audio-technica

ATND1061LK
ATND1061DAN

Beamforming Array Microphone

User Manual
- Digital Microphone Manager Edition -

English

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Digital Microphone Manager

What is Digital Microphone Manager?

Digital Microphone Manager is a software application that supports the operation of digital microphones (supported models) from Audio-Technica. It enables users to create projects, configure microphone and audio settings, as well as set a microphone coverage range that suits the layout of rooms where microphones are actually installed. It also enables users to perform real-time editing and display talker positions in an online environment, a useful feature for on-site adjustments of advanced settings.

Supported models & recommended environments

Digital Microphone Manager is designed for use with computers. It cannot be used with tablets or smartphones.

Item	Description
Supported models	ATND1061LK ATND1061DAN
Supported OS	Microsoft Windows 10, 11
Recommended display resolution	1280 × 720 or higher

Installing Digital Microphone Manager

1 **Download Digital Microphone Manager to your computer.**

- The installer can be downloaded from the Audio-Technica website (https://www.audio-technica.com/) for the country or region where used.

2 **Double-click the downloaded "DigitalMicrophoneManager-X.X.X-Setup.exe".**

3 **Follow the instructions displayed on the setup wizard to install Digital Microphone Manager.**

- .NET 6.0 Runtime must be installed on the computer being used. Follow the on-screen instructions to install the software when the installation confirmation screen appears.

Examples of product uses

For example, a user could create presets and projects offline based on design plans before performing actual work at the microphone installation site. Once created, the user could then connect Digital Microphone Manager to the network at the installation site, synchronize it with microphones, and finely adjust each setting while monitoring live sound.

1 **Create a new project.**

- Open a new project and set the room size.
- For details, see "Creating new projects" (p. 12).

2 **Create a room.**

- Set a grid display that can be used as a reference when performing microphone layout.
- Load images (e.g., drawings of the room layout) that can be used as a reference for microphone placement and beam zone settings.
- For details, see "Room settings" (p. 16).

3 **Layout microphones.**

- Add microphones offline and perform settings such as for their position, direction, or elevation exclusion angle.
- For details, see "Adding and connecting microphones" (p. 25) and "Microphone settings" (p. 32).

4 **Set the beam zone.**

- Set Coverage Zones, Priority Zones, and Exclusion Zones.
- For details, see "Beam zone settings" (p. 42).

5 **Set the sound quality for each channel.**

- For details, see "Audio settings" (p. 61).

6 **Perform auto mix settings.**

- For details, see "Setting auto mix" (p. 69).

7 **Perform system settings.**

- Perform settings (e.g., indicator lamp colors) related to microphone settings.
- For details, see "Settings & Maintenance" (p. 89).

8 **Create presets.**

- For details, see "Presets" (p. 38).

9 **Establish network connections.**

- Perform network settings and connect to the network.

- The microphone ships from the factory with “IP Config Mode” set to “Auto”. Set the computer to automatically obtain IP address settings.
- For details, see "Connecting Digital Microphone Manager and microphone" (p. 9).

10 **Connect with a microphone.**

- Connect the microphones and synchronize microphone settings for the created project.
- For details, see "Connecting a microphone" (p. 29).

11 **Adjust settings by monitoring actual sound.**

- Adjust settings offline while monitoring microphone coverage and the quality of sound output from the speakers.

Connecting Digital Microphone Manager and microphone

Connecting microphones

1 **Set the computer to automatically obtain IP address settings.**

2 **Connect the microphone and the computer on which Digital Microphone Manager is installed to the same network.**

- The microphone ships from the factory with “IP Config Mode” set to “Auto”.

3 **Launch Digital Microphone Manager.**

- Depending on the operating system and security software being used, confirmation screens requesting communication authorization may be displayed during setup. When these appear, authorize the communication.
- To connect using a static IP address, set “IP Config Mode” to “Static”.

If you cannot connect with the microphone

If you cannot connect with the microphone, check the following:

- Digital Microphone Manager might not work properly due to the firewall or security software firewall of the computer being used. In this case, check the firewall settings and authorize communication with Digital Microphone Manager.
- Digital Microphone Manager uses IP multicast. Make sure that your multicast IP address/port number is not blocked in your network environment.
- To maintain stable connection to the microphone synced to Digital Microphone Manager, we recommend not connecting to multiple networks. For example, if the microphone is connected with a wired LAN, disable the Wi-Fi connection. If multiple networks are connected, the microphone may not be detected or the connection may be lost.

About firewall settings

1 **Click “Windows Security” from Start menu.**

2 **Click “Firewall & network protection”.**

3 **Click “Allow an app through firewall”.**

4 **Confirm that check marks have been entered for all domain, private, and public items in Digital Microphone Manager.**

- If check marks have not been entered, apply check marks for all items.

5 **Click “OK”.**

- If Digital Microphone Manager is not listed, click “Allow another app” to add Digital Microphone Manager. If it does not appear on the list, you need to specify a location. Specify a file in the following location:
  C:\Program Files\Audio-Technica\Digital Microphone Manager
  File name: DigitalMicrophoneManager.exe

Launching Digital Microphone Manager

1 **Launch Digital Microphone Manager installed to your computer.**

» **The top menu screen appears.**

Actions possible using the top menu screen

New Project

Create a new project.

Open Project

Edit a project by opening a project file saved to your computer.

Connect Online Device

Connect a microphone on the same network.

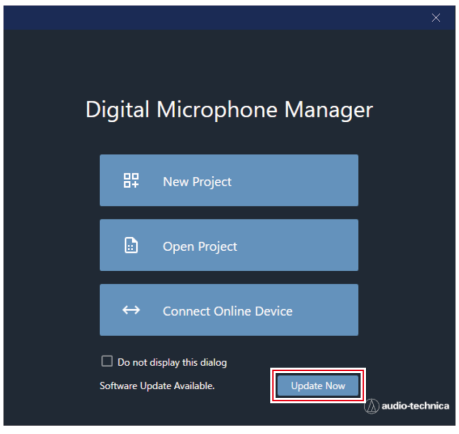
Update Now

Update Digital Microphone Manager. This will only be displayed when an update is available.

- If “Do not display this dialog” is turned on by entering a check in the box, the “New Project” screen will appear the next time the application is launched without the top menu screen being shown. Settings can also be changed using "Page Settings" (p. 103) under software application settings.

Updating Digital Microphone Manager

1 **Click “Update Now” on the top menu screen.**



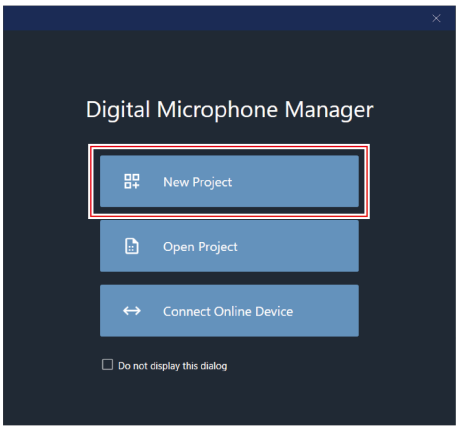
» **The update file search will start and the setup screen will appear.**

2 **Perform the update by following the instructions on the setup screen.**

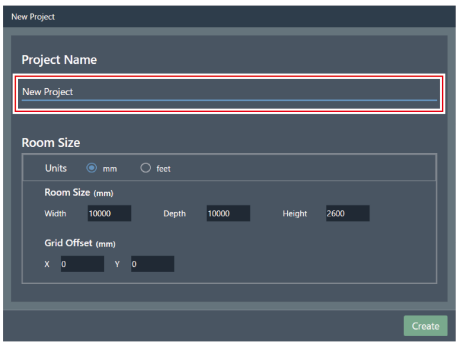
» **Once the update is complete, Digital Microphone Manager will automatically reboot.**

Creating new projects

1 **Click “New Project” on the top menu screen.**

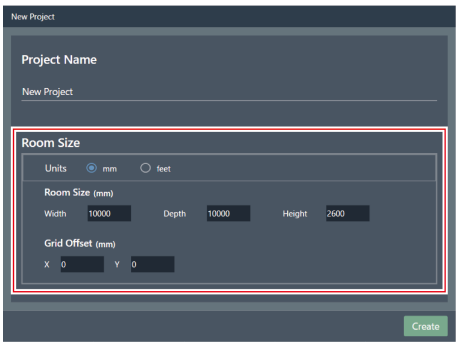


2 **Enter a project name.**



3 **Configure a room size.**

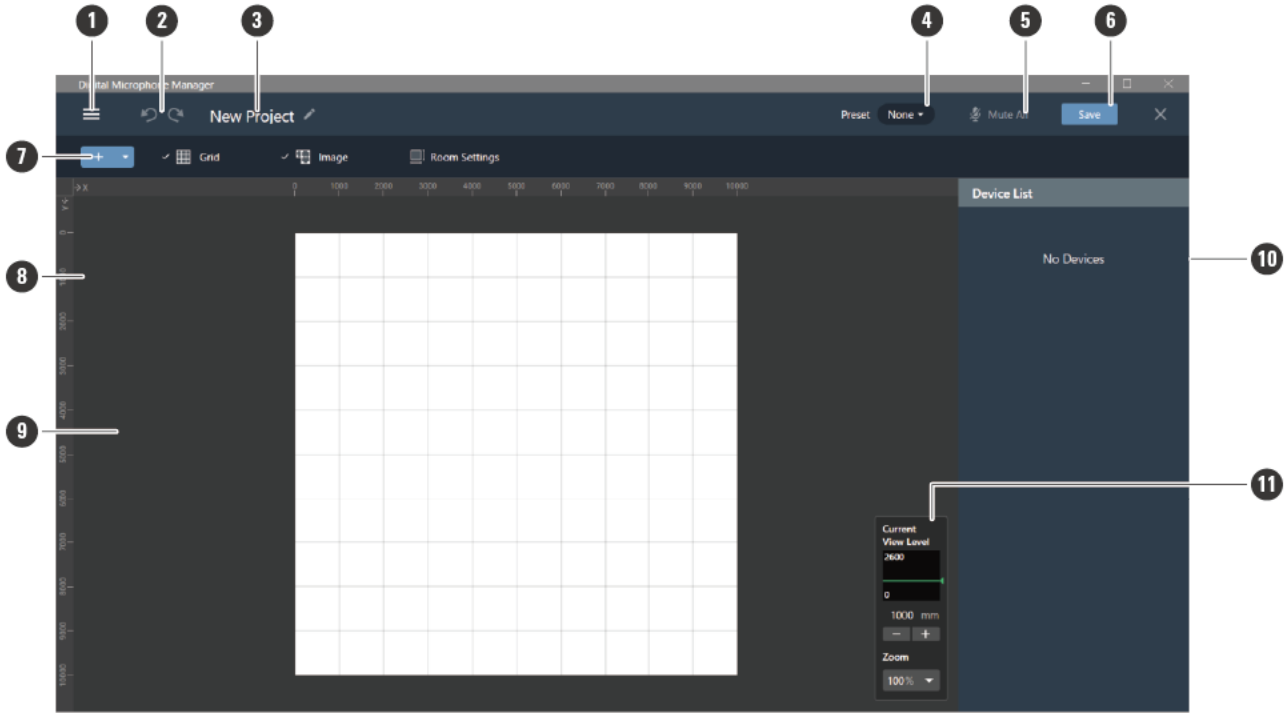
- Select the unit to be used next to “Units” and enter the “Width”, “Depth”, and “Height” for the “Room Size”.
- Use “Grid Offset” to set the room offset position from the origin point.
- The offset is moved in the minus direction away from the origin point. For example, to offset by 5,000 mm, enter “-5000”.
- Project names and room size settings can be changed later if necessary, even after the project has been created.



4 **Click “Create”.**

» **The screen for creating a new project opens.**

Overview of the project screen



1 Main menu

Click to select the main menu.

2 Undo/Redo button

Click to undo an action or redo an action.

3 Project name

Displays the project name. Click to change the project name.

4 Preset

Click to save or recall presets. For details, see "Presets" (p. 38).

5 Mute All

With each click, all microphones in the project switch between muted and unmuted.

6 Save

Click to save project files.

7 Toolbar

Displays setting tools for rooms and microphones.

8 Ruler

Displays a scale starting from the position of the origin point.

9 Main area

Displays a top-down view of the room. The main area can be dragged to move the display position of the room. It can also be used to display audio settings available when “Audio” is selected for the microphone.

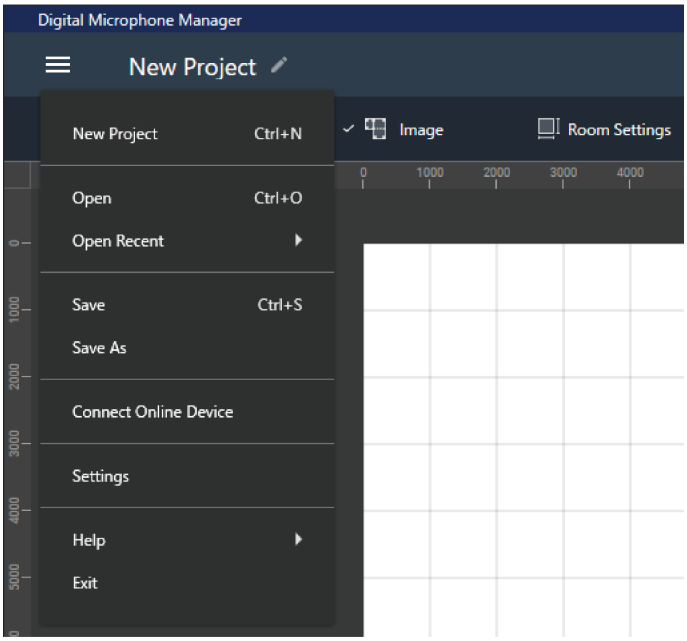
10 Context panel

Displays settings for selected microphones, beam zones, and tools. Also displays a device list when no microphones, beam zones, or tools are selected.

⑪ View level controller

Set microphone view levels and main area zoom level.

Actions possible using the main menu



Main menu	Description
New Project	Create a new project.
Open	Open project files saved to your computer.
Open Recent	Open recently opened project files.
Save	Save a project file by overwriting.
Save As	Name and save a project file.
Connect Online Device	Connect a microphone on the same network.
Settings	Configure software application settings. For details, see "Software application settings" (p. 101).
Help	Clicking “Help” in the submenu will display Digital Microphone Manager online help portal. Clicking “About” will display software application information, such as the version.
Exit	Exit Digital Microphone Manager.

Room settings

Change settings such as for grid or image displays and room sizes.

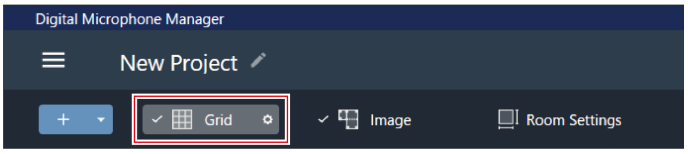
- Click the margin in the main area to deselect any microphones, beam zones, etc., that may be selected.

Displaying the grid

Turning the grid ON and OFF

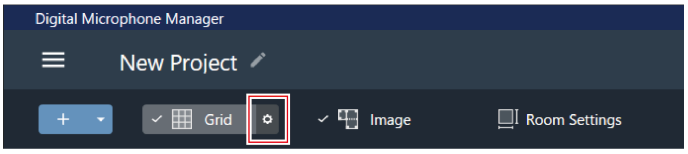
1 **Click “Grid” in the toolbar.**

- With each click, the grid display switches between ON and OFF.
- When the grid display is turned on, a check mark will appear next to “Grid”.



Changing grid display settings

1 **Click the gear icon next to “Grid” in the toolbar.**

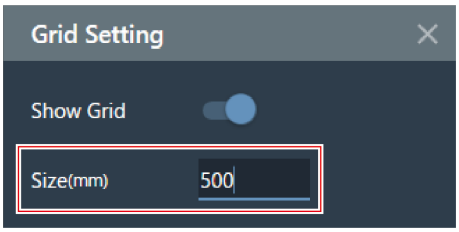


» **“Grid Setting” appears in the context panel.**

2 **Click the “Show Grid” switch.**

- With each click, the grid display switches between ON (blue) and OFF (no color).

3 **For “Size”, enter a size for each box of the grid.**



4 **Click the main area or press the Enter key.**

» **Grid display settings will be changed.**

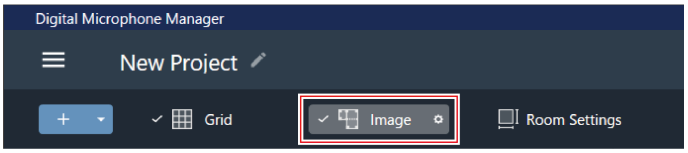
- The grid is displayed based on the origin point. The grid size and offset position of the room from the origin point can be changed to fit the actual grid ceiling.

Laying out images

Turning image displays ON and OFF

1 **Click "Image" in the toolbar.**

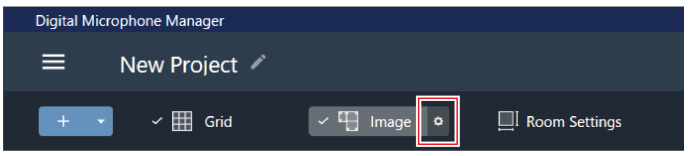
- With each click, the image display switches between ON and OFF.
- When the image display is turned on, a check mark will appear next to "Image".



» **The image display turns ON or OFF.**

Importing image files

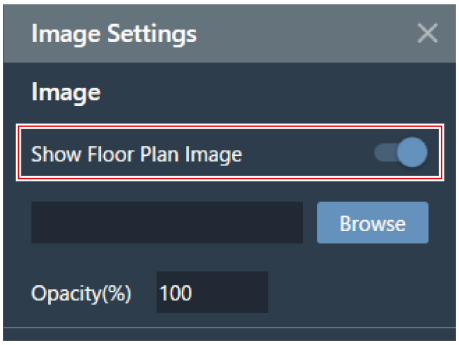
1 **Click the gear icon next to "Image" in the toolbar.**



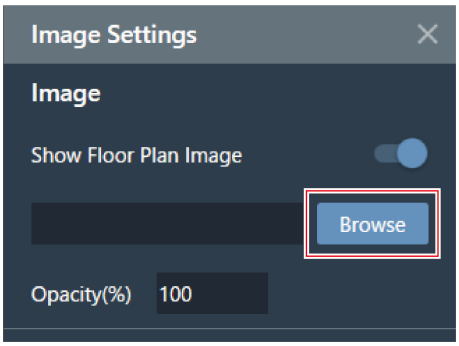
» **“Image Settings” appears in the context panel.**

2 **Click the switch for “Show Floor Plan Image”.**

- With each click, the image display switches between ON (blue) and OFF (no color).



3 **Click “Browse”.**



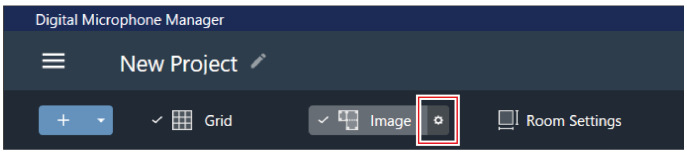
4 **Select and open image files saved to your computer.**

- .png, .jpg, .jpeg, and .bmp files are supported.
- Only one file can be imported.
- Importing another image after an image has already been imported will result in the first image being replaced by the second image.

» **The image is imported.**

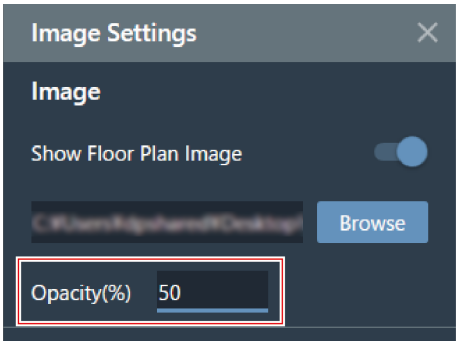
Setting image opacity

1 **Click the gear icon next to “Image” in the toolbar.**



» **“Image Settings” appears in the context panel.**

2 **For “Opacity”, enter the opacity.**

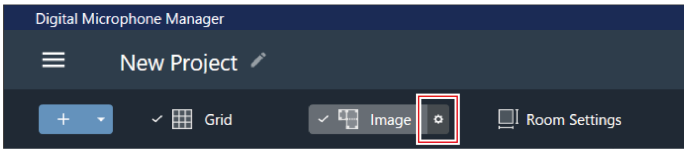


3 **Click the main area or press the Enter key.**

» **The image opacity is set.**

Setting image position and angle

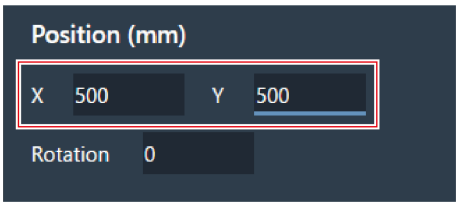
1 **Click the gear icon next to “Image” in the toolbar.**



» **“Image Settings” appears in the context panel.**

2 **Under “Position”, enter the position from the origin point using “X” (horizontal direction) and “Y” (vertical direction).**

- The upper-left corner of the image becomes the position for reference.



3 **For “Rotation”, enter the rotation angle of the image.**

- The image rotates clockwise at the entered angle.

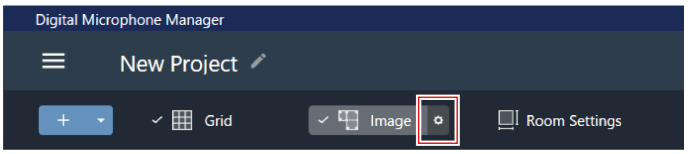
4 **Click the main area or press the Enter key.**

» **The image position and angle are set.**

- In the main area, the image can also be dragged to change its position.

Setting the image size

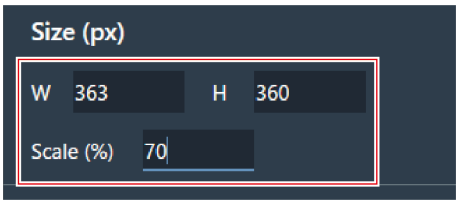
1 **Click the gear icon next to “Image” in the toolbar.**



» **“Image Settings” appears in the context panel.**

2 **Enter the pixel size using “W” (Width) and “H” (Height) under “Size”, or enter the scale ratio in “Scale”.**

- If a value is entered into either “W”, “H”, or “Scale”, the image will be resized while maintaining the ratio.
- Changing the ratio of the image width and height is not possible.



