SOFTWARE INSTRUCTIONS

MIXER AMPLIFIER A-5000 SERIES

(Ver. 1.5.0)

Thank you for purchasing TOA's Mixer Amplifier.
Please carefully follow the instructions in this manual to ensure long, trouble-free use of your equipment.

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1. A-5000 PC SOFTWARE OUTLINE

1.1. General Description

Use the dedicated settings software when setting compression, manual mute functions, and feedback suppressor (FBS) function for the A-5000 Series.
Settings can be performed regardless of whether the A-5000 series (referred to as “unit” hereinafter) is concurrently in communication with a PC (online mode) or not (offline mode).
Note, however, that some operations and displays can only be performed online.
The PC and unit communicate via a network. When both are online, Preset Memory can be recalled from the PC to the unit, and acoustic signal processing settings can be changed in real time. Only one unit at a time can be used with the PC software.
Set data can be stored in the PC.

1.2. System Requirements

Install the software in a PC that meets the following specifications:

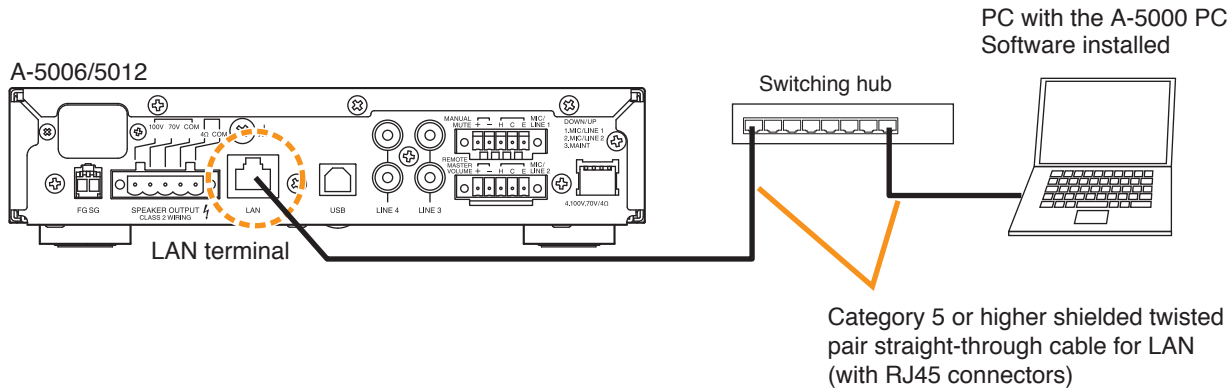
1.2.1. Recommended PC requirements

Hardware Requirements	
CPU	Intel Core™ i3, 2 GHz or faster
Memory	Over 2 GB
Display	1024 x 768 resolution or higher
Free Hard Disk Space	Over 16 MB however, over 600 MB is required for the 32 bit version or over 1.5 GB for the 64 bit version when “.NET Framework” is not yet installed
Optical Drive	CD-ROM drive
LAN	100BASE-TX
Software Requirements	
OS	Following are the verified operating systems: Windows 7 Professional 32bit SP1 Windows 7 Professional 64bit SP1 Windows 8.1 Pro 32bit Windows 8.1 Pro 64bit
Required Component	.NET Framework 4 Client Profile (Internet access is required when “.NET Framework” needs to be installed)

- Intel Core is the trademark of Intel Corporation in the United States and other countries.
- Windows is the registered trademarks of Microsoft Corporation in the United States and other countries.
- Regarding other company names and products, they are also trademarks of individual companies.

