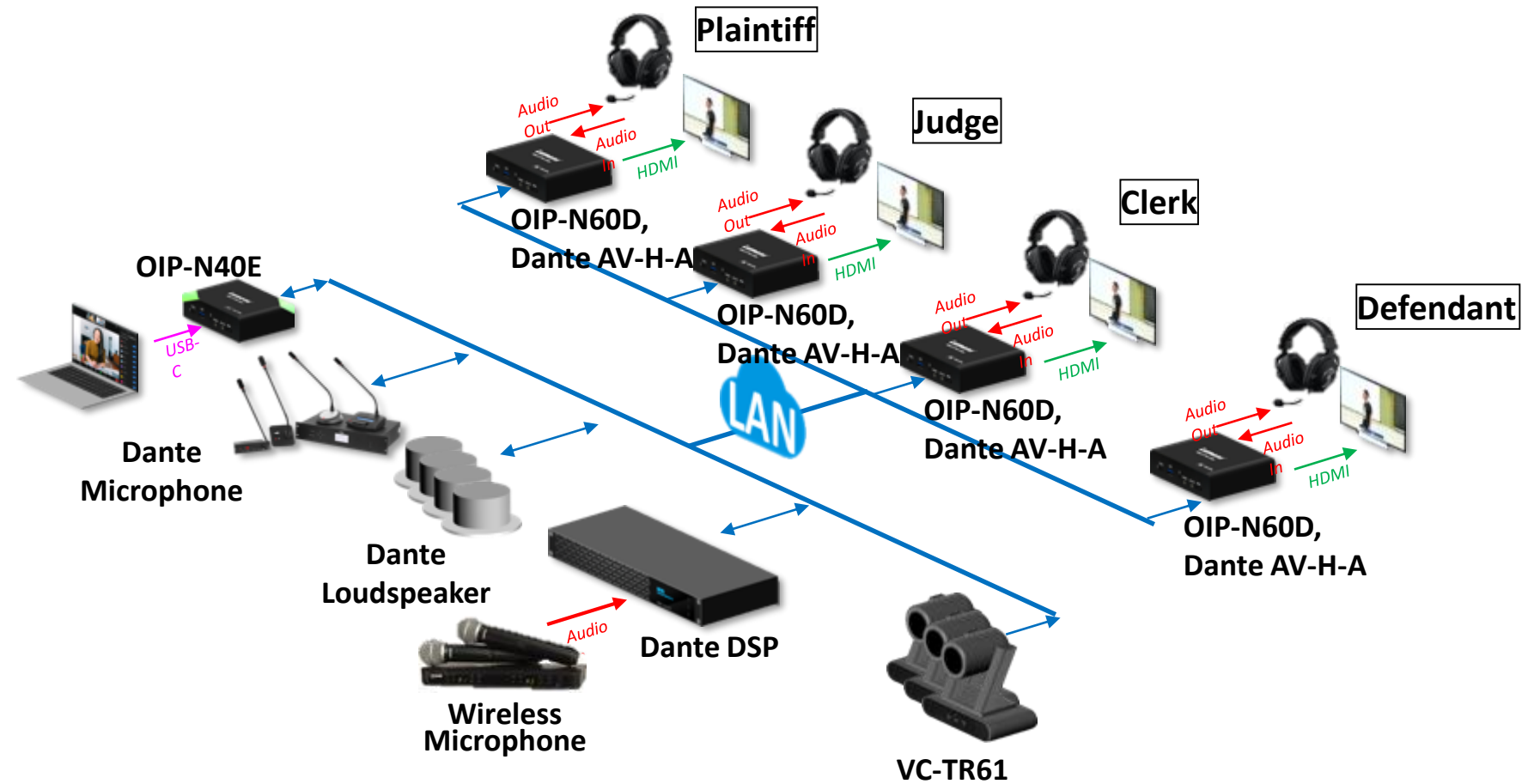
`http://OIP-N40E IP/cgi/audio.cgi?AuxSrv1=OIP-N60D-DSP IP&AuxSrv2=OIP-N60D-A1 IP&AuxSrv3=OIP-N60D-A2 IP&AuxSrv(N)=OIP-N60D-A(N-1) IP&AuxSrvSwitch=FF`

■ Limitation and attention item:

- 1) In the same environment, a maximum of 9 OIP-N devices can be used simultaneously.
One OIP-N can receive 8 audio channels.
- 2) Audio source needs to be [Line in] device, or it should add a convertor.

Scenario - Courtroom

Application: BYOM + Recording and live streaming +
Dante Audio DSP



Courtroom - Dante

- How to use:

1. OIP-N40E

Step1: Go to OIP-N40E [Stream]=>[Stream Setting], change Stream type to [RTSP or NDI] and Apply.