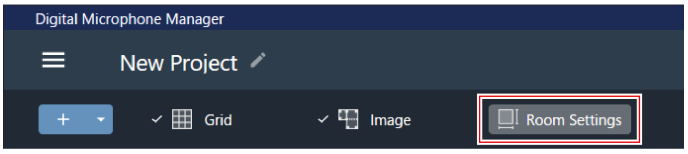
3 **Click the main area or press the Enter key.**

» **The image size is set.**

- In the main area, the point in the corner of the image can also be dragged to resize the image.

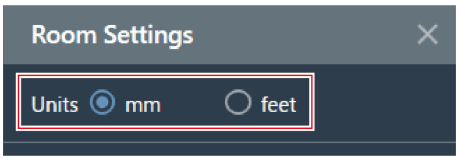
Setting the room size and offset

1 **Click “Room Settings” in the toolbar.**

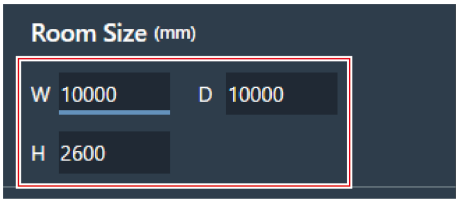


» **“Room Settings” appears in the context panel.**

2 **Select the unit next to “Units”.**



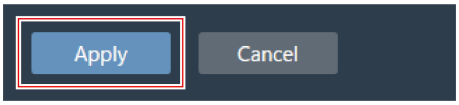
3 **Under “Room Size”, enter the room size using “W” (Width), “D” (Depth), and “H” (Height).**



4 **Under “Grid Offset”, enter the room offset position from the origin point using “X” (horizontal direction) and “Y” (vertical direction).**

- The offset is moved in the minus direction away from the origin point. For example, to offset by 5,000 mm, enter "-5000".

5 **Click "Apply".**



» **The room size and offset are set.**

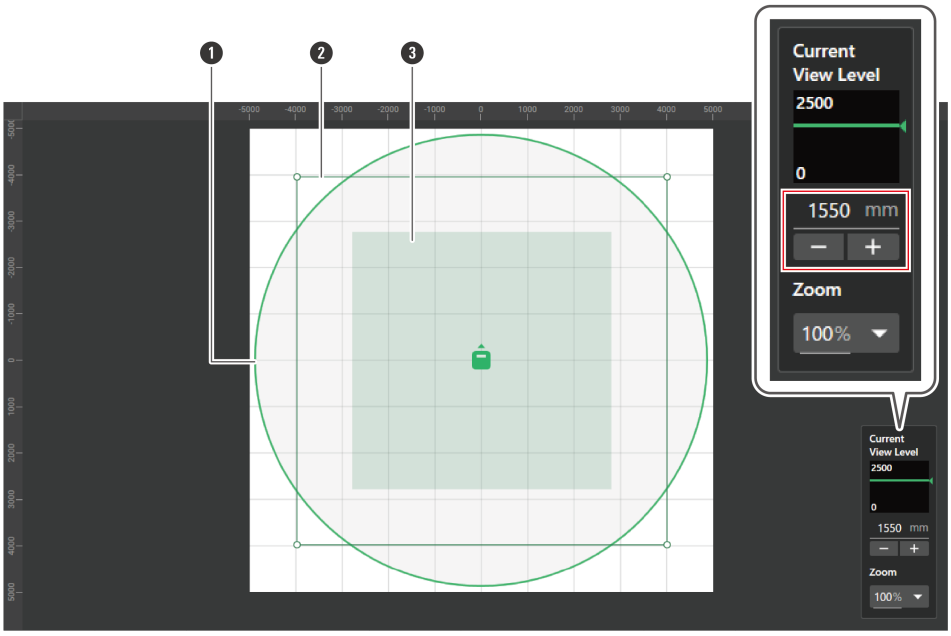
Changing the room view level

The microphone pickup area can be seen by adjusting the room's view level (display height) to match the height of a person's head when they stand or sit.

- The size of the microphone pickup area displayed in the main area changes based on the view level.

1 **Enter the display height using "Current View Level" in the view level controller or click "–" or "+".**

- When "–" or "+" is clicked, the display height changes by 50 mm.
- Click the beam zone to return to the view level at the time the beam zone was set.



1 Microphone pickup area
2 User-defined beam zone
3 Beam zone for current view level

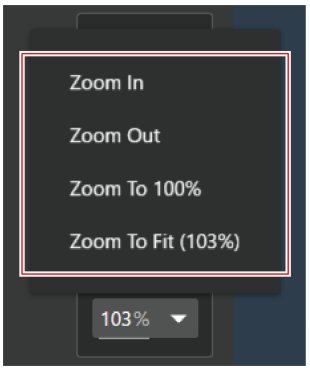
» **The displays for the microphone pickup area and beam zone change.**

Changing the zoom level of the main area

The zoom level of the main area can be adjusted between 10% and 600%.

1 **In the view level controller, click the area in the red box under “Zoom”.**

2 **Select a zoom level from the pull-down menu.**



Item	Description
Zoom In	Select to zoom in.
Zoom Out	Select to zoom out.
Zoom To 100%	Select to display at 100%.
Zoom To Fit	Select to display by zooming to fit the image size.

» The zoom level of the main area is changed.

- The zoom level can be changed directly using “Zoom” in the view level controller.
- The zoom level can also be changed by hovering the cursor over the main area and turning the mouse wheel.

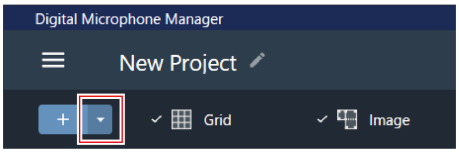
Adding and connecting microphones

Adding an offline microphone

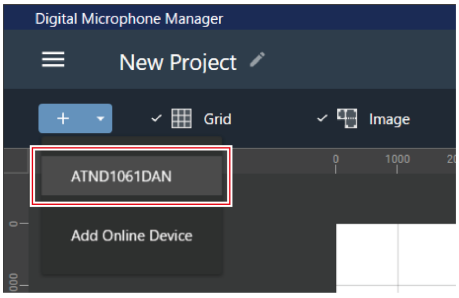
Add microphones in an offline environment.

- Click the margin in the main area to deselect any microphones, beam zones, etc., that may be selected.
- Up to 20 microphones can be added to each project.

1 **Click the area in the red box on the toolbar.**



2 **Click the model name of the microphone to be added from the pull-down menu.**



» The microphone is added to the main area.

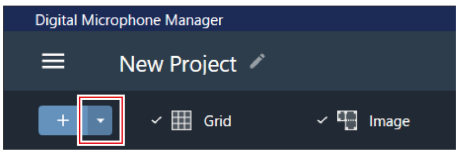
- Clicking "+" in the toolbar adds the model that was selected last.

Adding an online microphone

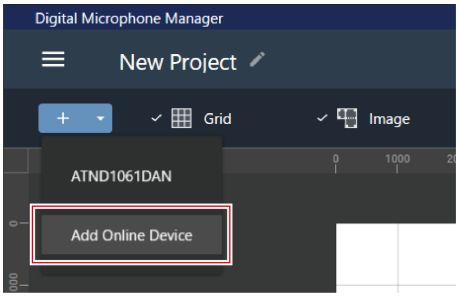
Add a microphone in the same network (online environment).

- Click the margin in the main area to deselect any microphones, beam zones, etc., that may be selected.
- Up to 20 microphones can be added to each project.

1 **Click the area in the red box on the toolbar.**

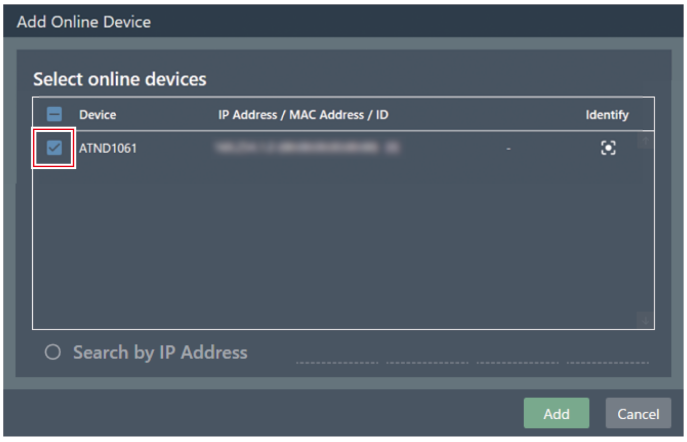


2 Click “Add Online Device” in the pull-down menu.

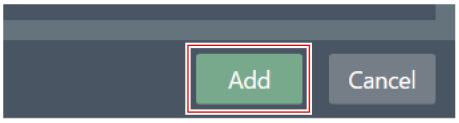


3 Select microphones to be added by clicking the corresponding check boxes.

- Clicking the check box at the top selects or deselects all check boxes.
- Online microphones can also be added by IP address by clicking “Search by IP Address”.



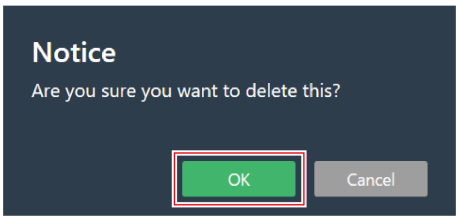
4 Click “Add”.



» **The microphone is added to the main area.**

Deleting a microphone

1. **Select a microphone in the main area.**
2. **Press the Delete key.**
3. **Click “OK” in the message.**



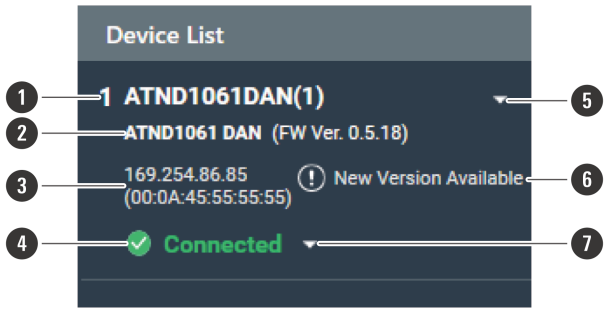
» **The microphone is deleted.**

- Selected microphones can also be deleted by selecting “Delete Device” from the microphone list menu in the device list.

Overview of the device list

When no selections have been made in the main areas, “Device List” appears in the context panel.

- Clicking the device list selects the microphone.



1. **Microphone name**

   Displays the microphone name.

2. **Model name / firmware version**

   Displays the microphone model name and firmware version.

3. **IP address / MAC address**

   Displays the microphone IP address and MAC address.

4 Microphone connection status

Displays the microphone connection status.
Connected: A connection was established normally.
Disconnected: Not connected with the microphone.
Missing: A connection error occurred.
Power Save: Connection established in power save mode.

5 Device list menu

Click to select the device list menu.

6 Firmware update

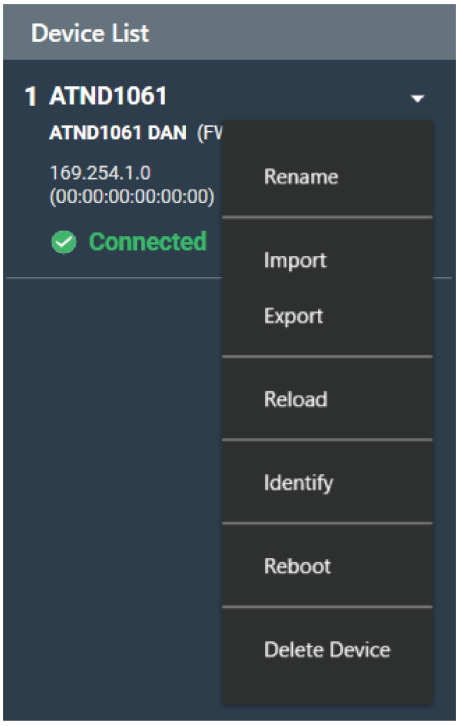
Displayed when an update is available for the microphone firmware. Update the firmware from “System Settings” > “Utilities” > "Firmware Update" (p. 95) on the Settings & Maintenance screen.

7 Connection menu

Click to change the microphone connection status.
Connect: Connect with a microphone. It may take several minutes to save presets when reflecting settings from the software application to the microphone.
Disconnect: Disconnect from a microphone.
Reconnect: Reconnect with a missing microphone.
Power Save Mode: Connect in power save mode.

- In power save mode, all operations on online devices will be disabled.

Actions possible in the device list menu



Device list menu	Description
Rename	Rename a microphone.
Import	Import microphone information from a file.
Export	Export microphone information to a file.
Reload	Import microphone information located somewhere on the same network.
Identify	Flash the microphone indicator lamp.
Reboot	Reboot the microphone.
Delete Device	Delete a microphone.

Connecting a microphone

Connect an offline microphone to a microphone that has actually been installed to synchronize microphone settings.

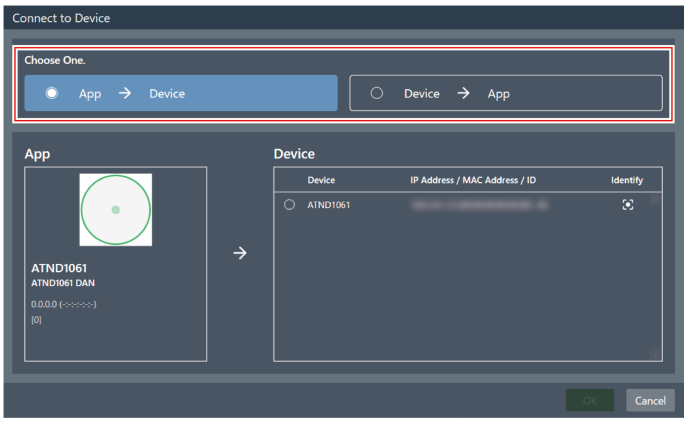
1 **Selections such as microphones or beam zones will be deselected.**

» **"Device List" appears in the context panel.**

2 **Click the area in the red box on the connection menu.**

3 **Click "Connect" in the pull-down menu.**

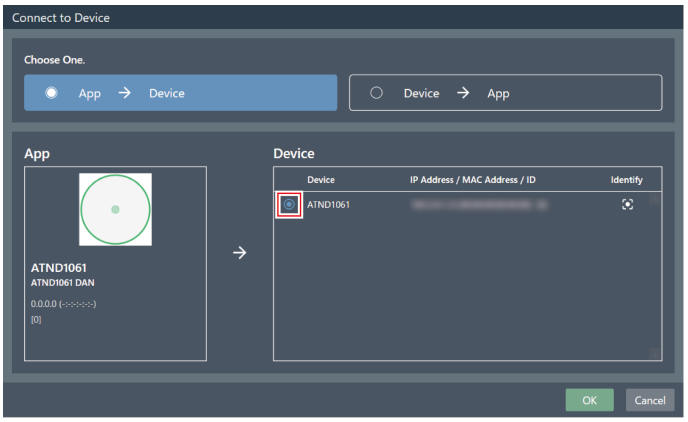
4 Under “Choose One.”, select the settings data to be reflected.



Item	Description
App -> Device	Push software application settings to the microphone.
Device -> App	Push microphone settings to the software application project.

5 Under “Device”, select the microphone to be connected.

- Only microphones on the same network are shown under “Device”.
- Click “Identify” to confirm the settings will be pushed to the desired connected microphone.



6 Click “OK”.

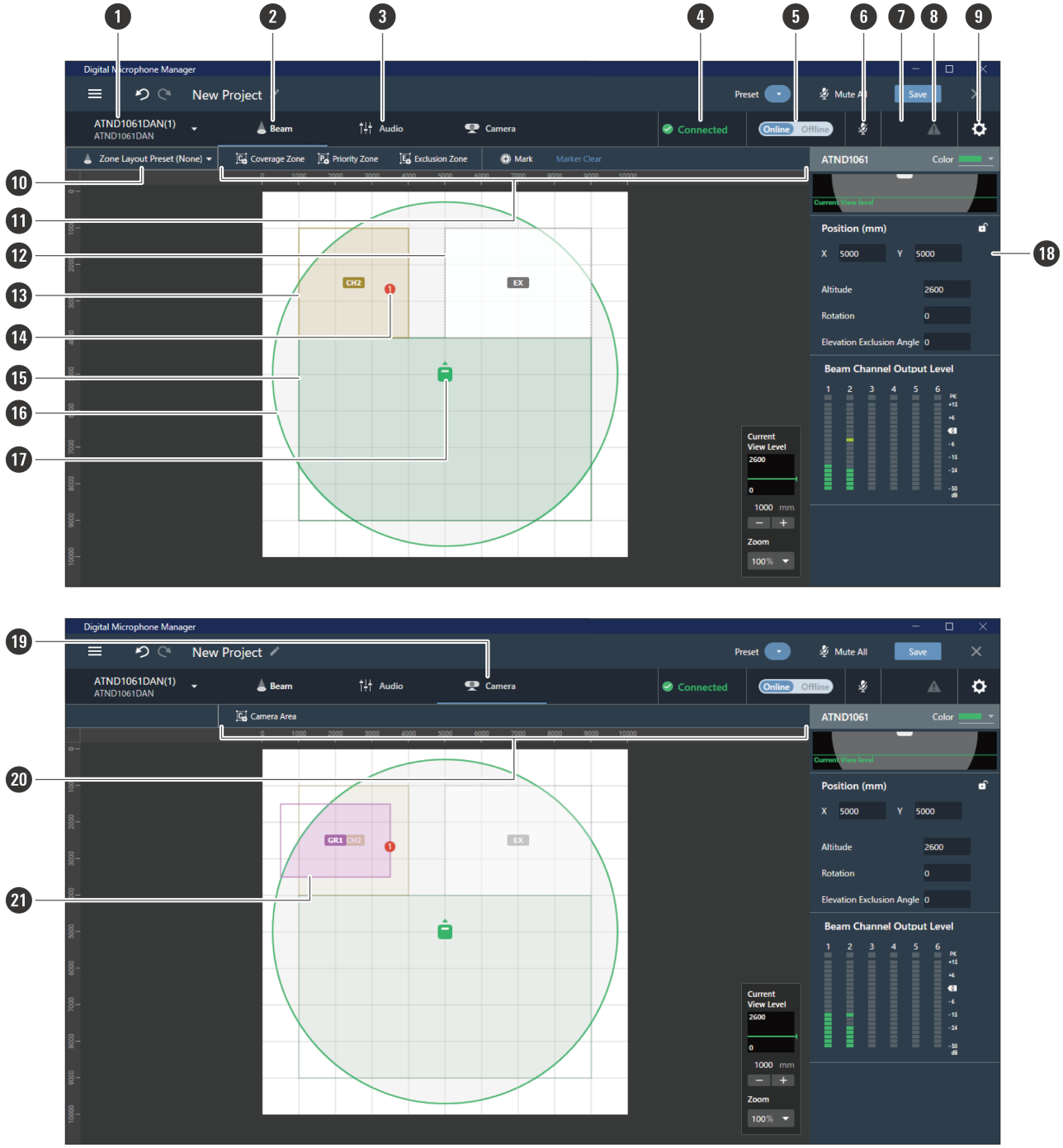
- It may take several minutes to save presets when reflecting settings from the software application to the microphone.

» **Once connected with the microphone, the microphone connection status switches to "Connected".**

Microphone settings

Overview of the microphone settings screen

Selecting a microphone will switch to the microphone settings screen.



1 Microphone name / model name

Displays the microphone name and model name. The microphone name can be changed using “Rename” in the device list menu. Click to select and display settings for a different microphone.

2 Beam Tab

Click to switch to the display for the microphone beam zone settings.

3 Audio Tab

Click to switch to the display for the microphone audio settings.

4 Microphone connection status

Displays the microphone connection status.
Connected: A connection was established normally.
Disconnected: Not connected with the microphone.
Missing: A connection error occurred.
Power Save: Connection established in power save mode.

5 Online/Offline

Click to temporarily take the connection for an online microphone offline. Click again to switch the microphone back online. Select the settings data to be reflected and click “OK”. It may take several minutes to save presets when reflecting settings from the software application to the microphone.

6 Mute

With each click, the selected microphone switches between muted and unmuted.

7 Audio-Technica LINK status (ATND1061LK only)

Displays the Audio-Technica LINK connection status.

: Audio-Technica LINK is not connected correctly.

: Audio-Technica LINK is connected correctly.

8 Error status

Displays the error status.

: No error is present.

: An error is present. Clicking the triangle mark below the icon displays a description of the error. After checking the description of the error, move the cursor away from the icon, and the triangle mark will disappear.

9 Settings & Maintenance

Displays the microphone’s Settings & Maintenance screen.

10 Zone Layout Preset

Click to select a zone layout preset for the selected microphone. For details, see "Zone layout presets" (p. 54).

11 Beam toolbar

If “Beam” is selected, the toolbar appears.

12 Exclusion Zone

This is the area set as the Exclusion Zone. “EX” is displayed.

13 Priority Zone

This is the area set as the Priority Zone. “CH2” to “CH6” are displayed.

14 Position marker

A position marked using the position marker. Numbers are shown in the order marked.

15 Coverage Zone

This is the area set as the Coverage Zone.

⑯ **Microphone pickup area**

The microphone scans for sound and displays areas in which sound pickup is possible. The size of the microphone pickup area will depend on the microphone installation height and settings for the sound pickup angle and view level.

⑰ **Microphone icon**

Displays the microphone installation position.

⑱ **Context panel**

Displays microphone settings.

⑲ **Camera Tab**

Click to switch to the display for the microphone Camera Area settings.

⑳ **Camera toolbar**

If “Camera” is selected, the toolbar appears.

㉑ **Camera Area**

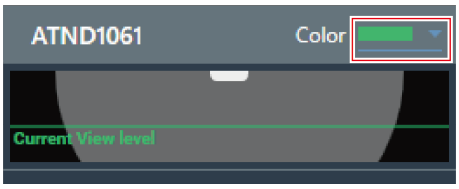
This is the area set as the Camera Area. Group numbers “GR1” to “GR8” are displayed. Camera Area is only displayed when “Camera” is clicked to switch to the display for Camera Area settings.

Setting microphone display colors

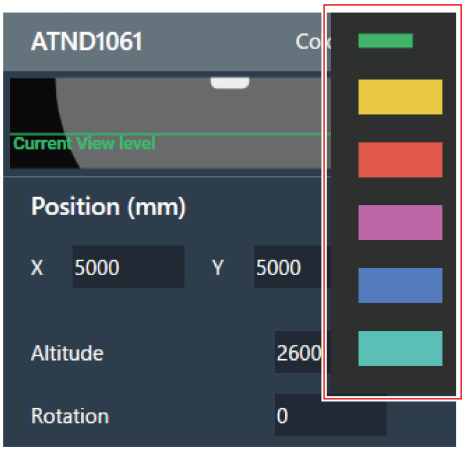
1 **Select a microphone in the main area.**

» **Microphone settings are shown in the context panel.**

2 **Click the area in the red box next to “Color”.**



3 **Select a display color from the pull-down menu.**



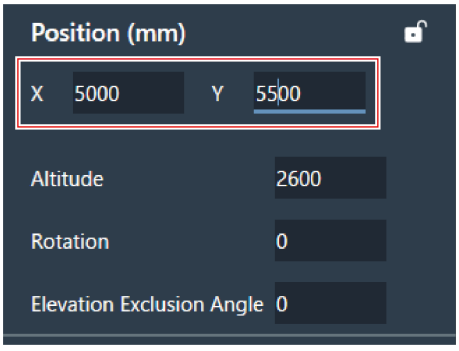
» The microphone display color is set.