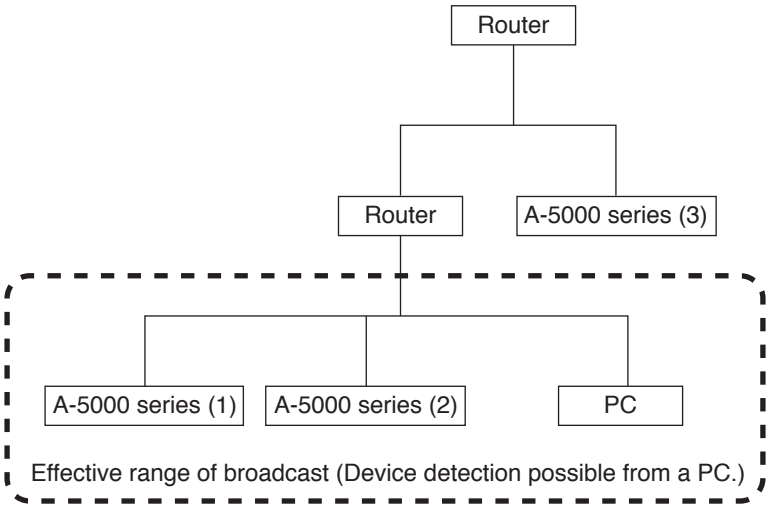
1.2.2. Connecting between the PC and the unit

Connect the unit's LAN terminal to the PC via a switching hub.
Connect a PC and the unit to a switching hub using LAN straight-through cables individually.



1.2.3. Network

- Perform the network setting for the PC in advance following the instructions of the network administrator of the facilities where the unit is installed.
  If incorrect setting has been performed, this may adversely affect other devices connected to the same network.
- The unit that communicates with this software can be detected using the Device detection function.
  The Device detection function detects the unit connected on the local area network.
  A "Broadcast" communication method is used for detection.
  Therefore, this detection function is available only within the effective range of broadcast. Broadcast will not reach beyond the router even within the local area network.



In the network configuration shown above, the A-5000 series (3) cannot be detected if the device detection is executed from the PC.
For the effective range of broadcast, consult your network administrator of the facilities where the unit is installed.

2. SOFTWARE SETUP

2.1. Installing the A-5000 PC Software

Terminate all other application programs in operation before installation.
Follow the procedures below to install.

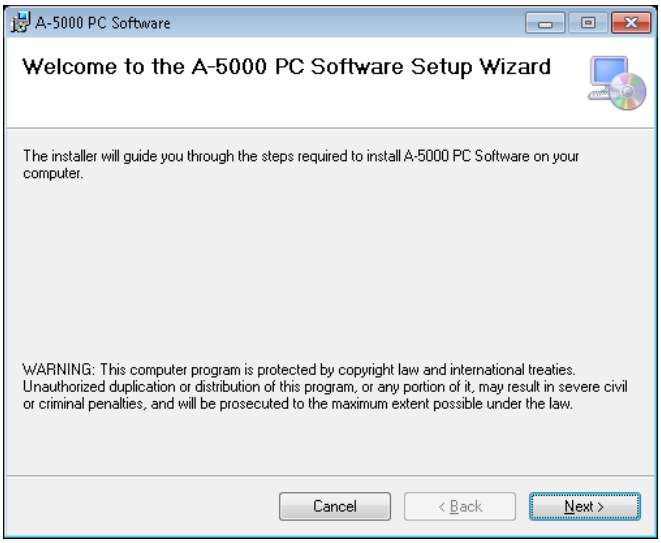
Step 1. Insert the supplied CD into the PC's CD drive.

Step 2. Open the CD drive from the "Explorer" or "My Computer."
The "English" folder, "Japanese" folder, and other contents are displayed.

Step 3. Open the "English" folder.

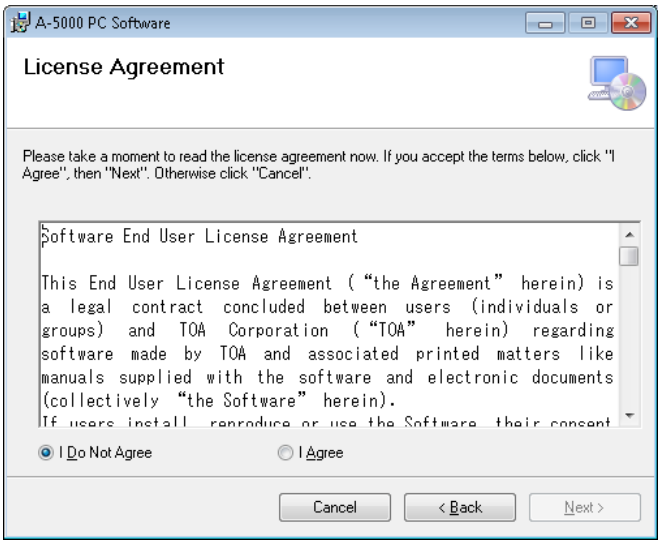
Step 4. Open the "Software" folder.