Step2: Go to [System]=>[Output]=>[Virtual USB Setting], enable Virtual USB Output and select [Follow Dante] as UAC source.

(Continued on next slide)

Step1

Stream Setting:

Stream Type	RTSP	▼
Codec	H.264	▼
Bit Rate	7000	kbps
Rate Control	CBR	▼
RTSP URL	rtsp://192.168.6.62:8557/h264	
<input type="checkbox"/> Multicast		
<input type="checkbox"/> Authentication		
Account		
Password		
Apply	Cancel	

Step2

Virtual USB Setting

Virtual USB Output	<input checked="" type="checkbox"/>
Codec	MJPEG ▼
UAC Output	Follow Routing ▼

Courtroom - Dante

- **How to use:**

1. OIP-N40E

Step3: Go to [Source], select **VC-TR61** as Source.

Step4: Go to [Audio]=>[Dante Audio], enable [Dante audio], select [USB Audio] as Audio source.

Step3

OIP-N40E

Default

Source List:

Search New Source

Search Mode

No.	Name	Location	IP Add.	Type	Status	Remark
1	----	-----	-----	Dante AV-H	OK	For Dante
2	VC-TR61	Default	192.168.6.24	RTSP	OK	8557/h264

+

▲

▼

Edit

Delete

Play

Step4

Audio

Audio In/Out

Stream Audio

Talk Back Audio

Dante Audio

Dante Audio

☒

Audio Source

USB Audio

▼

Encode Sample Rate

48 KHz

▼

Apply

Cancel

Courtroom - Dante

- How to use:
- 2. **OIP-N60D, Dante AV-H-A:** (repeat below steps in setting each OIP-N60D-A)
Step1: Go to [Audio]=>[Audio In/Out], [Audio in] select [Line in], [Audio out] enable and select [Follow Dante].
(Continued on next slide)

Step1

Audio

Audio In/Out	HDMI Audio Out	Talk Back Audio	Dante Audio
<p>Audio In Enable</p> <p>Audio In: Line In ▼</p> <p>Audio Volume: <input type="range"/> 6</p> <p>Audio Out <input checked="" type="checkbox"/></p> <p>Audio Source: Follow Dante ▼</p> <p>Audio Volume: <input type="range"/> 10</p> <p><input type="button" value="Apply"/> <input type="button" value="Cancel"/></p>			

Courtroom - Dante

- How to use:
2. **OIP-N60D, Dante AV-H-A:** (repeat below steps in setting each N60D-A)
Step2: Go to [Audio]=>[Dante Audio], enable and select [Audio in].
Step3: Go to [Source], search and select **OIP-N40E** as video source.

Step2

Audio

Audio In/Out	HDMI Audio Out	Talk Back Audio	Dante Audio

Dante Audio ☒

Audio Source Audio In ▼

Encode Sample Rate 48 KHz ▼

Apply Cancel

Step3

Source List: Search New Source Search Mode : on

No.	Name	Location	IP Add.	Type	Status	Remark
<input type="checkbox"/>	1	OIP-N40E	Default, 192.168.6.81	192.168.6.81	NDI	Source 1
<input type="checkbox"/>	2	VC-TR61	Default, 192.168.6.49	192.168.6.49	NDI	OK
<input checked="" type="checkbox"/>						

▲ ▼ Edit Delete Source 1 Source 2

Courtroom - Dante

- How to use:

3. Dante Controller setting

- 1) Go to Dante Controller, subscriber all the TX and RX you need.
- TX: N40E 、 N60D audio channel, Dante Mic, RX: Dante DSP ;
- TX: Dante DSP RX: N40E 、 N60D audio channel, Dante Speaker

■ Limitation and attention item:

- 1) The number of devices that can be deployed in the same environment is determined by the DSP channel count.
- 2) Audio source needs to be [Line in] device, or it should add a convertor.

Filter Transmitters		Filter Receivers		Transmitters (13)		Receivers (12)	
OIP-N40E-035133							
OIP-N60D-Dante-AV-H-03510e							
OIP-N60D-Dante-AV-H-03528b							
VC-TR61-03cef4							
Y001-Yamaha-RM-CR-B5B85D							
Y001-Yamaha-RM-TT-840769							
OIP-N40E-0350a3							
01							
01							
02							
OIP-N60D-Dante-AV-H-03528b							
01							
01							
02							
Y001-Yamaha-RM-CR-B5B85D							
01							
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
Y065-Yamaha-VXL1-16P-8c5507							
01							
02							