Setting the microphone position and direction

1 Select a microphone in the main area.

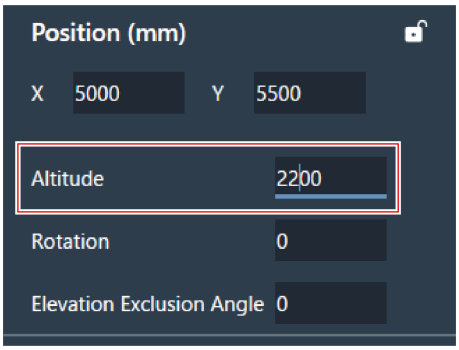
» Microphone settings are shown in the context panel.

2 Under “Position”, enter the position from the origin point using “X” (horizontal direction) and “Y” (vertical direction).

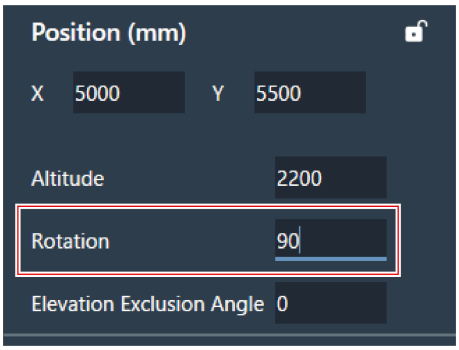


3 For “Altitude”, enter the height at which the microphone is installed from the floor.

- The microphone installation height cannot be set higher than the room height. If a value higher than the room height is entered, a message is displayed and the room height setting is changed to match the microphone installation height.



4 **For “Rotation”, enter the microphone rotation angle.**



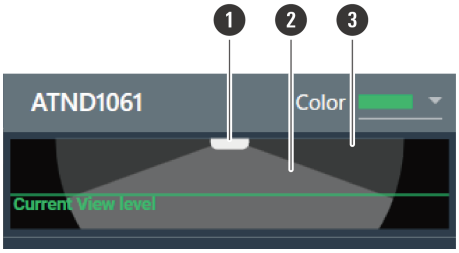
5 **Click the main area or press the Enter key.**

» The microphone position and direction are set.

- The main area shows a top-down view of the room and microphones. However, because you would actually be looking up in the case of a microphone installed to the ceiling, the microphone’s direction of movement and direction of rotation are reversed.
- In the main area, the microphone icon can also be dragged to change the microphone position.

Setting the microphone’s elevation exclusion angle

The microphone collects sound in a hemispherical area centered on the microphone. Setting the elevation exclusion angle prevents sounds from air conditioners installed near the ceiling from being picked up.

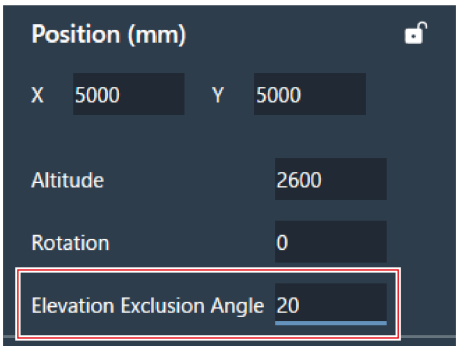


1. Microphone
2. Microphone pickup area
3. Outside microphone pickup area

1 **Select a microphone in the main area.**

» **Microphone settings are shown in the context panel.**

2 **For "Elevation Exclusion Angle", enter the microphone's elevation exclusion angle.**



3 **Click the main area or press the Enter key.**

- Previously set beam zones and all points in the corners of the Camera Area cannot be set to an angle that moves outside the microphone pickup area.

» **The size of the microphone pickup area displayed in the main area changes based on the set elevation exclusion angle.**

Locking a microphone

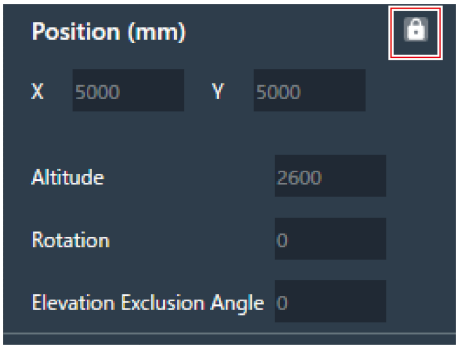
The microphone is locked to prevent changes to its position, installation height, direction, and elevation exclusion angle.

1 **Select a microphone in the main area.**

» **Microphone settings are shown in the context panel.**

2 **Click the lock icon.**

- With each click, the microphone switches between locked and unlocked.



» **The microphone is locked.**

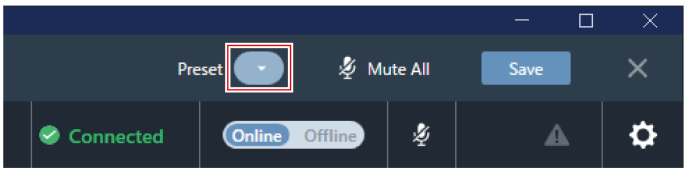
Presets

Up to 16 presets can be saved, including for beam zones, audio, Camera Areas, and some settings in Settings & Maintenance. This enables settings to be switched to suit user needs.

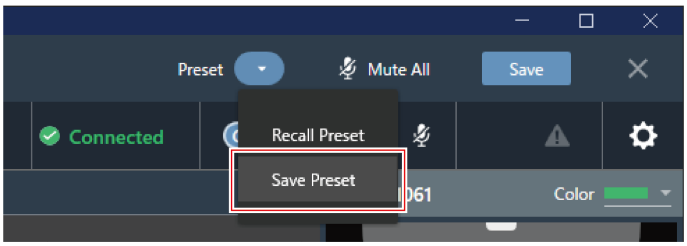
Saving presets

1 **Select a microphone in the main area.**

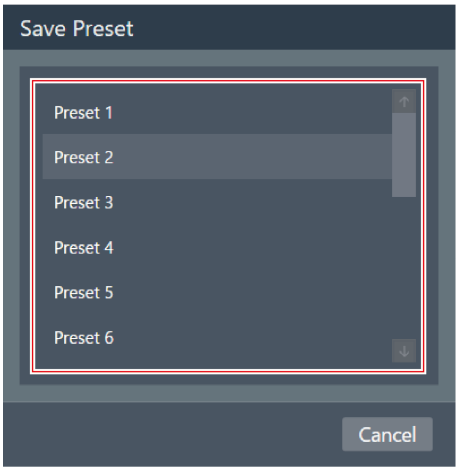
2 **Click the area in the red box next to "Preset".**



3 **Click "Save Preset" in the pull-down menu.**

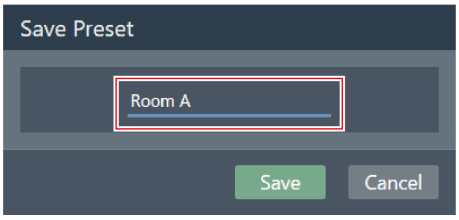


4 **Click the slot where the preset is to be saved.**



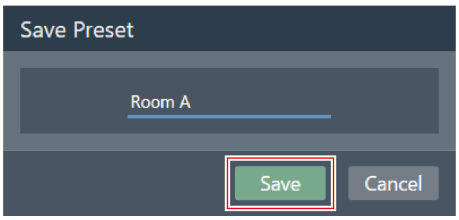
5 **Enter a name.**

- Entry is possible by clicking on the name.



6 **Click “Save”.**

- It may take several minutes to save presets if the microphone is online.



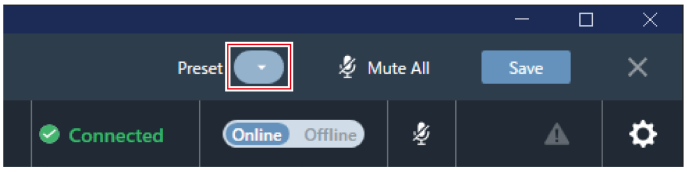
» **Settings for the selected microphone are saved in the preset.**

- Presets are saved for each microphone.
- For information on importing and exporting presets, see "Presets" (p. 97) in Settings & Maintenance.

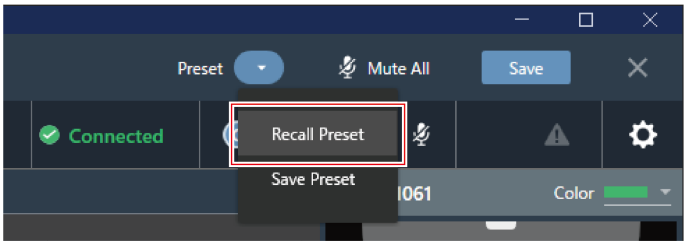
Recalling presets

1 **Select a microphone in the main area.**

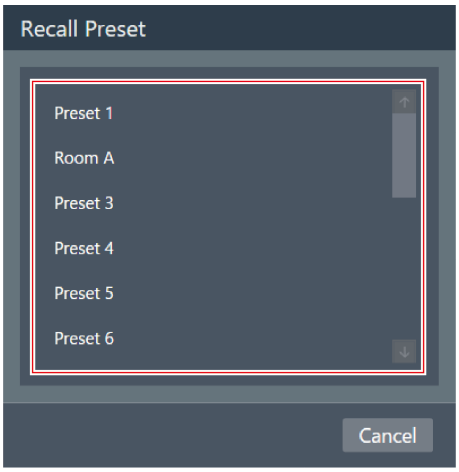
2 **Click the area in the red box next to "Preset".**



3 **Click "Recall Preset" in the pull-down menu.**



4 **Click the preset to be recalled.**



» **The preset settings are reflected in the selected microphone.**

Beam zone settings

Setting a Coverage Zone

Adding a Coverage Zone

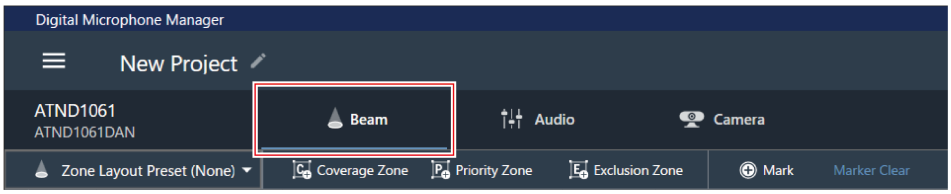
Sound picked up in the Coverage Zone is output from the Coverage channel (CH1).

- The Coverage channel is used for outputting audio for multiple talkers from one channel.
- Up to 16 Coverage Zones can be set for each microphone.

1 **Select a microphone in the main area.**

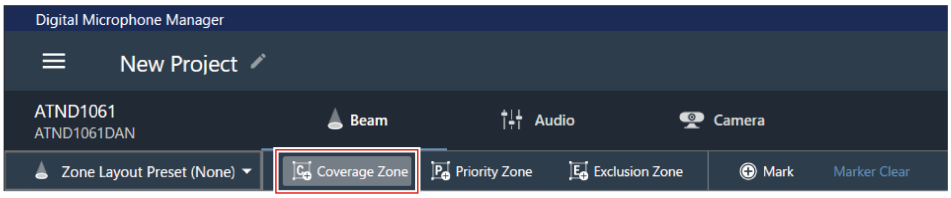
» **The microphone settings screen appears.**

2 **Click “Beam”.**



3 **Click “Coverage Zone”.**

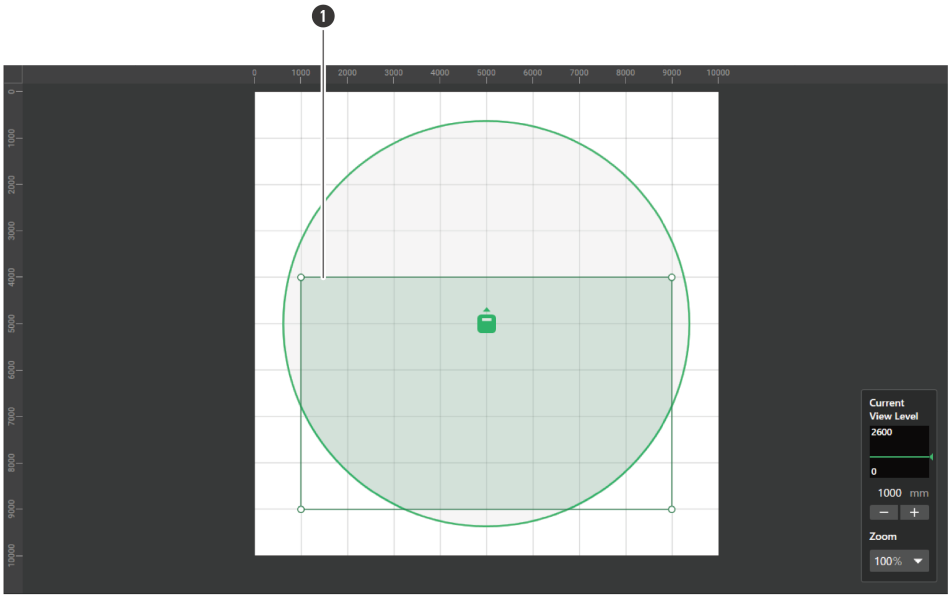
- With each click, the mode for adding a Coverage Zone is turned on/off.
- The mode for adding a Coverage Zone can be turned off by right-clicking in the microphone pickup area or by pressing the Esc key on the keyboard.



» **The mode for adding a Coverage Zone is turned on.**

4 **Add a Coverage Zone by dragging it within the microphone pickup area.**

- Coverage Zones cannot be added outside the microphone pickup area.

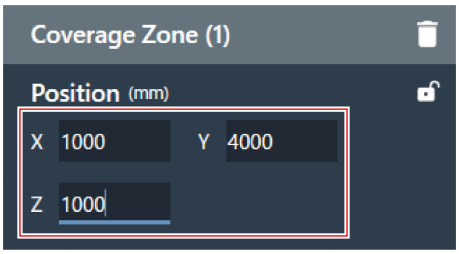


1 Coverage Zone

» **The added Coverage Zone is selected and "Coverage Zone" appears in the context panel.**

5 Adjust the position of the Coverage Zone.

- Under "Position", enter the height from the floor in "Z" and the position from the origin point using "X" (horizontal direction) and "Y" (vertical direction).
- In the main area, the Coverage Zone can also be dragged to change its position.



6 Adjust the size of the Coverage Zone.

- Under "Size", enter the size of the Coverage Zone using "W" (Width) and "D" (Depth).
- In the main area, the point in the corner of the Coverage Zone can also be dragged to resize the image.

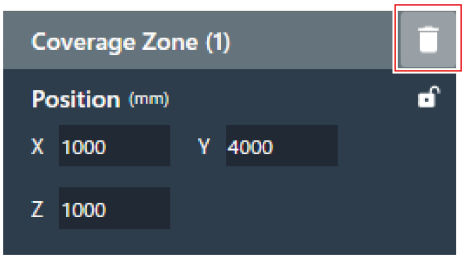
- Although overlap with other beam zones is possible, zones will be enabled in the following order: Exclusion Zone -> Priority Zone -> Coverage Zone
- If beam zones are set to overlap, clicking on the overlapped zone while pressing the Ctrl key will enable it to be selected.

Deleting a Coverage Zone

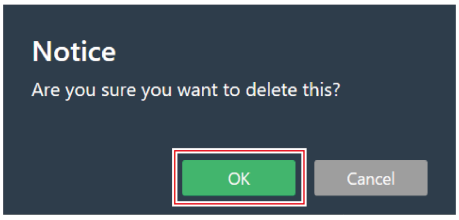
1 **Select a Coverage Zone in the main area.**

» **“Coverage Zone” appears in the context panel.**

2 **Click the trash icon or press the Delete key.**



3 **Click “OK” in the message.**



» **The Coverage Zone is deleted.**

Locking a Coverage Zone

The Coverage Zone is locked to prevent changes to its position and size.

1 **Select a Coverage Zone in the main area.**

» **“Coverage Zone” appears in the context panel.**

2 **Click the lock icon.**

- With each click, the Coverage Zone switches between locked and unlocked.

» **The Coverage Zone is locked.**

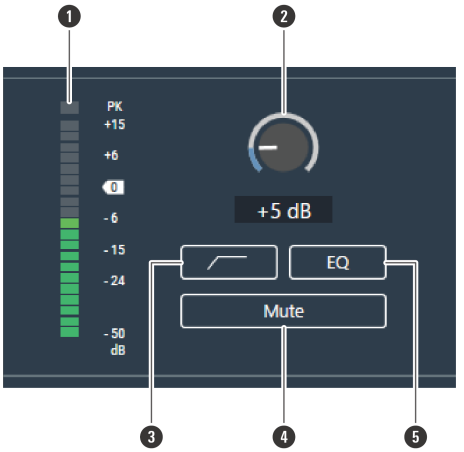
Setting the audio input level for a Coverage Zone

1 **Select a Coverage Zone in the main area.**

» **“Coverage Zone” appears in the context panel.**

2 **Set the audio input level for the Coverage Zone.**

- Because Coverage Zones have output audio only on CH1, the same settings are used even when there are multiple Coverage Zones.



1. Shows the audio input level.
2. Sets the input gain of the audio input. Adjust the gain by dragging (vertical direction) the meter.
3. With each click, the low-cut of the audio input switches between ON (blue) and OFF (no color).
4. With each click, the mute of the audio input switches between ON (blue) and OFF (no color).
5. With each click, the 4-band EQ applied to the audio input switches between ON (blue) and OFF (no color).

Setting a Priority Zone

Adding a Priority Zone

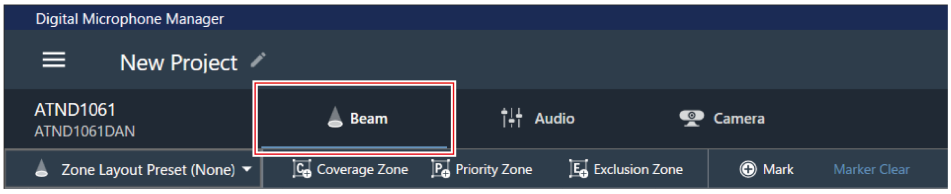
Sound picked up in Priority Zones is output from Priority 1 to Priority 5 channels (CH2 to CH6).

- Priority channels are used for outputting audio for specific talkers from one channel.
- If all channels are in use, CH6 will be assigned as the Priority Zone.
- Up to 16 Priority Zones can be set for each microphone.

1 **Select a microphone in the main area.**

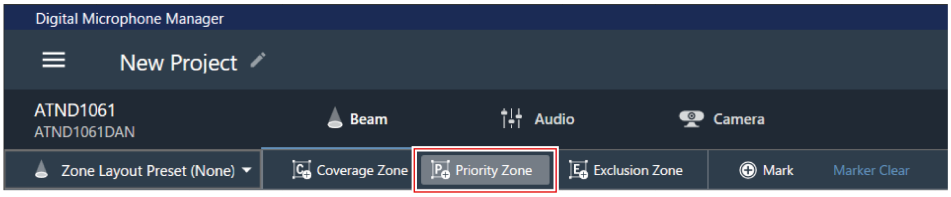
» **The microphone settings screen appears.**

2 **Click “Beam”.**



3 **Click “Priority Zone”.**

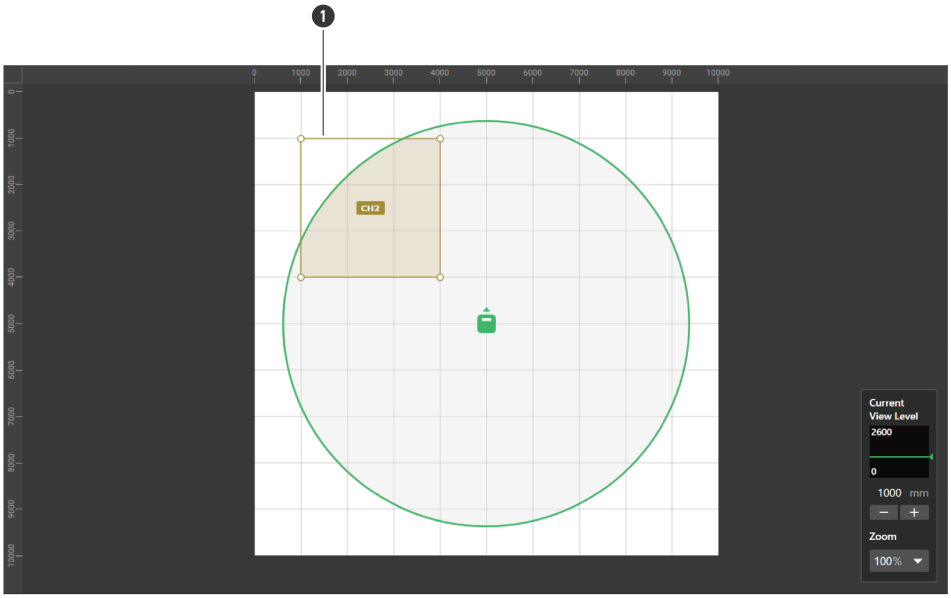
- With each click, the mode for adding a Priority Zone is turned on/off.
- The mode for adding a Priority Zone can be turned off by right-clicking in the microphone pickup area or by pressing the Esc key on the keyboard.



» **The mode for adding a Priority Zone is turned on.**

4 **Add a Priority Zone by dragging it within the microphone pickup area.**

- Priority Zones cannot be added outside the microphone pickup area.
- Priority Zones cannot overlap.

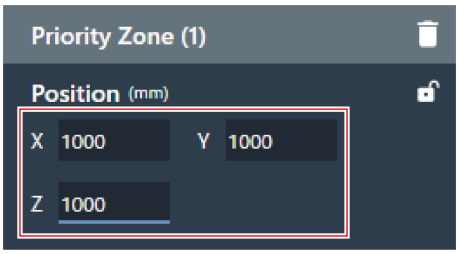


1 Priority Zone

» **The added Priority Zone is selected and "Priority Zone" appears in the context panel.**

5 Adjust the position of the Priority Zone.

- Under "Position", enter the height from the floor in "Z" and the position from the origin point using "X" (horizontal direction) and "Y" (vertical direction).
- In the main area, the Priority Zone can also be dragged to change its position.