Step 5. Double-click the "setup.exe."
The window at right is displayed.



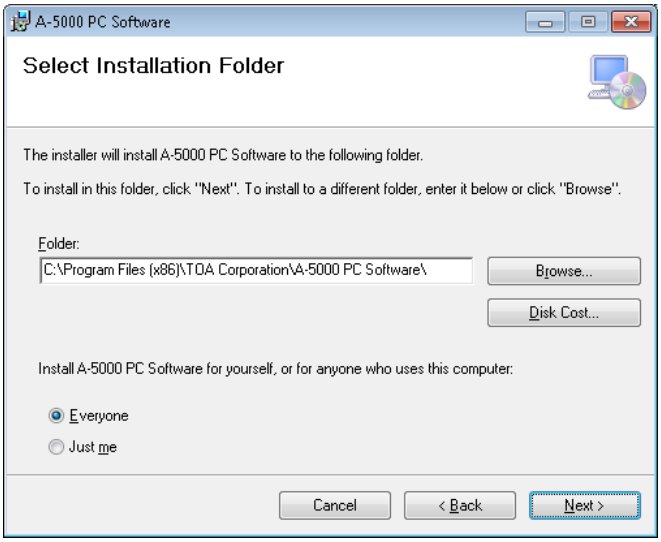
Step 6. Click the [Next] button.

The window at right is displayed.
Check the contents of the License Agreement, then choose the "I Agree" or "I Do Not Agree" radio button.
Choosing "I Agree" allows to click the [Next] button.



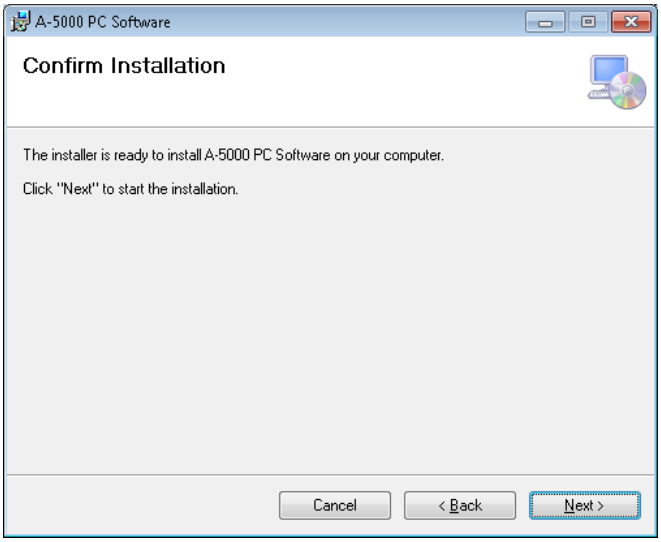
Step 7. Check the contents of the window, then click the [Next] button.

The window at right is displayed.

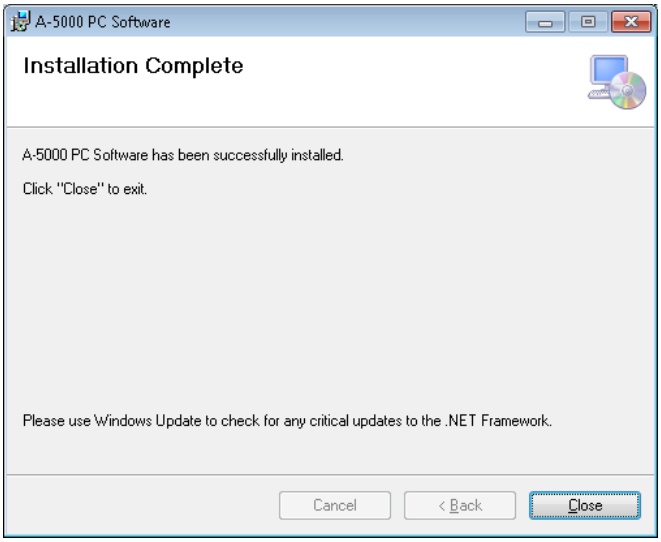


Step 8. If necessary, change the folder into which the software will be installed, then click the [Next] button.