6 Adjust the size of the Priority Zone.

- Under "Size", enter the size of the Priority Zone using "W" (Width) and "D" (Depth).
- In the main area, the point in the corner of the Priority Zone can also be dragged to resize the image.

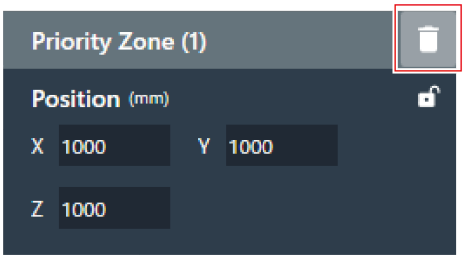
- Although overlap with other beam zones is possible, zones will be enabled in the following order: Exclusion Zone -> Priority Zone -> Coverage Zone
- If beam zones are set to overlap, clicking on the overlapped zone while pressing the Ctrl key will enable it to be selected.

Deleting a Priority Zone

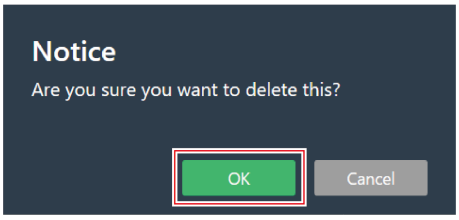
1 **Select a Priority Zone in the main area.**

» **"Priority Zone" appears in the context panel.**

2 **Click the trash icon or press the Delete key.**



3 **Click "OK" in the message.**



» **The Priority Zone is deleted.**

Locking a Priority Zone

The Priority Zone is locked to prevent changes to its position and size.

1 **Select a Priority Zone in the main area.**

» **"Priority Zone" appears in the context panel.**

2 **Click the lock icon.**

- With each click, the Priority Zone switches between locked and unlocked.

» **The Priority Zone is locked.**

Changing audio output channels

Change the output channel assigned to the Priority Zone.

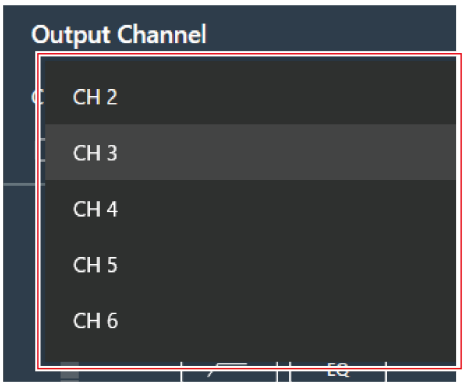
- Priority Zones can be assigned to channels CH2 to CH6.
- Multiple Priority Zones can be assigned to the same output channel. When doing so, assigned Priority Zones are covered with one beam (the beam will jump to the zone with the loudest human voice).
- Priority Zone audio output channels can be included in the CH1 output (Coverage Zone). This is useful when outputting the audio for an entire conference from one channel.

1 **Select a Priority Zone in the main area.**

» **"Priority Zone" appears in the context panel.**

2 **Click the area in the red box next to "CH" under "Output Channel".**

3 **Select an audio output channel from the pull-down menu.**



» **The audio output channel of the Priority Zone is changed.**

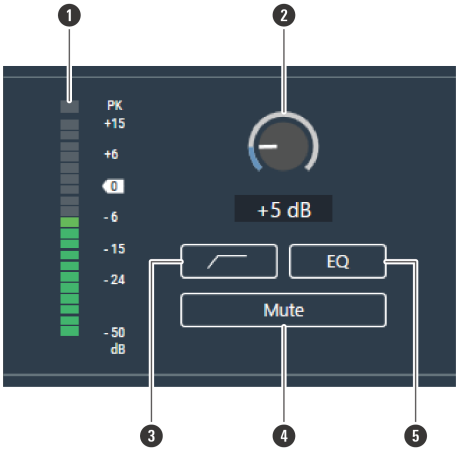
- To include Priority Zone audio output channels in the CH1 output, click the check box for "Include in Coverage Zone". To use this function, the Coverage Zone must overlap the Priority Zone(s) that are intended to be sent to CH1 output.

Setting the audio input level for a Priority Zone

1 **Select a Priority Zone in the main area.**

» **"Priority Zone" appears in the context panel.**

2 **Set the audio input level for the Priority Zone.**



1. Shows the audio input level.
2. Sets the input gain of the audio input. Adjust the gain by dragging (vertical direction) the meter.
3. With each click, the low-cut of the audio input switches between ON (blue) and OFF (no color).
4. With each click, the mute of the audio input switches between ON (blue) and OFF (no color).
5. With each click, the 4-band EQ applied to the audio input switches between ON (blue) and OFF (no color).

Setting an Exclusion Zone

Adding an Exclusion Zone

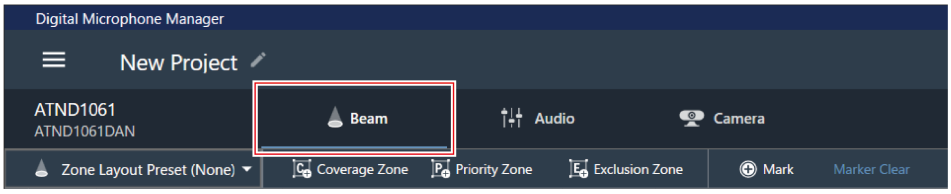
Set areas where all sounds from noise sources such as air conditioners and projectors should be excluded from sound pickup.

- Up to 16 Exclusion Zones can be set for each microphone.

1 **Select a microphone in the main area.**

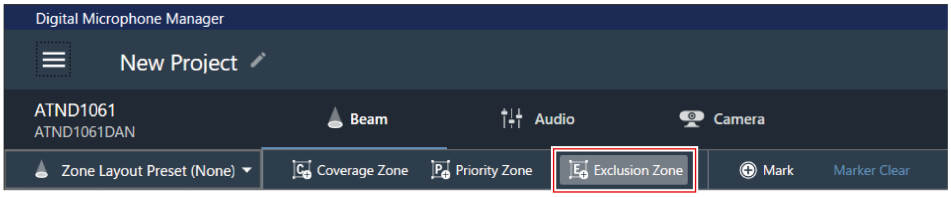
» **The microphone settings screen appears.**

2 **Click “Beam”.**



3 **Click “Exclusion Zone”.**

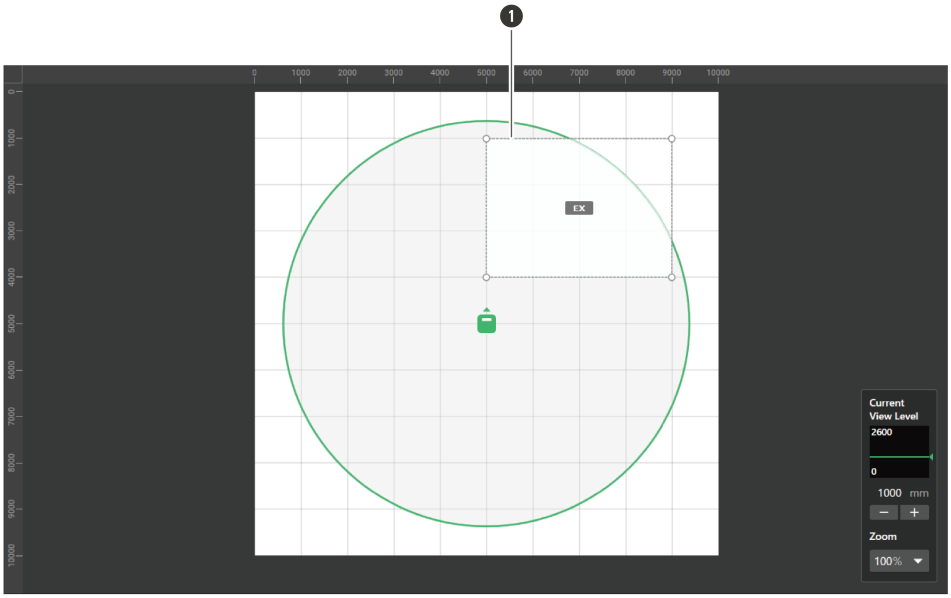
- With each click, the mode for adding an Exclusion Zone is turned on/off.
- The mode for adding an Exclusion Zone can be turned off by right-clicking in the microphone pickup area or by pressing the Esc key on the keyboard.



» **The mode for adding an Exclusion Zone is turned on.**

4 **Add an Exclusion Zone by dragging it within the microphone pickup area.**

- Exclusion Zones cannot be added outside the microphone pickup area.

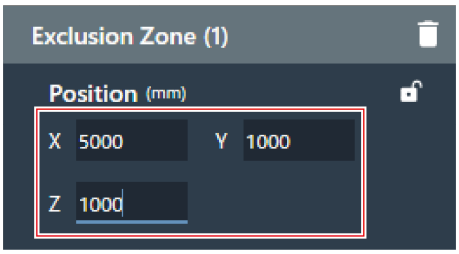


1 Exclusion Zone

» **The added Exclusion Zone is selected and "Exclusion Zone" appears in the context panel.**

5 Adjust the position of the Exclusion Zone.

- Under "Position", enter the height from the floor in "Z" and the position from the origin point using "X" (horizontal direction) and "Y" (vertical direction).
- In the main area, the Exclusion Zone can also be dragged to change its position.



6 Adjust the size of the Exclusion Zone.

- Under "Size", enter the size of the Exclusion Zone using "W" (Width) and "D" (Depth).
- In the main area, the point in the corner of the Exclusion Zone can also be dragged to resize the image.

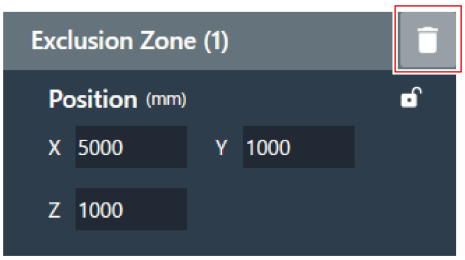
- Although overlap with other beam zones is possible, zones will be enabled in the following order: Exclusion Zone -> Priority Zone -> Coverage Zone
- If beam zones are set to overlap, clicking on the overlapped zone while pressing the Ctrl key will enable it to be selected.

Deleting an Exclusion Zone

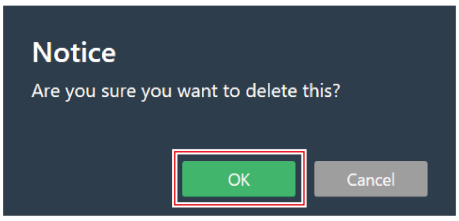
1 **Select an Exclusion Zone in the main area.**

» **"Exclusion Zone" appears in the context panel.**

2 **Click the trash icon or press the Delete key.**



3 **Click "OK" in the message.**



» **The Exclusion Zone is deleted.**

Locking an Exclusion Zone

The Exclusion Zone is locked to prevent changes to its position and size.

1 **Select an Exclusion Zone in the main area.**

» **"Exclusion Zone" appears in the context panel.**

2 **Click the lock icon.**

- With each click, the Exclusion Zone switches between locked and unlocked.

» **The Exclusion Zone is locked.**

Zone layout presets

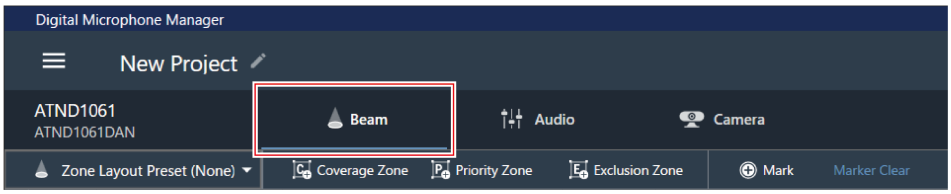
Up to 10 settings for beam zones and Camera Areas can be saved as zone layout presets. These are convenient if used as templates for creating presets.

Saving zone layout presets

1 **Select a microphone in the main area.**

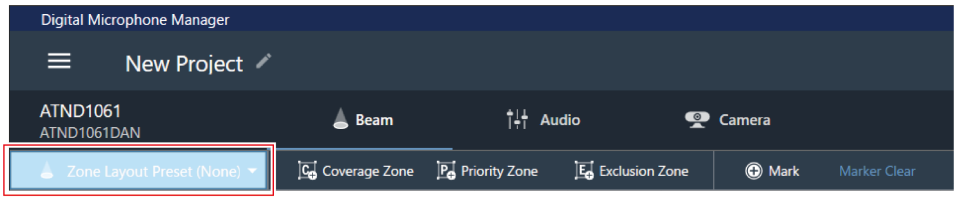
» **The microphone settings screen appears.**

2 **Click "Beam".**



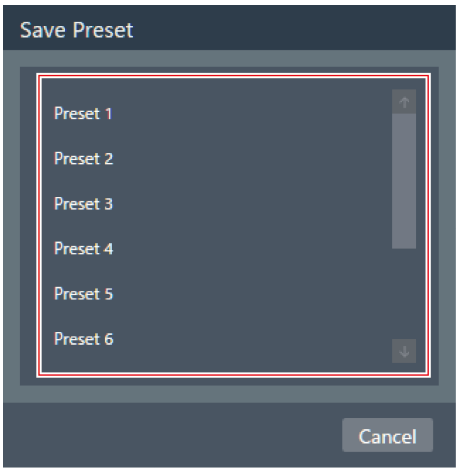
3 **Click "Zone Layout Preset (None)".**

- "Zone Layout Preset (None)" shows the name of the selected zone layout preset.



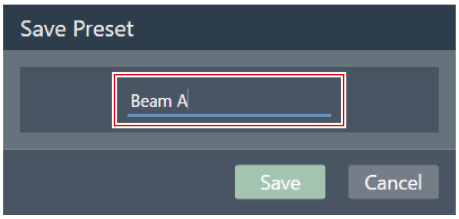
4 **Click “Save Zone Layout Preset”.**

5 **Click the slot where the zone layout preset is to be saved.**

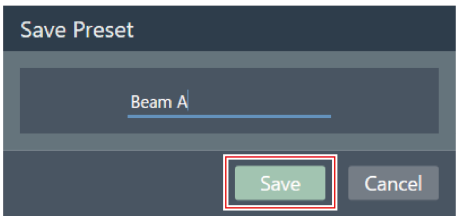


6 **Enter a name.**

- Entry is possible by clicking on the name.



7 **Click “Save”.**



» **Settings for the beam zone and Camera Area of the selected microphone are saved as a zone layout preset.**

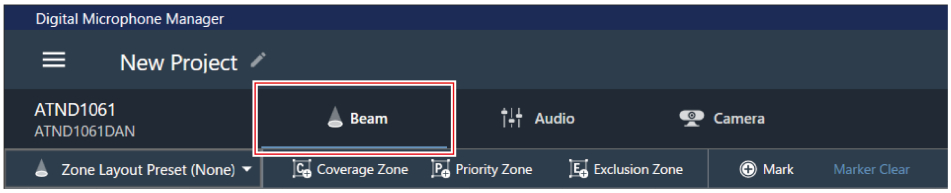
- Zone layout presets are saved in the software application, enabling their use in other projects.
- For information on importing and exporting zone layout presets, see "Zone Layout Library (Presets)" (p. 106).

Recalling zone layout presets

1 **Select a microphone in the main area.**

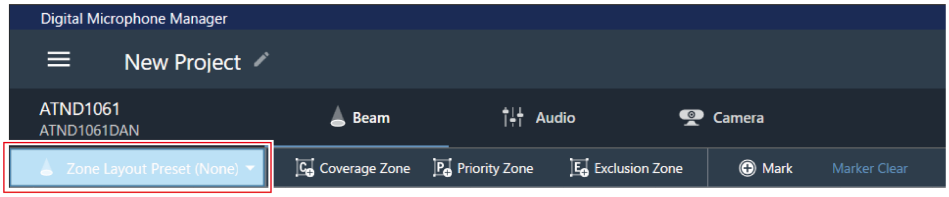
» **The microphone settings screen appears.**

2 **Click “Beam”.**



3 **Click “Zone Layout Preset (None)”.**

- “Zone Layout Preset (None)” shows the name of the selected zone layout preset.



4 **Click the zone layout preset to be recalled.**

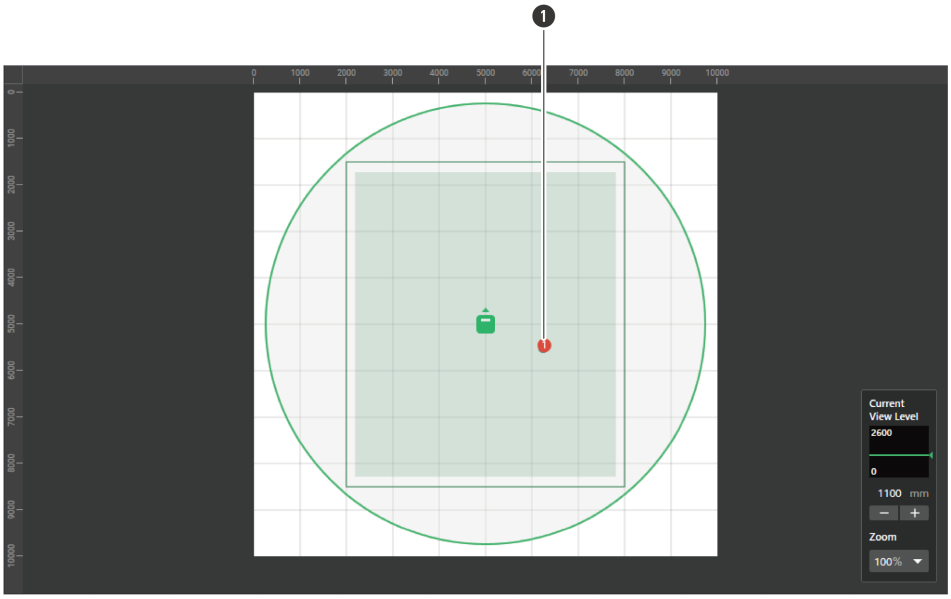
» **The zone layout preset settings are reflected in the selected microphone.**

Position markers

Adding a position marker

These mark the positions where sound is detected. This is useful for setting zones when a room drawing is not available. The positions of Coverage Zones and Priority Zones can be set by referencing position markers.

- Position markers can only be used if the microphone is online.
- Position markers can be used for marking up to 16 locations for each microphone.

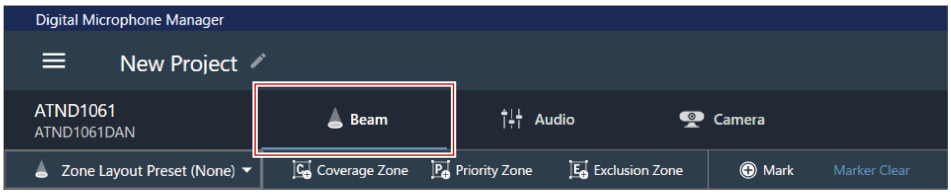


1 Position marker

1 **Select a microphone in the main area.**

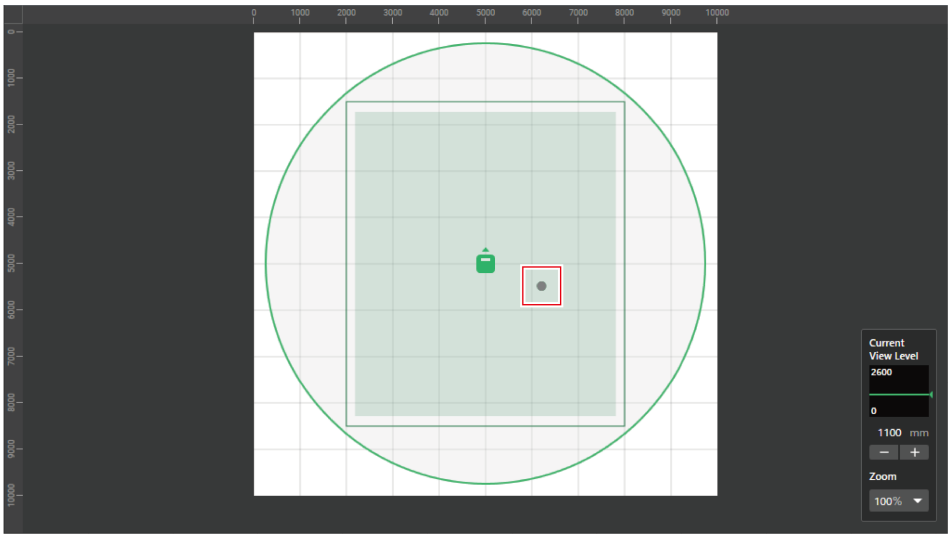
» **The microphone settings screen appears.**

2 **Click “Beam”.**

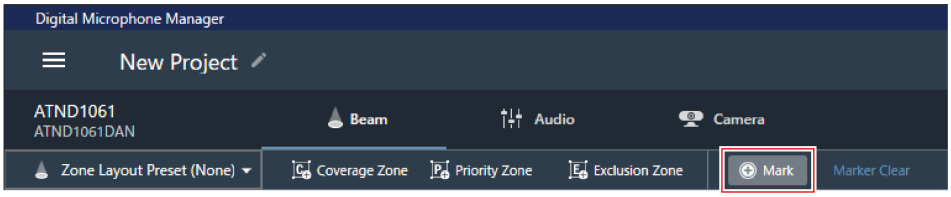


3 **Speak from anywhere in the room.**

» **The location where the voice was detected is shown in the main area.**



4 Click “Mark”.



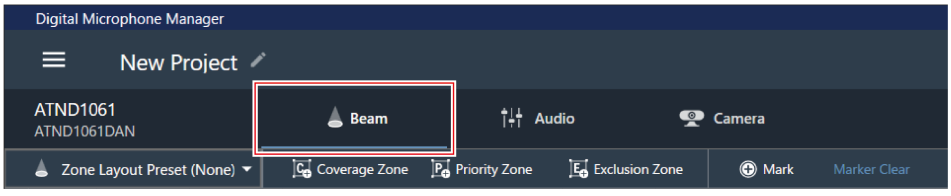
» The position marker is added.

Deleting a position marker

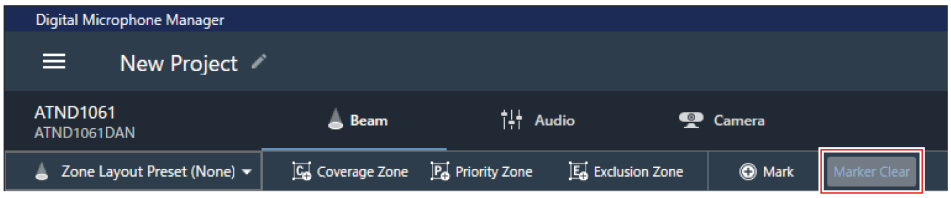
1 Select a microphone in the main area.

» The microphone settings screen appears.

2 Click “Beam”.



3 Click “Marker Clear”.



» **All position markers are deleted.**

- When the view level display height is changed, the position markers will be deleted.

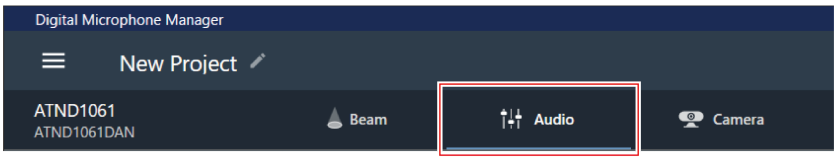
Audio settings

Displaying the audio settings screen

1 **Select a microphone in the main area.**

» **The microphone settings screen appears.**

2 **Click “Audio”.**



» **The audio settings screen appears.**

Overview of the audio settings screen

The displayed settings will vary depending on the selected DSP mode.

Mode	Setting
AEC mode	AGC, Auto Mix, AEC, NC
Voice Lift mode	Voice Lift, Auto Mix

AEC mode

1 Coverage channel (CH1)

This is the audio channel used for sound pickup from the Coverage Zone.

2 Channel menu

Click to select the channel menu.

3 Priority 1 to Priority 5 channels (CH2 to CH6)

These audio channels are used for sound pickup from each Priority Zone.

4 Analog Input channel

This audio input channel is for establishing analog connections with external microphones.

5 Auto Mix channel

This audio output channel is mixed with auto mix.

6 Analog Output channel

This audio output channel is an analog conversion of the Auto Mix channel.

7 Channel audio settings

Make audio settings tailored to each channel type.

8 Selected microphone(s)

Displays selected microphones.

9 Advanced audio settings

Displays advanced audio settings (AGC / Auto Mix / AEC / NC).

Voice Lift mode

1 Coverage channel (CH1)

This is the audio channel used for sound pickup from the Coverage Zone.

2 Channel menu

Click to select the channel menu.

3 Priority 1 to Priority 5 channels (CH2 to CH6)

These audio channels are used for sound pickup from each Priority Zone.

4 Analog Input channel

This audio input channel is for establishing analog connections with external microphones.

5 Auto Mix channel

This audio output channel is mixed with auto mix.

6 Analog Output channel

This audio output channel is an analog conversion of the Auto Mix channel.

7 Voice Lift channel

This audio output channel is used in Voice Lift mode.

8 Channel audio settings

Make audio settings tailored to each channel type.

9 Selected microphone(s)

Displays selected microphones.

⑩ **Advanced audio settings**

Displays advanced audio settings (Voice Lift / Auto Mix).

Switching DSP mode

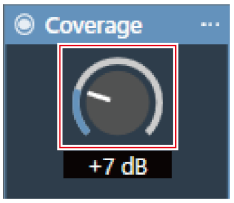
Settings can be configured by selecting “System Settings” > “Audio” > “DSP Mode” on the Settings & Maintenance screen.

Adjusting the gain

Adjust the input gain of the audio input.

1 **Adjust the gain by dragging (vertical direction) the meter in the channel audio settings.**

- Because the level meter will turn blue and display the pre-fader level when the gain is adjusted, adjust while monitoring that level.



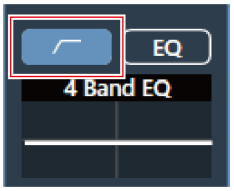
- Gain values can also be entered by clicking on the number below the meter.

Setting low-cut

Turn the low-cut of the input audio ON or OFF.

1 **In the channel audio settings, click the area for the input type as shown in the red box.**

- With each click, the low-cut switches between ON (blue) and OFF (no color).



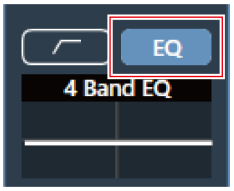
» **Low-cut is turned ON or OFF.**

Setting the 4-band EQ

Turn the 4-band EQ of the audio input ON or OFF.

1 **Click “EQ” in the channel audio settings.**

- With each click, the 4-band EQ switches between ON (blue) and OFF (no color).



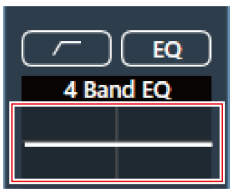
» **The 4-band EQ is turned ON or OFF.**

Adjusting the 4-band EQ

Adjusting in easy mode

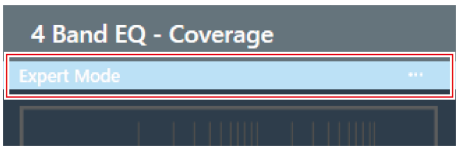
Select from pre-arranged EQ patterns to easily adjust the 4-band EQ.

1 **Click the graph for “4 Band EQ” in the channel audio settings.**

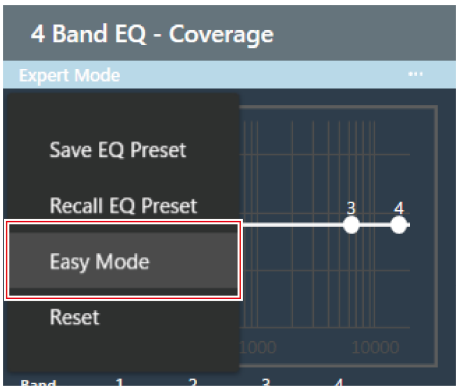


» **“4 Band EQ” is shown in the advanced audio settings.**

2 **Click “Expert Mode”.**

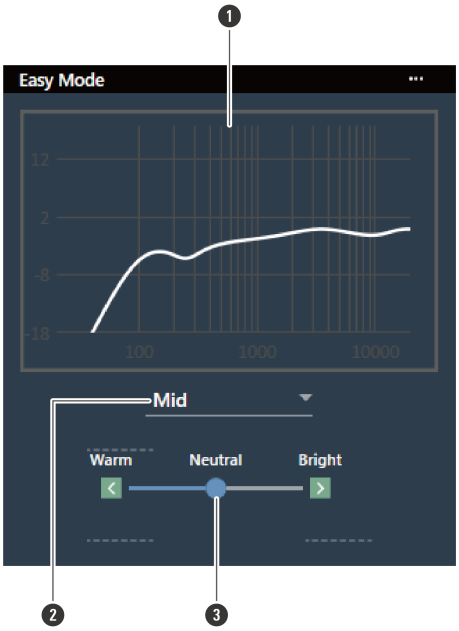


3 **Click “Easy Mode” in the pull-down menu.**



» **“4 Band EQ” is switched to easy mode in the advanced audio settings.**

4 **Adjust the 4-band EQ.**



1. Display the EQ frequency response waveform.
2. Select an audio type from the pull-down menu.
3. Adjust the tone.

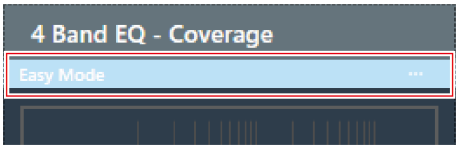
Adjusting in expert mode

The parameters can be set for each band for finer 4-band EQ adjustment.

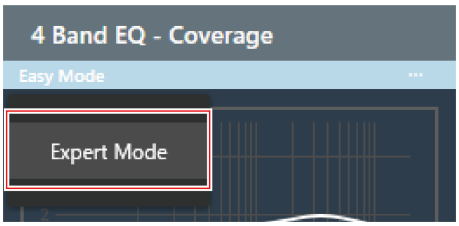
1 **Click the graph for “4 Band EQ” in the channel audio settings.**

» **“4 Band EQ” is shown in the advanced audio settings.**

2 **Click “Easy Mode”.**

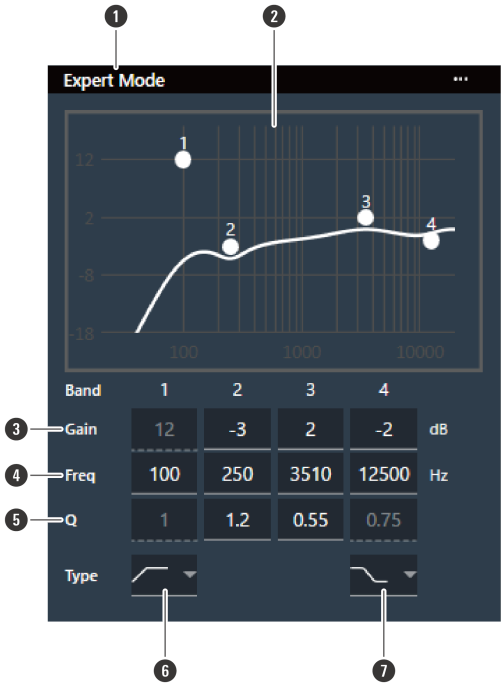


3 **Click “Expert Mode” in the pull-down menu.**



» **“4 Band EQ” is switched to expert mode in the advanced audio settings.**

4 **Adjust the 4-band EQ.**

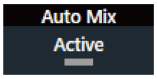
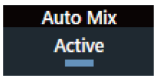
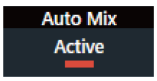


1. Click to save or recall EQ presets or reset the frequency response waveform.
   Save EQ Preset: Frequently used 4-band EQ settings can be saved as EQ presets.
   Recall EQ Preset: Recall an EQ preset.
   Easy Mode: Switch the 4 Band EQ setting to easy mode.
   Reset: Reset the frequency response waveform.
2. Display and adjust the EQ frequency response waveform. The pointer for each band indicates the frequency and the gain position. The frequency and gain can be adjusted by dragging the pointer.
3. Enter a value to change the gain.
4. Enter a value to change the frequency.
5. Enter a value to change the Q value. The higher this value, the narrower the range at which adjustments centered on the frequency will take place.
6. Select the filter type for Band 1 from the pull-down menu.
   - HPF (High-Pass Filter): Cuts bands at frequencies below the selected frequency.
   - LSH (Low-Shelving Filter): Increases/decreases bands at frequencies below the selected frequency.
   - PEQ: Increases/decreases around the selected frequency.
7. Select the filter type for Band 4 from the pull-down menu.
   - LPF (Low-Pass Filter): Cuts bands at frequencies above the selected frequency.
   - HSH (High-Shelving Filter): Increases/decreases bands at frequencies above the selected frequency.
   - PEQ: Increases/decreases around the selected frequency.

- EQ presets are saved in the software application, enabling their use in other projects.
- For information on importing and exporting EQ presets, see "4 Band EQ Library (Presets)" (p. 103).

Checking the status of auto mix

The status of auto mix is displayed in the channel audio settings.

Display	Status
	OFF status.
	ON status.
	ON and auto mix is functioning.

Setting auto mix

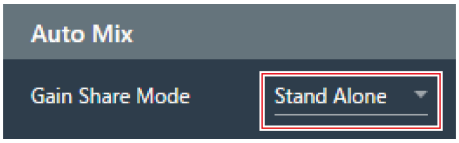
Turn auto mix ON or OFF. This function compares the total sum of the audio input levels from channels for which auto mix is turned ON and then divides the gain among all the channels based on that ratio. This means total gain always remains constant, even when there are audio inputs from multiple channels.

- The audio inputs of channels for which auto mix is turned ON are mixed and outputted from the Auto Mix channel.

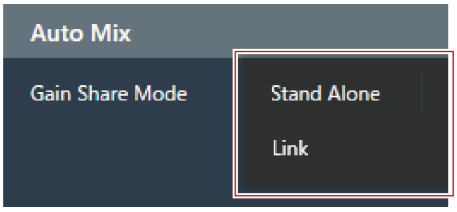
1 **Click “Auto Mix” in the advanced audio settings.**

» **“Auto Mix” is shown in the advanced audio settings and channel audio settings.**

2 **Click the area in the red box next to “Gain Share Mode”.**



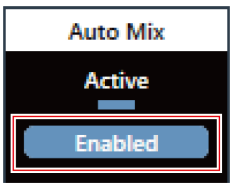
3 **Select a gain share mode from the pull-down menu.**



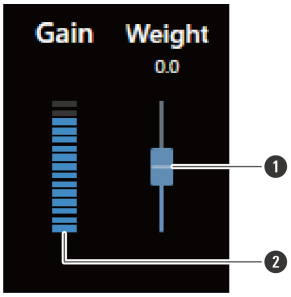
Item	Description
Stand Alone	A microphone operates on its own.
Link	Multiple microphones operate together.

4 **In the channel audio settings of the channel(s) for which auto mix will be used, click "Enabled" to turn auto mix ON (blue).**

- With each click, the auto mix switches between ON (blue) and OFF (no color).



5 **Adjust the auto mix weight.**



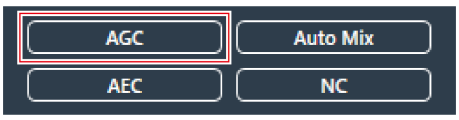
1. Drag the knob to adjust the auto mix weight.
2. Shows the automatically adjusted gain value.

» **Auto mix settings are configured.**

Setting AGC

Turn AGC (Automatic Gain Control) for the Auto Mix channel ON or OFF. This function automatically calibrates gain based on the input level to keep the output levels of signals with level differences constant. It increases the volume of sounds below the target level, and decreases the volume of sounds louder than the target level.

1 **Click "AGC" in the advanced audio settings.**



» **“AGC” is shown in the advanced audio settings.**

2 **Click the “AGC” switch to turn it ON (blue).**

- With each click, the AGC switches between ON (blue) and OFF (no color).

3 **Set the “Target Level”.**

- The target level can be adjusted by clicking the area in the red box.
- The target level can be set between unity (0 dB) and ±10 dB.

» **AGC is set for the Auto Mix channel.**

- If using in combination with a web conferencing system, unexpected malfunctions may occur, such as large amounts of noise. In such situations, turn AGC to OFF.

Setting AEC

Turn the AEC (Acoustic Echo Canceller) for the Auto Mix channel ON or OFF. By using the other party’s audio signals as reference signals at events such as conferences, this function removes only the echoes in the other party’s audio from the audio signals sent from your party, and outputs only the talker’s voice.

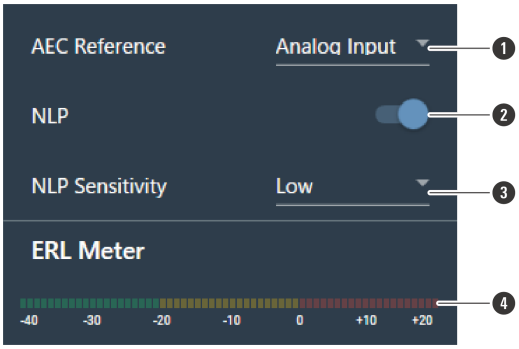
1 **Click “AEC” in the advanced audio settings.**

» **“AEC” is shown in the advanced audio settings.**

2 **Click the “AEC” switch to turn it ON (blue).**

- With each click, the AEC switches between ON (blue) and OFF (no color).

3 **Set the AEC.**



1. Select a reference signal from the pull-down menu. Normally, audio from a microphone at another site would be selected.
2. Configure settings to reduce remaining echo. The product ships from the factory in “ON” (blue). With each click of this switch, the setting switches between ON (blue) and OFF (no color).
3. Select an NLP level from the pull-down menu. The product ships from the factory in “Low”.
4. Until the ERL meter is at 0 or below, adjust the distance between microphones, speaker positions, input level, etc.

» AEC is set for the Auto Mix channel.

- In settings such as a video conference, acoustic echoes can occur when the audio output from the speaker is picked up by a microphone. The audio from the other party is amplified by the speaker and can bounce off of the ceiling, walls or floors of the room, and, upon being picked up by the microphone, is returned to the other party along with your party’s audio. This causes the other party to hear a delayed version of their own audio, making it difficult to speak back. Turning on the AEC function makes it possible to deliver clear audio, with no echoes, to the other party.

Setting NC

Turn the NC (Noise Cancellation) for the Auto Mix channel ON or OFF. This function eliminates standing wave noise, such as operating noises from air conditioner or projector fans.

- Use of the NC function is recommended when installing the microphone near an air conditioner or projector, etc.

1 **Click “NC” in the advanced audio settings.**

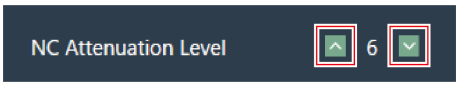
» **“NC” is shown in the advanced audio settings.**

2 **Click the “NC” switch to turn it ON (blue).**

- With each click, the NC switches between ON (blue) and OFF (no color).

3 **Set the “NC Attenuation Level”.**

- The attenuation level of the noise cancellation function can be adjusted by clicking the area in the red box.
- The attenuation level can be set between 0 dB to 20 dB.



» **NC is set for the Auto Mix channel.**

Using the voice lift function

This function enables people in the same room to hear uniform and clear audio, making it possible to have natural conversations with multiple people.

- Generally speaking, it is difficult to hear natural voices when approximately 7 m (23’) away from the speaker. In large rooms requiring the use of multiple microphones, it is difficult to have conversations between multiple people using only their natural voices.

Differences between the voice lift function and general voice amplification functions

The main purpose of general voice amplification functions is to transmit the sound of one person's voice to multiple people. This is why loud speakers are used to deliver clear audio at a sufficient volume even to people located far away from the speakers.
On the other hand, the purpose of the voice lift function is to create an environment where multiple people in the same room can have clear conversations using their natural voices. The volume in the room remains uniform, making people feel as if they’re speaking to each other from a close distance.

Rooms ideal for using the voice lift function

The voice lift function is effective in large rooms (more than 10 m (33') on a side) where multiple microphones are required.

- It is not recommended for use in rooms small enough to not require speakers, rooms with high levels of noise, or rooms with long reverberation times.

Setting voice lift

Set the suppression strength of the voice lift function.

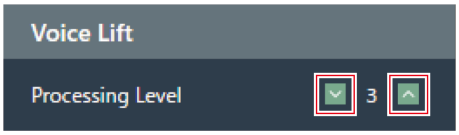
- The voice lift beam differs from normal sound pickup beams in that it moves within the entire sound pickup range (excluding Exclusion Zones). Once focused on a talker, it stays there for 70 ms before moving on to the next talker. The movement of the beam can be changed to suppress feedback. Also, the sound quality is adjusted using a speech filter to obtain clearer audio.
- The DSP mode in the audio settings must be switched to Voice Lift mode. See "Switching DSP mode" (p. 64).

1 **Click "Voice Lift" in the advanced audio settings.**

» "Voice Lift" is shown in the advanced audio settings.

2 **Set the "Processing Level".**

- Click the area in the red box to set the suppression strength of the voice lift function.
- The suppression strength can be set between 1 (weak) and 5 (strong) depending on the internal processing of the Voice Lift channel.



Setting value	Description
1	No DSP processing
2	Notch filter
3	Adaptive feedback canceller + notch filter
4	Adaptive feedback canceller + notch filter + NLP
5	Adaptive feedback canceller + notch filter + NLP + frequency shift

Turning the mute ON/OFF

Set whether to mute or unmute.

1 Click “Mute” in the channel audio settings.

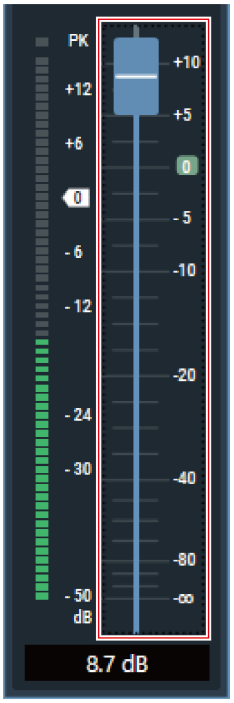
- With each click, the mute switches between ON (red) and OFF (no color).

» **The selected channel is muted or unmuted.**

Adjusting the input and output levels

Adjust a channel’s audio input level or audio output level.

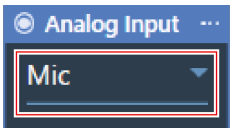
1 Adjust the input level or output level by dragging the volume adjustment knob in the channel audio settings.



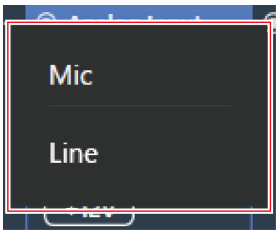
Setting Analog Input types

Sets the input type of the analog input channel.

1 **In the channel audio settings, click the area for the input type as shown in the red box.**



2 **Select an input type from the pull-down menu.**



Item	Description
Mic	Mic level
Line	Line level

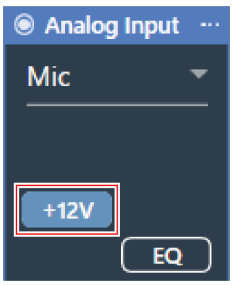
Turning phantom power for the Analog Input ON or OFF

Turn the phantom power (+12 V) for the Analog Input channel ON or OFF.

- This setting can be made only when “Mic” is selected as the input type.

1 **Click “+12V” in the channel audio settings.**

- With each click, the phantom power switches between ON (blue) and OFF (no color).

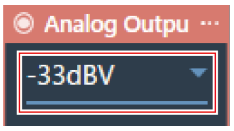


» **Phantom power is turned ON or OFF.**

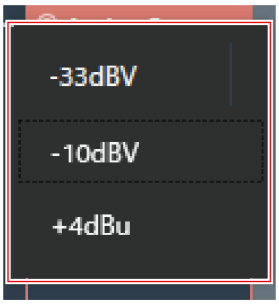
Setting the unity level for the Analog Output

Set the unity level for the Analog Output channel.

1 **In the channel audio settings, click the area for the unity level as shown in the red box.**



2 **Select a unity level from the pull-down menu.**



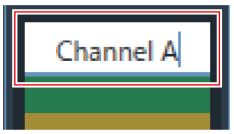
Item	Description
-33dBV	Mic (Balanced)
-10dBV	Line (Unbalanced)
+4dBu	Line (Balanced)

Setting channel names and colors

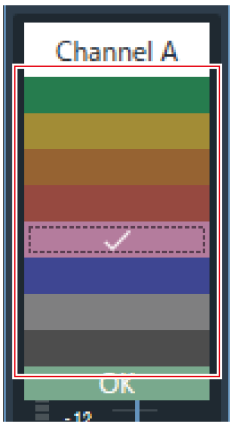
Set names and colors for each channel.

1 **Click the channel name in the channel audio settings.**

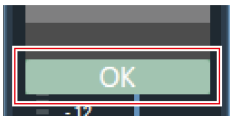
2 **Click on the text box and enter a channel name.**



3 **Select a color.**



4 **Click “OK”.**



» **The channel name and color are set.**

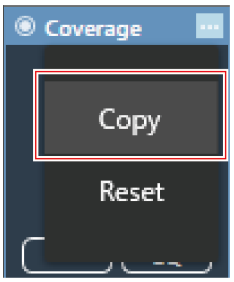
Copying audio settings

Copy audio settings for one channel and paste them to another channel.

- Only audio settings for the Coverage channel or channels Priority 1 to Priority 5 can be copied.

1 **Click the channel menu for the channel whose audio settings are to be copied.**

2 **Click “Copy” in the pull-down menu.**



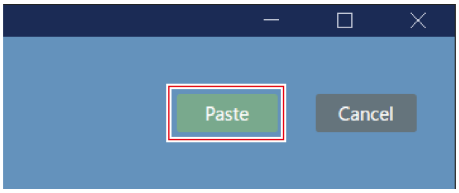
» **The screen display switches to copy mode and the source channel is selected.**

3 **Select a target channel.**

- Multiple target channels can be selected.
- Channels selected as target channels can be deselected by clicking on them again.

4 **Click “Paste”.**

- To cancel copying or reselect the source channel, click “Cancel”. Copy mode is cancelled.



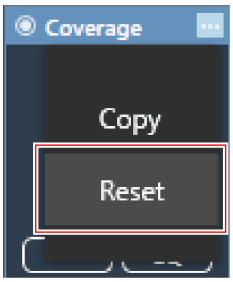
» **Audio settings from the source channel are reflected to the target channel.**

Reset audio settings

Return the audio settings for a channel to the default settings.

1 **Click the channel menu for the channel whose audio settings are to be reset.**

2 **Click “Reset” in the pull-down menu.**



» **Audio settings are reset.**

Camera Area settings

Adding a Camera Area

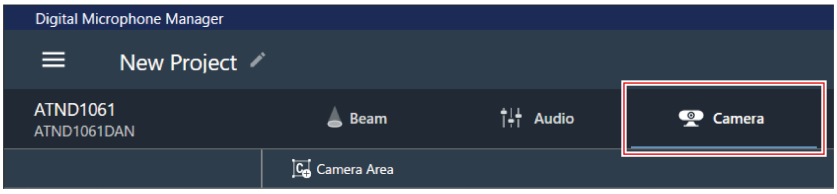
Talkers in the Camera Area are detected and output as location data.

- The camera can be pointed at the talker based on output location data.
- Camera operation requires that location data be received and processed by the camera.
- Up to 15 Camera Areas can be set for each microphone.

1 **Select a microphone in the main area.**

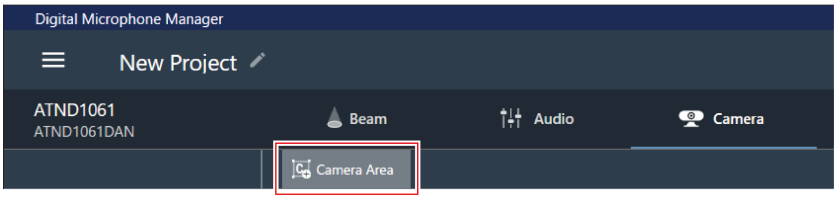
» **The microphone settings screen appears.**

2 **Click “Camera”.**



3 **Click “Camera Area”.**

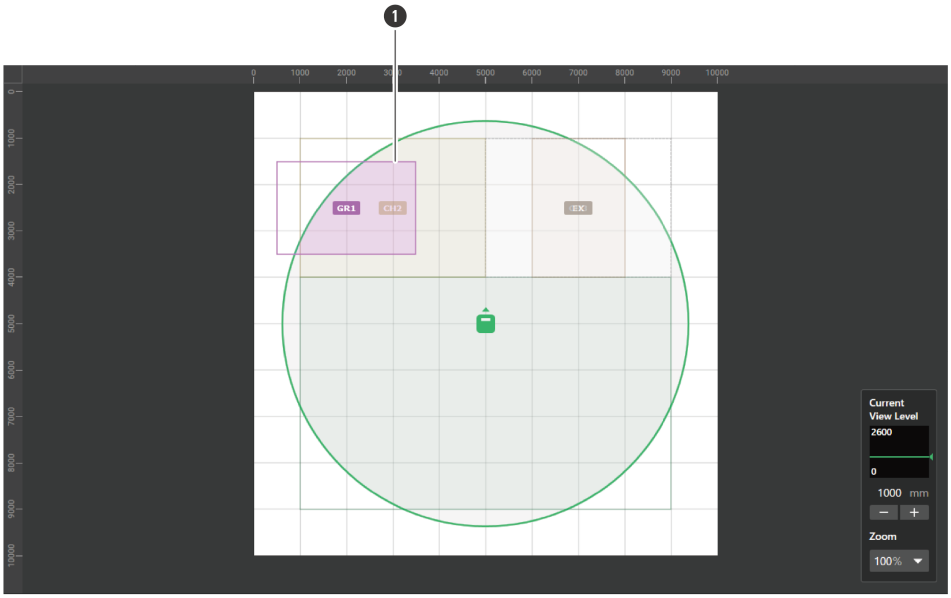
- With each click, the mode for adding a Camera Area is turned on/off.
- The mode for adding a Camera Area can be turned off by right-clicking in the microphone pickup area or by pressing the Esc key on the keyboard.



» **The mode for adding a Camera Area is turned on.**

4 **Add a Camera Area by dragging it within the microphone pickup area.**

- Camera Areas cannot be added outside the microphone pickup area.
- Camera Areas cannot overlap.



1 Camera Area

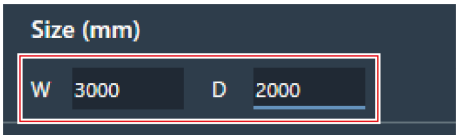
» **The added Camera Area is selected and "Camera Area" appears in the context panel.**

5 Adjust the position of the Camera Area.

- Under "Position", enter the height from the floor in "Z" and the position from the origin point using "X" (horizontal direction) and "Y" (vertical direction).
- In the main area, the Camera Area can also be dragged to change its position.

6 Adjust the size of the Camera Area.

- Under "Size", enter the size of the Camera Area using "W" (Width) and "D" (Depth).
- In the main area, the point in the corner of the Camera Area can also be dragged to resize the image.



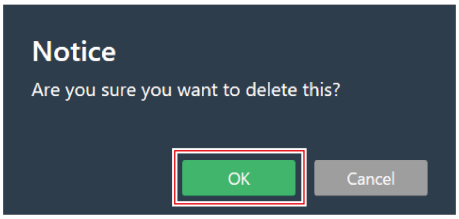
Deleting a Camera Area

1 **Select a Camera Area in the main area.**

» **“Camera Area” appears in the context panel.**

2 **Click the trash icon or press the Delete key.**

3 **Click “OK” in the message.**



» **The Camera Area is deleted.**

Locking a Camera Area

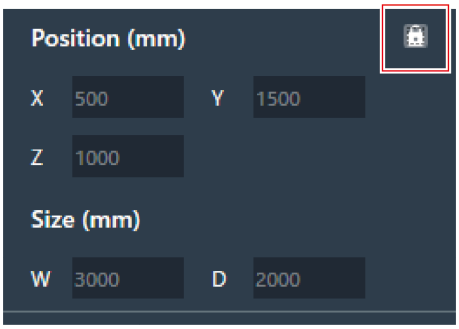
The Camera Area is locked to prevent changes to its position and size.

1 **Select a Camera Area in the main area.**

» **“Camera Area” appears in the context panel.**

2 **Click the lock icon.**

- With each click, the Camera Area is either locked or unlocked.



» **The Camera Area is locked.**

Setting groups

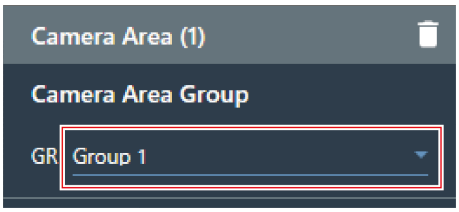
Set groups assigned to Camera Areas.

- Multiple Camera Areas can be assigned to the same group.
- Up to 8 Camera Area groups can be assigned for each microphone.

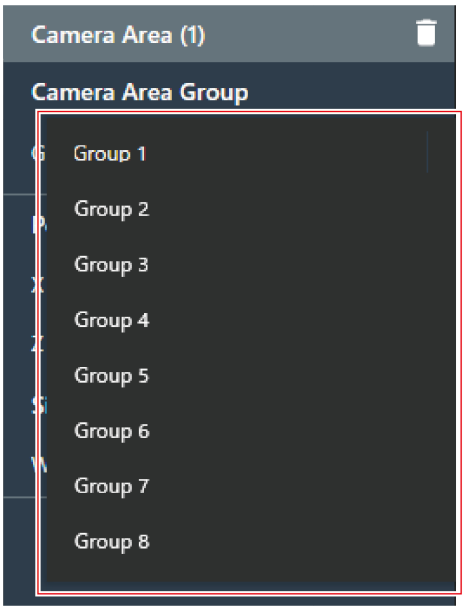
1 **Select a Camera Area in the main area.**

» **“Camera Area” appears in the context panel.**

2 **Click the area in the red box next to “GR” under “Camera Area Group”.**



3 **Select a group number from the pull-down menu.**



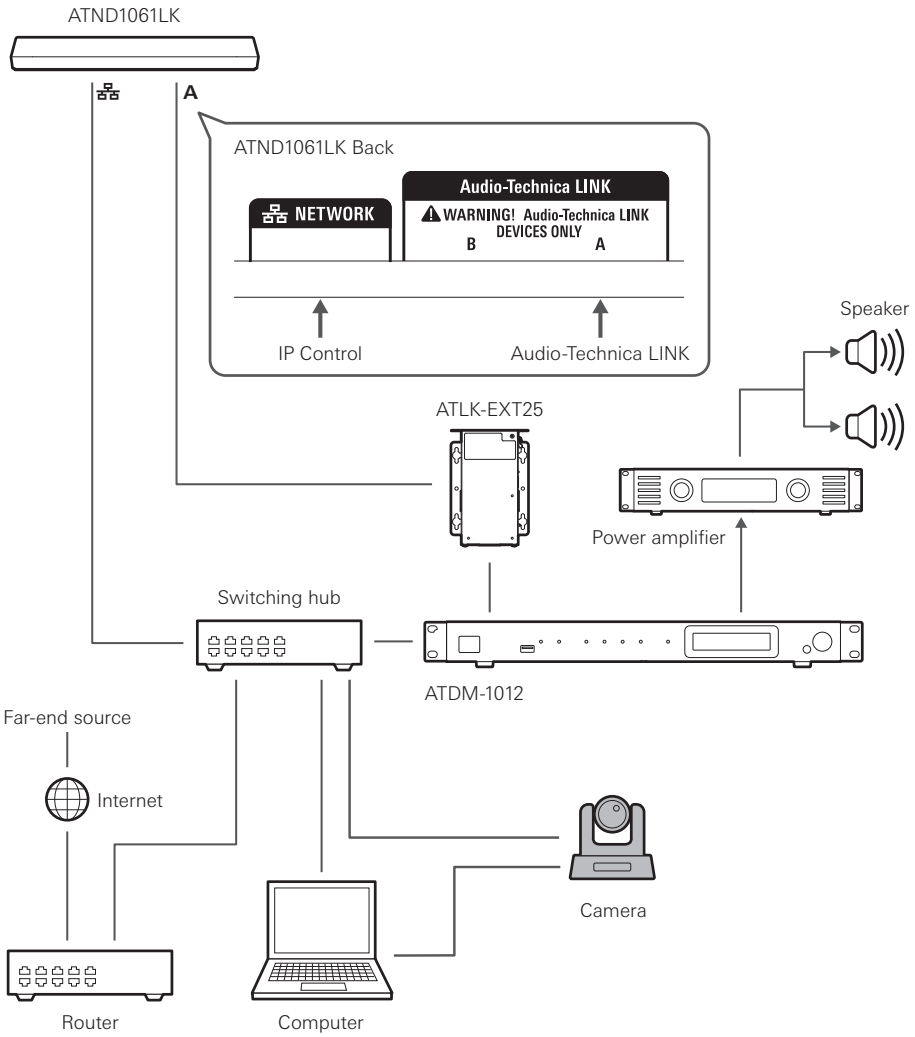
» **The group number displayed in the Camera Area changes to the assigned group number.**

Using the camera linking function

The camera linking function can be used by updating the microphone with the latest firmware. This function does not use any sort of control system, but is used to operate the camera whenever the microphone detects a speaker.

System connection examples

ATND1061LK is used as an example for explanation.



Cameras with confirmed compatibility

This list of cameras with confirmed compatibility is current as of June 2023. Please check the Audio-Technica website for the latest information.

Panasonic Connect Co., Ltd.

Messages are sent and received using the HTTP protocol in a format specific to Panasonic cameras.

Compatible models	AW-UE50, AW-UE40, AW-UE20, AW-HE20
Protocol	Panasonic protocol

Sony Marketing Inc.

Messages are sent and received using the UDP protocol in VISCA over IP format.

Compatible models	SRG-X40UH
Protocol	VISCA over IP

Canon Marketing Japan Inc.

Messages are sent and received using the UDP protocol in VISCA over IP format.

Compatible models	CR-N300
Protocol	VISCA over IP

JVCKENWOOD Corporation

Messages are sent and received using the UDP protocol in VISCA over IP format.

Compatible models	KY-PZ200, KY-PZ200N
Protocol	VISCA over IP

Command list (Panasonic protocol)

Command name	Send command	Data value	Setting
Recall Preset Memory	http://[IPaddress]/cgi-bin/aw_ptz?cmd=%23R [Data]&res=1	[Data]: 00 to 99	Preset 001 to Preset 100
Pan/Tilt AbsolutePosition Control	http://[IPaddress]/cgi-bin/aw_ptz?cmd=%23APC [Data1][Data2]&res=1	[Data1]: 8000h [Data2]: 8000h	[Data1] Pan Position Center (0°) [Data2] Tilt Position Center (0°)
Zoom Position Control	http://[IPaddress]/cgi-bin/aw_ptz?cmd=%23AXZ [Data]&res=1	[Data]: 555h	Wide (Zoom position default)
PowerON, Standby	http://[IPaddress]/cgi-bin/aw_ptz?cmd=%23O [Data]&res=1	[Data]: 0/1	Standby/PowerOn

Command list (VISCA over IP)

Command Set	Command	Send command	Data value	Setting
PRESET	RECALL	8x 01 04 3F 02 pp FF	pp: 00 to 63	Recalled preset number - 1
PAN TILT	PAN TILT drive	8x 01 06 04 FF	-	Pan / Tilt position default
ZOOM	DIRECT	8x 01 04 47 00 00 00 00 FF	-	Zoom position default
POWER	ON/STANDBY	8x 01 04 00 0p FF	p: 2/3	On/Standby

How to connect

1 **Set the camera preset (set the angle of view).**

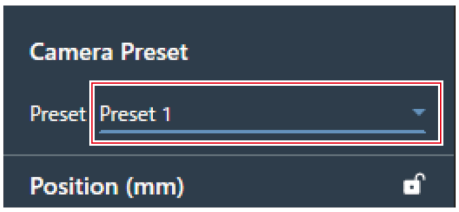
- For information on setting camera presets, refer to the user manual for the camera.

2 **Configure camera area settings in Digital Microphone Manager.**

- See "Adding a Camera Area" (p. 81).

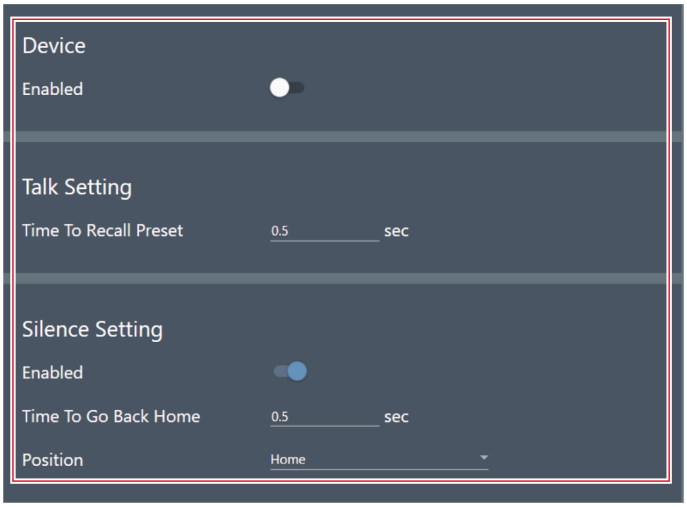
3 **Set the preset.**

- Configure settings to link the camera area group with the preset recalled by the camera. Check the camera preset number and set which camera preset to recall.



4 **Select “Camera” on the Settings & Maintenance screen.**

- Set “Enabled” under “Device” to ON (blue) and configure each setting.
- For information on settings, see "Camera" (p. 99).



Pausing the camera linking function

To pause the camera link function while it is in operation, set “Camera Control” using IP control or GPI settings to pause using external control.

Settings & Maintenance

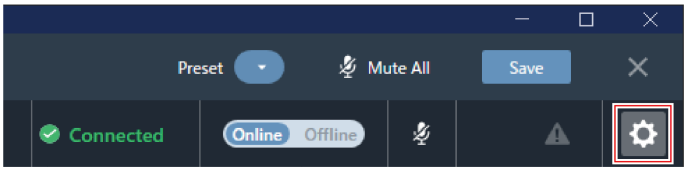
Advanced options for the microphone system and access utilities to help maintain and troubleshoot the system are available.

Basic operations on Settings & Maintenance screen

1 **Select a microphone in the main area.**

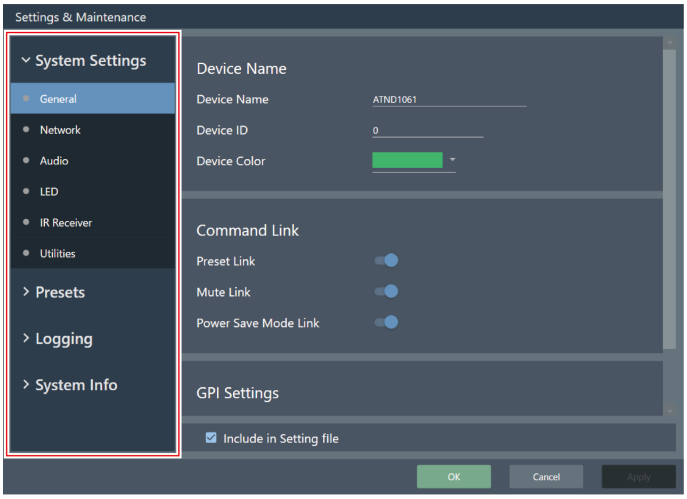
» **The microphone settings screen appears.**

2 **Click the area in the red box.**



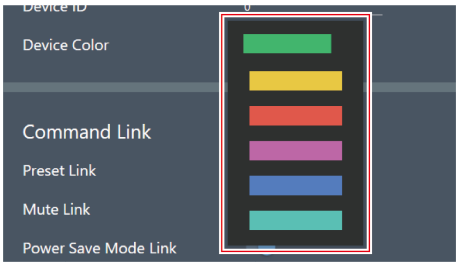
» **The Settings & Maintenance screen appears.**

3 **Open the settings menu and click on a setting.**



4 **For settings requiring text input, click the field for the setting to input text.**

5 **For settings requiring selection from a pull-down menu, click the field for the setting and make a selection from the pull-down menu.**

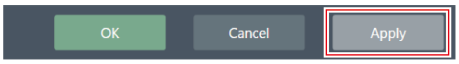


6 **For settings requiring use of a switch, click the switch.**

- With each click, the setting switches between ON (blue) and OFF (no color).

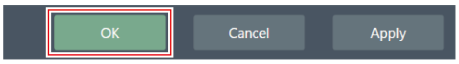
7 **Click “Apply”.**

- Click “Cancel” to cancel the setting.



» The setting will be applied.

8 **Click “OK” to exit.**



General (System Settings)

Device Name

Item	Description
Device Name	Set the microphone name.
Device ID	Set the microphone ID.
Device Color	Set microphone display colors in the main area.

Command Link

Send an IP command to one microphone to mute multiple microphones in the same network simultaneously, recall presets, mute and shift to power save mode.

- Command Link is communicated by broadcast.
- It is not necessary to set addresses on the microphone side (Digital Microphone Manager side). However, the subnet masks of the microphones to be linked should be the same.
- The using ports are 18000 and 18001 (transmit and receive ports). When using external devices, make sure that the port numbers are not the same.

Item	Description
Preset Link	Link preset recalls.
Mute Link	Link mute recalls.
Power Save Mode Link	Link power save mode transitions.
Link Group	Microphones on the same network can be divided into groups to use Command Link. Users must set group numbers.

GPI Settings

Item	Description
Port1	Set the function assigned to GPI port 1.
Port2	Set the function assigned to GPI port 2.

Include in Setting file

Selecting the check box will reflect “General” settings to Web Remote when setting files are imported or when “App -> Device” is selected when connecting an online microphone.

Network (System Settings)

Dante Network Configuration

Item	Description
Mode	Output is performed via a single cable when set to “Single Cable”. Output of IP control is performed via a separate cable when set to “Split”. Because this will require multiple connections, ensure that the necessary connections are made.
Latency	Set latency for the Dante port.

Dante & Audio Port Settings

Item	Description
IP Config Mode	Set the configuration mode for the IP address. When “Auto” is selected, IP addresses are automatically assigned by DHCP servers, etc. When “Static” is selected, static IP addresses are used.
IP Address[1]	Set the IP address.
Subnet Mask[1]	Set the subnet mask.
Gateway Address[1]	Set the gateway address.

[1] This is possible when “IP Config Mode” is set to “Static”.

IP Control & Web Remote Port Settings

Item	Description
IP Config Mode	Set the configuration mode for the IP address. When “Auto” is selected, IP addresses are automatically assigned by DHCP servers, etc. When “Static” is selected, static IP addresses are used.
IP Address[1]	Set the IP address.
Subnet Mask[1]	Set the subnet mask.
Gateway Address[1]	Set the gateway address.

[1] This is possible when “IP Config Mode” is set to “Static”.

Allow Discovery

Item	Description
Enabled	Set automatic detection for microphones on the same network. Setting to “ON” (blue) will enable automatic detection.

IP Control Settings

Item	Description
Port Number	Show the IP control port number.
Notification	Set whether to receive notifications from microphones during IP control. Setting to “ON” (blue) will result in notifications being received.
Audio Level Notification[1]	Set whether to receive audio level notifications from microphones during IP control. Setting to “ON” (blue) will result in notifications being received.
Camera Control Notification[1]	Set whether to receive camera detection notifications from microphones during IP control. Setting to “ON” (blue) will result in notifications being received.
Multicast Address[1]	Set the address for multicast.
Multicast Port Number[1]	Set the port number for multicast.

[1] This is possible when “Notification” is set to “ON”.

Include in Setting file

Selecting the check box will reflect “Network” settings to Web Remote when setting files are imported or when “App -> Device” is selected when connecting an online microphone.

Audio (System Settings)

Beam Settings

Item	Description
Beam Sensitivity	Set the beam sensitivity. Low: Beam direction detection accuracy is prioritized. Reactions to noises other than voices will be decreased. The beam tracking reaction speed will be slower. Mid: This is the most balanced setting. High: Reaction speed of beam tracking is prioritized. Reactions to noises other than voices will be increased.
Auto Attenuation	This function attenuates the levels of beam zones in which no talker has been detected for a certain period of time. It works by lowering the level of unwanted sound to prevent raising the noise floor, while also preventing decreased clarity due to mic bleed. Setting to “ON” (blue) will enable the Auto Attenuation function.
Attenuation Level[1]	Adjust the attenuation level of Auto Attenuation.
Hold Time[1]	Adjust the time until Auto Attenuation determines that a talker is not detected.

[1] This is possible when “Auto Attenuation” is set to “ON” (blue).

DSP Mode

Item	Description
DSP Mode	Set DSP mode for audio settings.

Dante Tx#6 Signal

Item	Description
Dante Tx#6 Signal	The assignment of the 6th digital output can be changed. If set to “Priority 5”, mixing will take place using equipment at a later stage. If set to “Auto Mix”, the mixing function of this microphone will be used.

LED (System Settings)

LED Settings

Item	Description
Unmute Color	Set the color of the microphone indicator lamp when unmuted.
Mute Color	Set the color of the microphone indicator lamp when muted.
Power Save Mode Color	Set the color the of microphone indicator lamp when in power save mode.

LED Dimmer

Item	Description
LED Dimmer	Set the brightness of the microphone indicator lamp. When set to “ON” (blue), the microphone indicator lamp will dim.

IR Receiver (System Settings)

Allow Control

Item	Description
Mute	Set whether to enable operation of the mute/confirm button on the IR remote controller. Setting to “ON” (blue) will enable this function.
Power Save Mode	Set whether to enable operation of the power save mode / cancel button on the IR remote controller. Setting to “ON” (blue) will enable this function.
Preset	Set whether to enable operation of the preset mode button on the IR remote controller. Setting to “ON” (blue) will enable this function.

Utilities (System Settings)

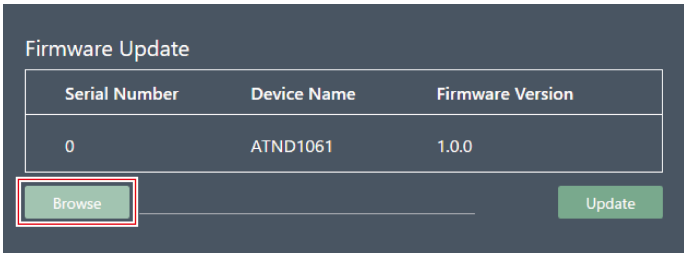
This item is displayed only when a microphone is connected.

Firmware Update

Use this procedure to update microphone firmware.

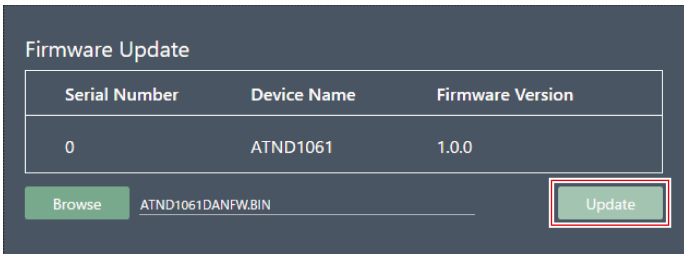
1 **Use the “Serial Number”, “Device Name”, and “Firmware Version” shown on the screen to determine whether the microphone is subject to an update.**

2 **Click “Browse”.**



3 **Select a file to be updated from the file selection screen.**

4 **Click “Update”.**



» **The update will start. Once the update is complete, the microphone will automatically reboot.**

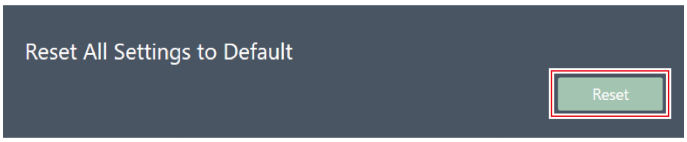
- The firmware can also be downloaded from Digital Microphone Manager if using the latest version of the software application. When “Download for firmware update” appears on the screen, click “Download” to download the latest firmware.

Reset All Settings to Default

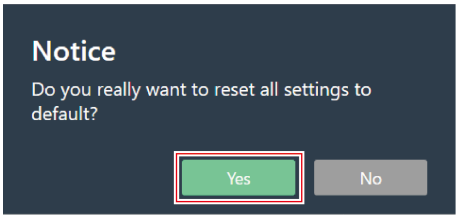
All microphone settings will be reset to factory default.

- However, the firmware version will remain the same.

1 **Click “Reset”.**



2 **Click “Yes” in the message.**



» **Initialization will start. Once initialization is complete, the microphone will automatically reboot.**

Presets

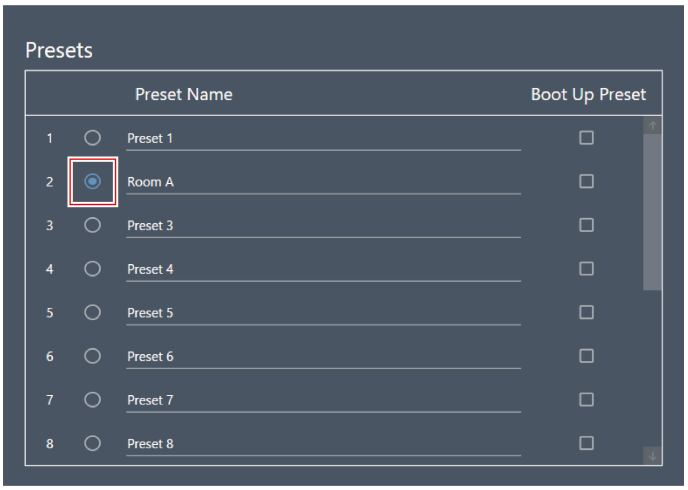
Presets

Item	Description
Preset Name	Display the preset name.
Boot Up Preset	Set the recalling presets when the microphone boots.

Exporting presets

Export presets to a file.

1 **Select the preset(s) to be exported to a file by clicking the corresponding button.**



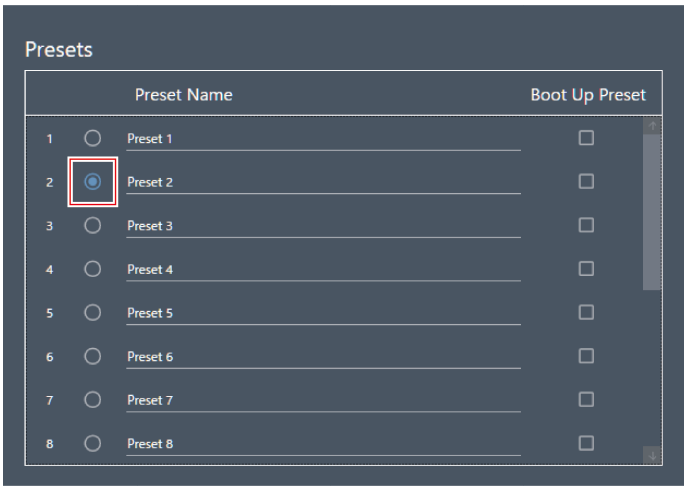
2 **Click “Export”.**

3 **Set the save location/file name, and export the file.**

Importing presets

Import exported preset files.

1 **Select import destination presets by clicking the corresponding button.**



2 **Click “Browse”.**

3 **Select and open preset files from the file selection screen.**

4 **Click “Import”.**

- It may take several minutes to reflect settings.

» **The preset(s) will be imported.**

Camera

Device

Item	Description
Enabled	Set the camera linking function. Setting to “ON” (blue) will enable the camera linking function.
Protocol[1]	Select the protocol to be used.
IP Address[1]	Enter the IP address of the camera to be used.
Port Number[1]	Set as follows depending on the protocol to be used. VISCA over IP: 52381 Panasonic: Port number set on the camera

[1] This is possible when “Enabled” is set to “ON” (blue).

Talk Setting

Item	Description
Talk To Recall Preset	Set the number of seconds after a speaker starts talking before the camera preset is recalled (the camera moves). Set this function to prevent the camera from moving immediately whenever a short utterance is made, etc.

Silent Setting

Item	Description
Enabled	Set a silent time. Setting to “ON” (blue) will enable the silent time setting.
Time To Go Back Home[1]	Set the number of seconds of silence before the camera preset is recalled (the camera returns to a position). Set this function to project the entire scene instead of focusing on a specific person when there is silence.
Position[1]	Set where the camera will return when there is silence.

[1] This is possible when “Enabled” is set to “ON” (blue).

Logging

Perform settings for log messages and download log files.

Item	Description
Enabled	Set whether to save log messages. Setting to “ON” (blue) will save log messages.
Destination[1]	Set whether to write log messages to internal memory or forward them to a Syslog server.
Log File[1]	Clicking “Download” will download log files registered to internal memory.

[1] This is possible when “Enabled” is set to “ON”.

- Syslog is a standard for transferring log messages across IP networks. It is used for administration of computer systems and security monitoring.

System Info

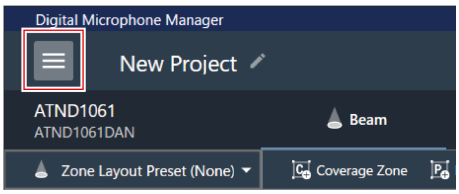
This displays information about the system, such as network settings and the serial number and firmware version of this product. System information can be exported to a text file by clicking “Export”. System information is displayed only when a microphone is connected.

Software application settings

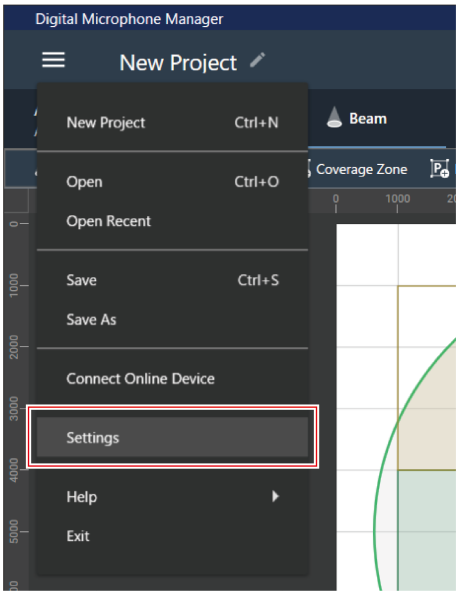
Basic operations on the Settings screen

Configure software application settings or EQ presets/zone layout presets.

1 **Click the main menu.**

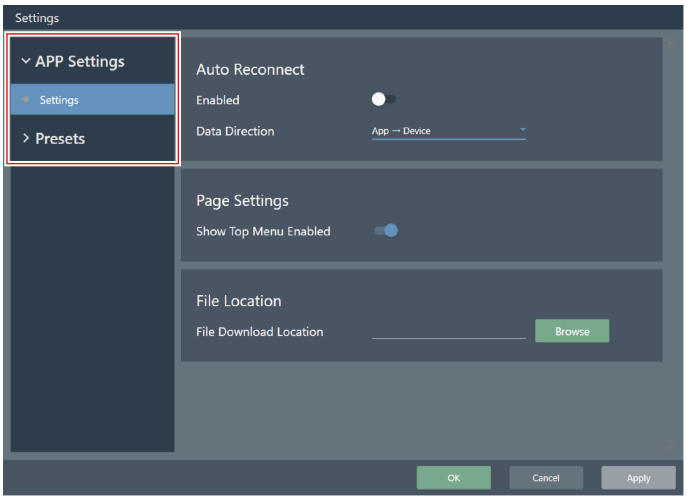


2 **Click “Settings”.**



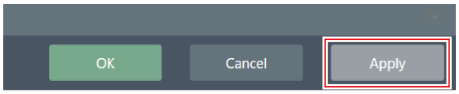
» **The Settings screen appears.**

3 **Open the settings menu and click on a setting.**



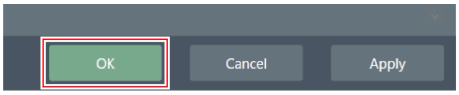
4 **When setting is complete, click “Apply”.**

- Click “Cancel” to cancel the setting.



» **The setting will be applied.**

5 **Click “OK” to exit.**



Settings (APP Settings)

Auto Reconnect

Item	Description
Enabled	Automatically reconnects when a project file is opened if a previously connected microphone is found on the same network. Setting to “ON” (blue) will enable this function.
Data Direction	If set to “App -> Device”, software application settings data is reflected to the microphone. If set to “Device -> App”, microphone settings data is recalled by the software application.

Page Settings

Item	Description
Show Top Menu Enabled	Set whether to display the top menu screen when the software application launches. Setting to “ON” (blue) will display the top menu screen.

File Location

Item	Description
File Download Location	Set the save location first displayed when a file is saved.

4 Band EQ Library (Presets)

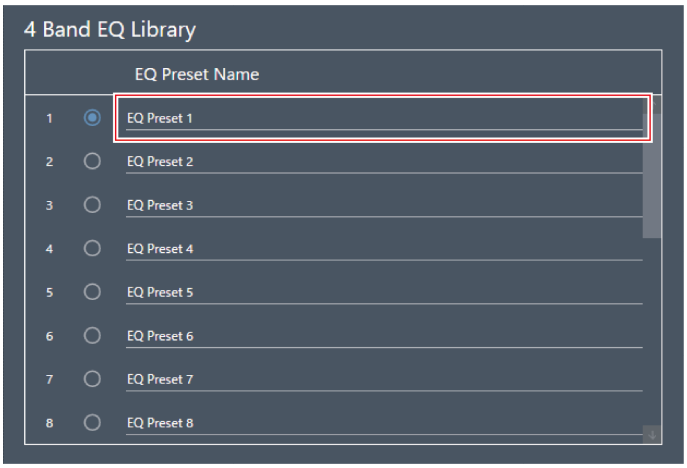
Export or import EQ presets or libraries to a file.

- For information on EQ presets, see "Adjusting in expert mode" (p. 66) for 4-band EQ.

Item	Description
4 Band EQ Library	A list of EQ presets in the library being imported.
EQ Preset	Export and import one “4 Band EQ Library” to a file.
Library	Export and import all libraries in the list of “4 Band EQ Library” to a file.

Changing an EQ preset name

1 **Click the name of the EQ preset to be changed.**

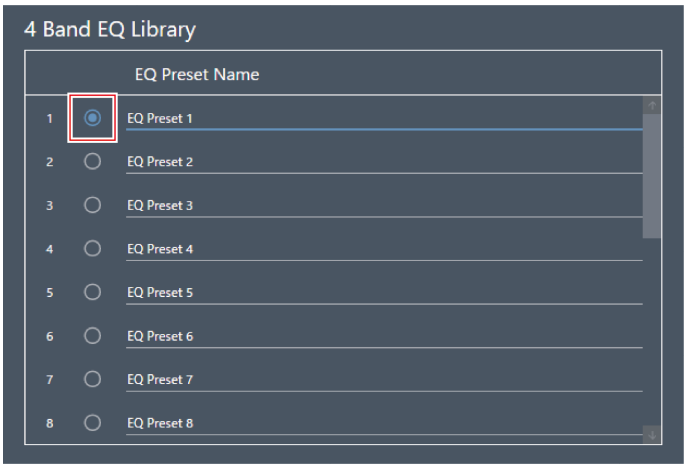


2 **Enter the EQ preset name.**

Exporting an EQ preset/library

1 **Under "4 Band EQ Library", select EQ preset(s) to be exported to a file by clicking the corresponding button.**

- When exporting a library, it is not necessary to select all EQ presets.



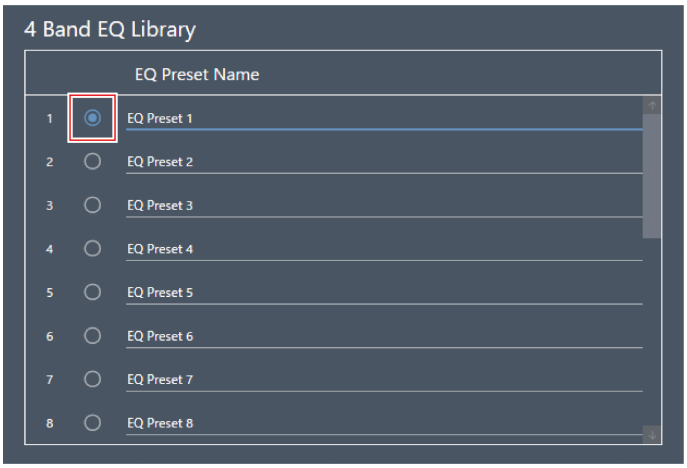
2 **Click "Export" for "EQ Preset" or "Library".**

3 **Set the save location/file name, and export the file.**

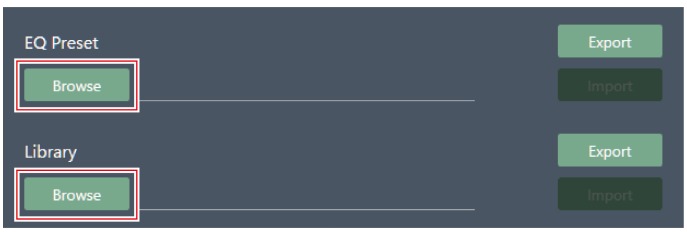
Importing an EQ preset/library

1 **Under "4 Band EQ Library", select import destination EQ presets by clicking the corresponding button.**

- When importing a library, it is not necessary to select all EQ presets.

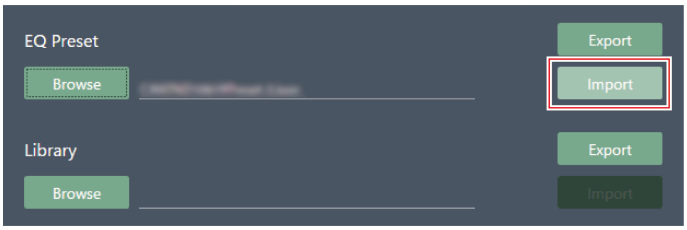


2 **Click "Browse" for "EQ Preset" or "Library".**



3 **Select and open files from the file selection screen.**

4 **Click "Import" for the file(s) to be imported.**



» **The EQ preset or library is imported.**

Zone Layout Library (Presets)

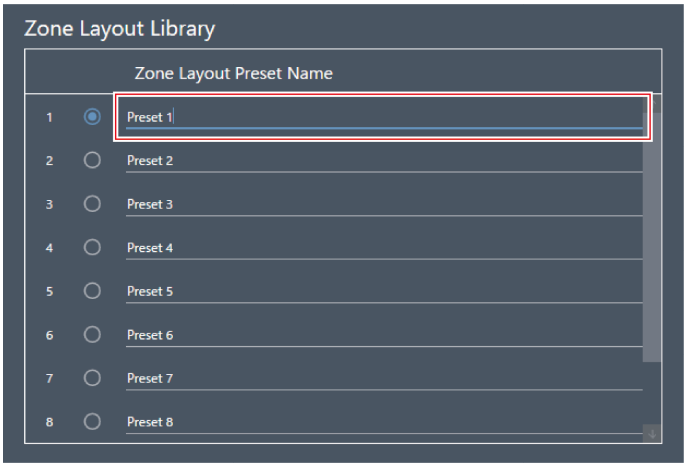
Export or import zone layout presets or libraries to a file.

- For details on zone layout presets, see "Zone layout presets" (p. 54).

Item	Description
Zone Layout Library	A list of zone layout presets in the library being imported.
Zone Layout Preset	Export and import one “Zone Layout Library” to a file.
Library	Export and import all libraries in the list of “Zone Layout Library” to a file.

Changing a zone layout preset name

1 **Click the name of the zone layout preset to be changed.**

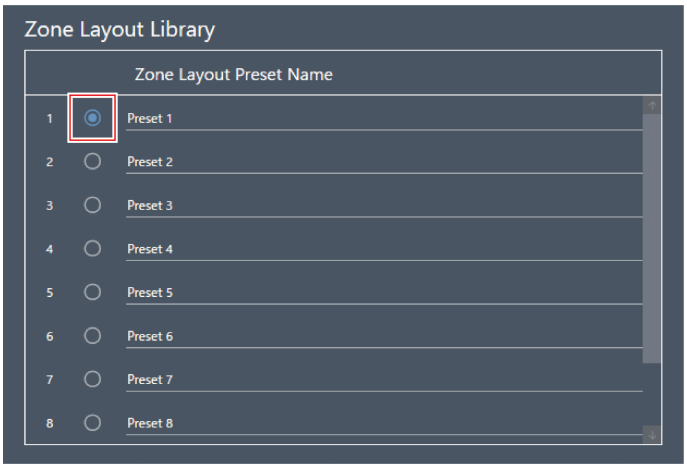


2 **Enter the zone layout preset name.**

Exporting a zone layout preset/library

1 **Under “Zone Layout Library”, select zone layout preset(s) to be exported to a file by clicking the corresponding button.**

- When exporting a library, it is not necessary to select all zone layout presets.



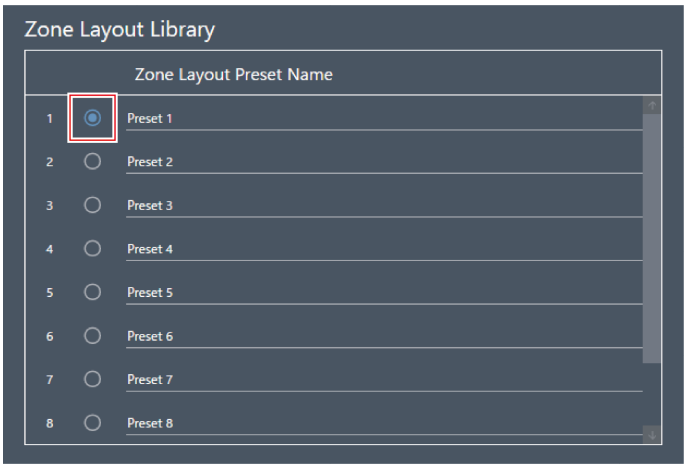
2 **Click “Export” for “Zone Layout Preset” or “Library”.**

3 **Set the save location/file name, and export the file.**

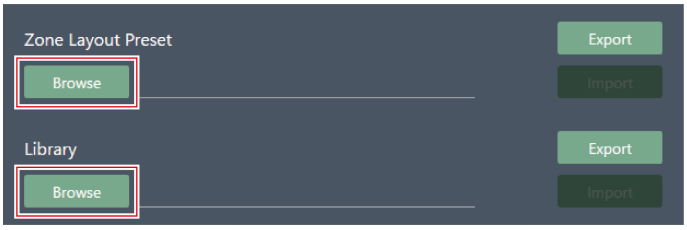
Importing a zone layout preset/library

1 **Under “Zone Layout Library”, select import destination zone layout presets by clicking the corresponding button.**

- When exporting a library, it is not necessary to select all zone layout presets.

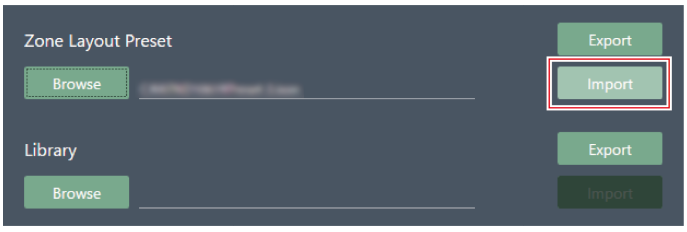


2 **Click “Browse” for “Zone Layout Preset” or “Library”.**



3 **Select and open files from the file selection screen.**

4 **Click “Import” for the file(s) to be imported.**

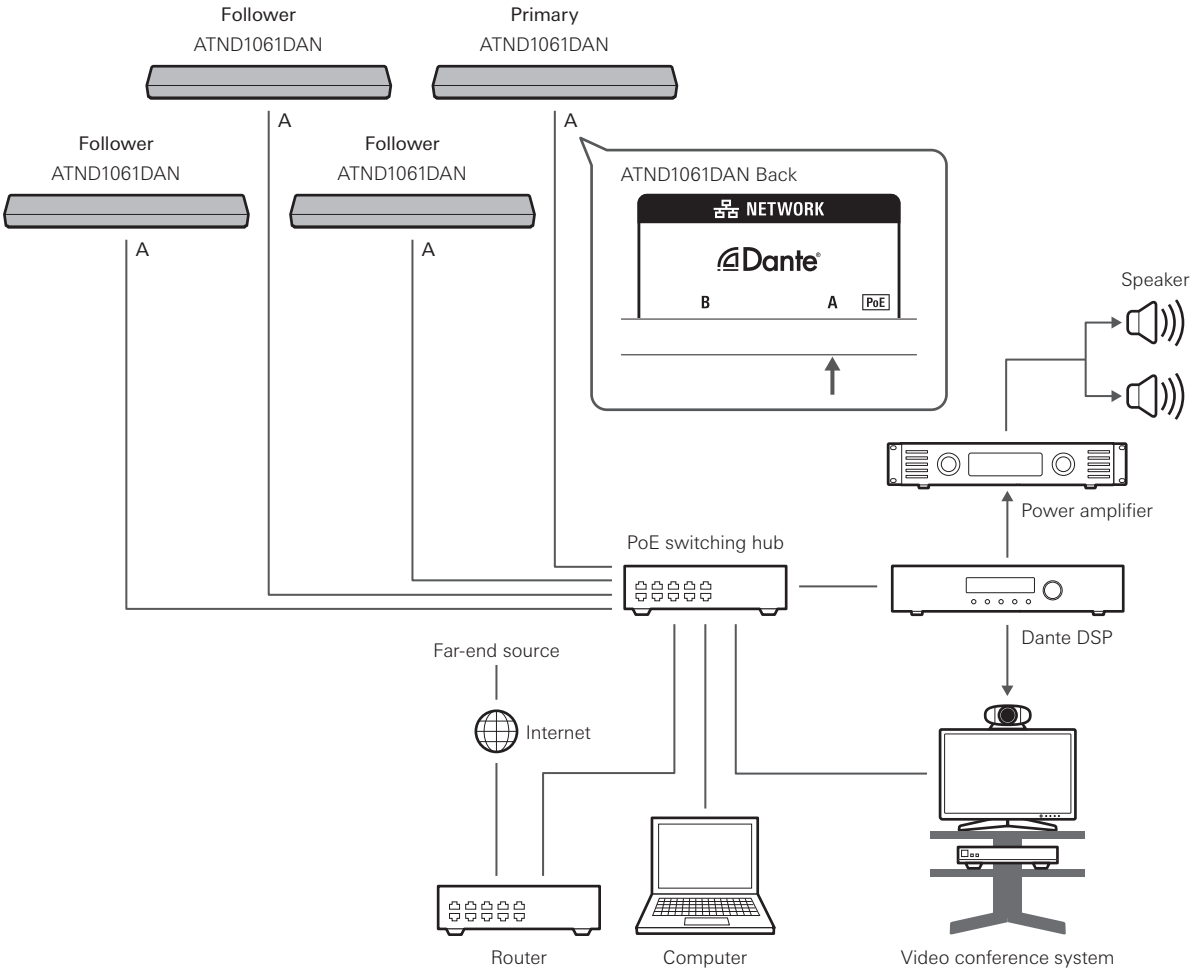


» **The zone layout preset or library is imported.**

Auto mix settings for connecting multiple units (ATND1061DAN)

Auto mix can be performed with multiple ATND1061DAN units as a single microphone group.

- When doing so, the main unit of the connected microphones will be the Primary unit, while all others will be Follower units.
- If performing auto mix for multiple units, the output for the auto-mixed microphones can be taken from the “Auto Mix” channel for the Primary unit.

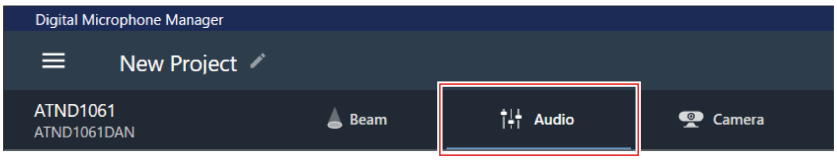


Digital Microphone Manager settings

1 **Select a microphone in the main area.**

» **The microphone settings screen appears.**

2 **Click “Audio”.**

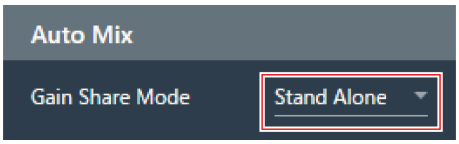


» The audio settings screen appears.

3 Click “Auto Mix” in the advanced audio settings.

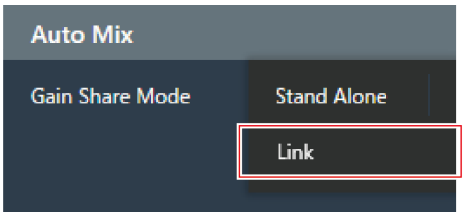
» “Auto Mix” is shown in the advanced audio settings and channel audio settings.

4 Click the area in the red box next to “Gain Share Mode”.

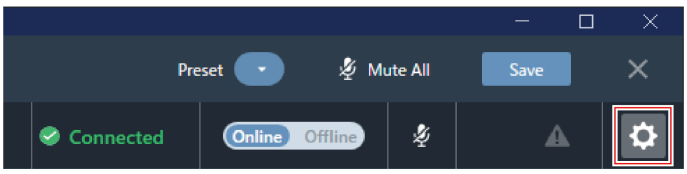


5 Click “Link” in the pull-down menu.

- Perform the same settings for all microphones.



6 Click the area in the red box.

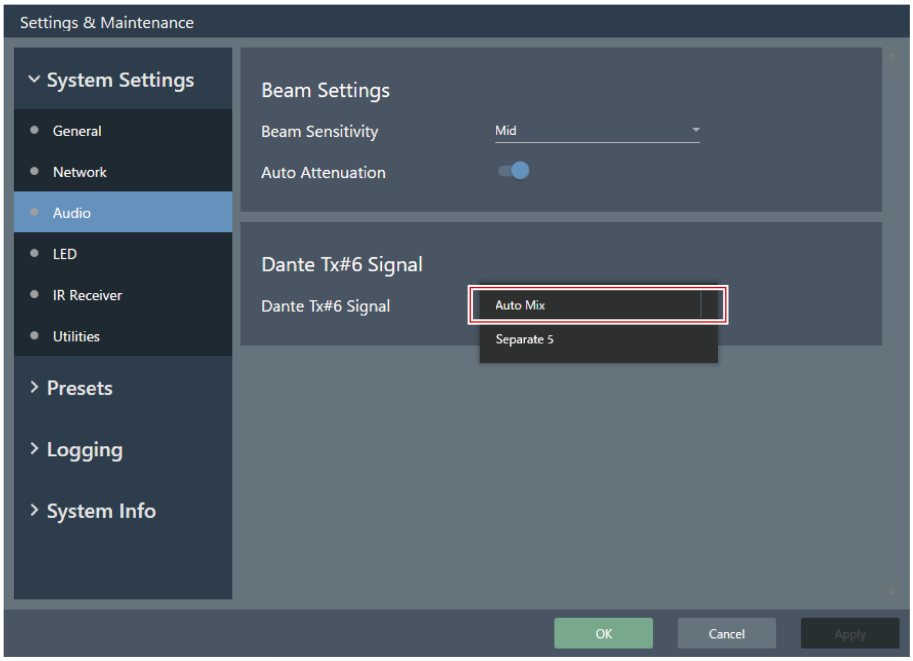


» The Settings & Maintenance screen appears.

7 **Click “System Settings” > “Audio”.**

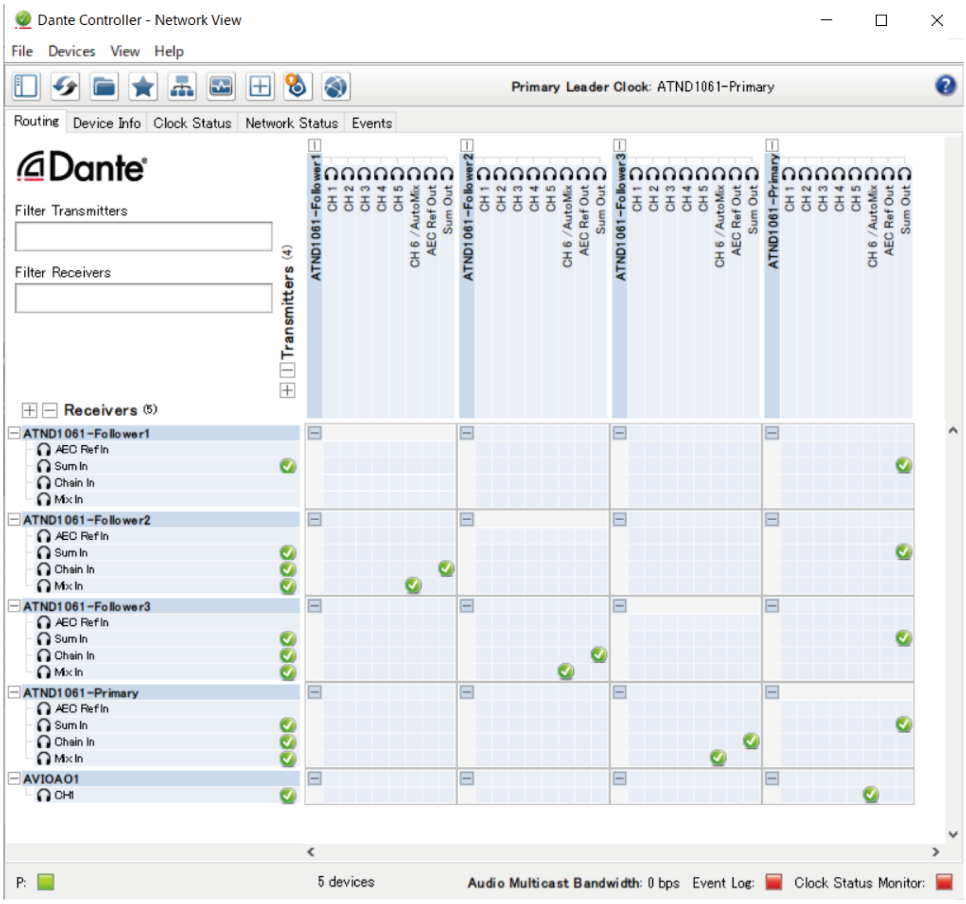
8 **Set “Dante Tx#6 Signal” to “Auto Mix”.**

- Perform the same settings for all microphones.



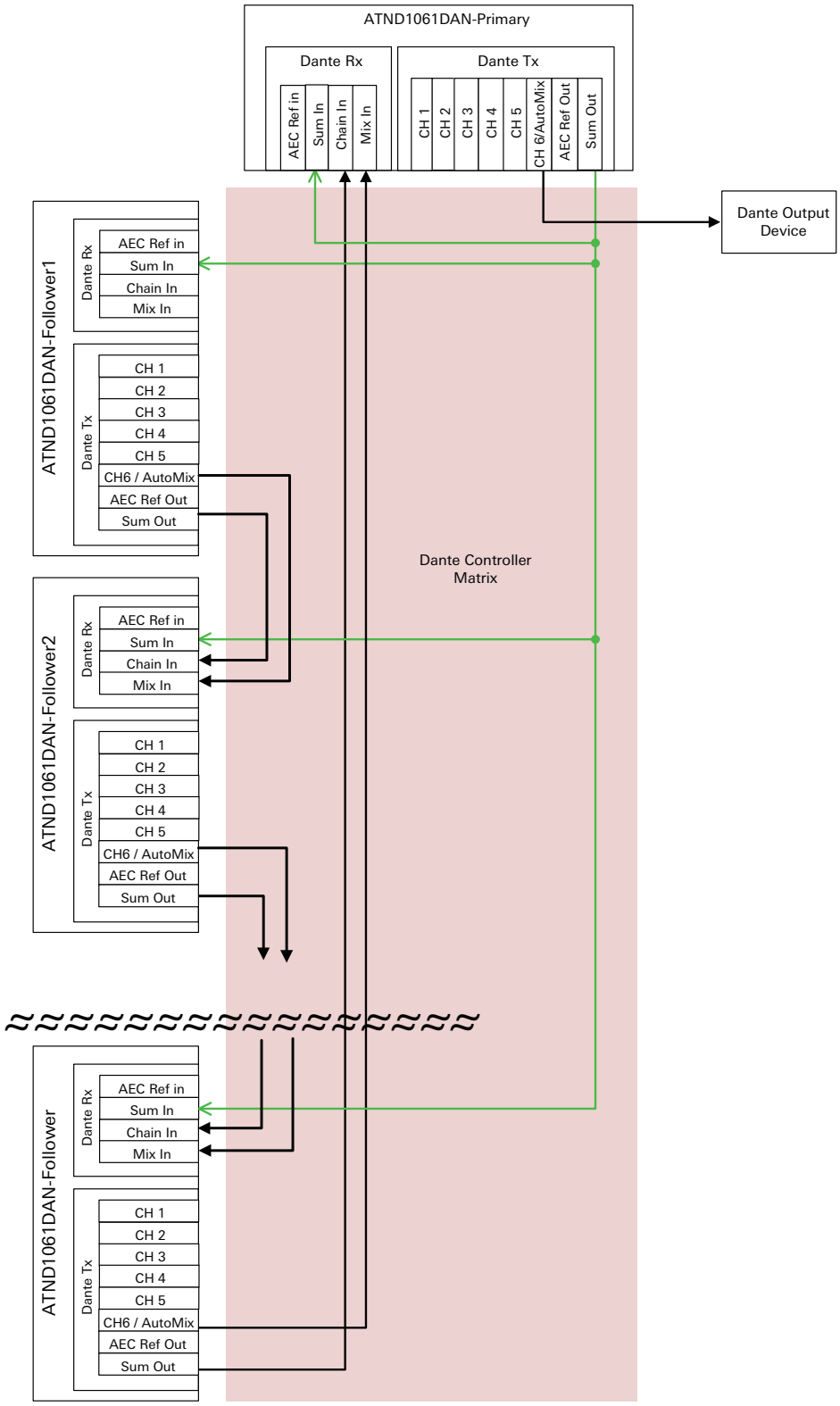
Dante Controller settings

Configure routing settings using the Dante Controller as follows.



Transmitters	Receivers
Follower1: Auto Mix	Follower2: Mix In
Follower1: Sum Out	Follower2: Chain In
Follower2: Auto Mix	Follower3: Mix In
Follower2: Sum Out	Follower3: Chain In
Follower3: Auto Mix	Primary: Mix In
Follower3: Sum Out	Primary: Chain In
Primary: Auto Mix	Output device
Primary: Sum Out	Primary and all Followers: Sum In

Signal system example

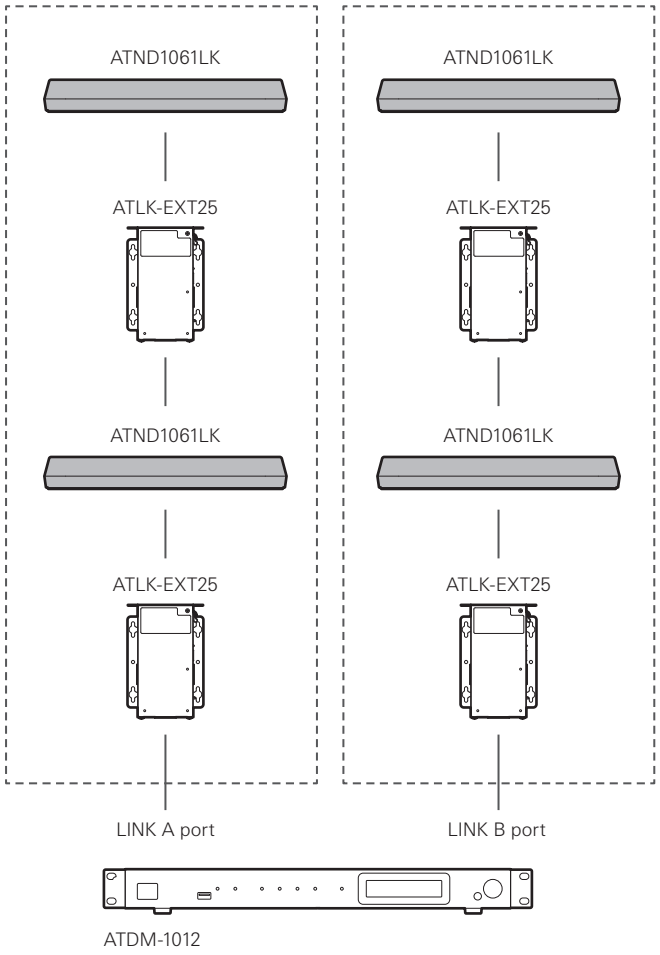


Auto mix settings for connecting multiple units (ATND1061LK)

Auto mix can be performed with multiple ATND1061LK units as a single microphone group. Follow steps 1 to 5 in "Digital Microphone Manager settings" (p. 109) of “Auto mix settings for connecting multiple units (ATND1061DAN)” to perform settings for the ATND1061LK.

Gain sharing

When using multiple ATND1061LK units, gain is shared within the areas inside the dotted lines in the figure. The gain sharing functions of the LINK A port and LINK B port of the ATDM series mixer are independent, while the gain sharing functions of the ATND1061LK units connected to each port operate in unison.



Forced update

If an error, such as the power being turned off, occurs during the firmware update and the update does not end normally, an error may occur even when the power is turned on, and the product may not start normally. When this happens, the microphone can be restored by performing a forced firmware update.

1 **Fix the IP address of the connected control device.**

- If the microphone suffers an error during start-up due to an error that occurred during the update, the settings will be as follows.
  IP Config Mode: Static
  IP Address: 192.168.33.102
  Subnet Mask: 255.255.255.000
- To connect the microphone to the network, fix the IP address of the Windows PC or Mac to an address that can communicate with "192.168.33.102". (Example: 192.168.33.100)

2 **Connect the control device to the same network as the microphone.**

3 **Launch the web browser of the control device.**

4 **Clear the history and cache of the web browser.**

- Not clearing the history and cache may prevent the display and functions from working properly when Web Remote is launched.

5 **Enter "192.168.33.102" as the microphone IP address.**

» **Web Remote will be launched in forced update mode.**

6 **Select and open a firmware update file.**

7 **Click "Update".**

» **The update will start. Once the update is complete, the microphone will automatically reboot. Once rebooted, the IP Config Mode will switch to "Auto".**

8 **Check the version from Web Remote or the Firmware Update screen of Digital Microphone Manager.**

- Check the "Firmware Version" to confirm that the microphone was correctly updated.

- Once updated, new firmware functions or improvements may prevent the display and functions from working properly when Web Remote is launched. When this happens, clear the history and cache of the web browser in use.

Error message list

Error message	Description
Cannot import file type.	The file you are trying to import is not a supported file format. Import a file of a supported file format.
Data is not valid.	The file you are trying to import contains invalid data. Import another file.
Digital Microphone Manager is already open. Please close Digital Microphone Manager to open a new session.	You are trying to launch another instance of Digital Microphone Manager.
Online device is not responding. Try again or check user manual for troubleshooting.	An online microphone is not responding. Check the network connection status for any problems.
Priority zones cannot overlap.	Two Priority Zones are set to overlap. Set Priority Zones so there is no overlapping.
Must be placed within microphone coverage zone.	The user is attempting to set the beam zone outside the microphone pickup area. Set a beam zone that is within the microphone pickup area.
Changing the Elevation Exclusion Angle has caused one or more defined zones to move outside of the coverage zone. Determine if set zones need to be repositioned.	The beam zone moved outside the microphone pickup area when changes were made to settings for the elevation exclusion angle. Set a beam zone that is within the microphone pickup area.
This exceeds the maximum number of devices that can be added.	The maximum number of microphones that can be added has been exceeded. Up to 20 microphones can be added to each project.
This exceeds the maximum number of zones that can be added.	The maximum number of areas that can be added has been exceeded. Up to 16 Coverage Zones, 16 Priority Zones, and 16 Exclusion Zones can be set for each microphone. Up to 15 Camera Areas can be set for each microphone.
Fail to save project file.	Saving of the project failed. Perform the operation again, and check whether the same error occurs.
Please check network connection.	An error occurred during microphone synchronization. Check the network connection status for any problems.
The device is processing.	The microphone is busy. Please wait a moment and try again.
Device must be placed within Room height.	The room height is set lower than the microphone installation height. Ensure the microphone installation height is set lower than the room height.
Data is not valid. Beam zone must be placed within device height.	The height of the beam zone for the imported zone layout preset is set higher than the microphone height. Ensure the microphone is set higher than the beam zone height.
Beam zone must be placed within device height.	The microphone installation height is set lower than the height of the beam zone. Ensure the beam zone height is set lower than the microphone installation height.
Camera Communication Error	Communication with the camera is not established. Check camera wires, network settings, and power supply.

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142700170-02-05
ver.1 2022.02.01
ver.5 2023.12.15