The window at right is displayed.



Step 9. Start installation according to the instructions on the screen.



Tip
If the .NET Framework is not installed in the PC, follow the on-screen instructions to install it. Connection to the internet is required.

Step 10. Click the [Close] button after installation completion.
The shortcut icon for the A-5000 GUI executable program is stored in the PC's start menu.

2.2. Uninstalling the A-5000 PC Software

Step 1. Click the Start button on the PC's desktop, and select [Setting → Control Panel].
The "Control Panel" window is displayed.

Step 2. Double-click the "Programs and Features" icon.
The currently installed program will then be displayed.

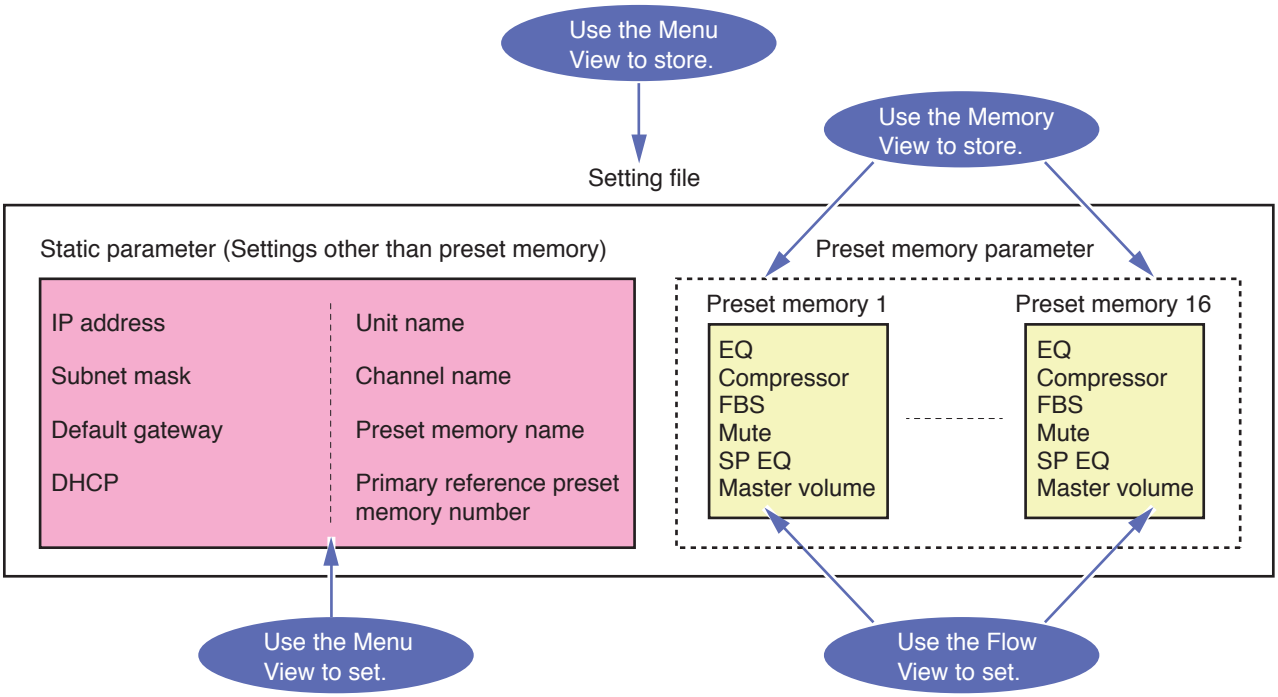
Step 3. Select "A-5000 PC Software."

Step 4. Click the "Uninstall."
The A-5000 PC Software is uninstalled.

3. SETTINGS FLOW

[Settings Summary]

Settings contents are broadly divided into preset memory parameter (see p. 30), where signal processing parameters are stored, and static parameter, for parameters not stored in the preset memory.



[Setting procedure example]

Step 1. Install the unit and set it up for audio output.

Step 2. Connect the unit to a PC (see p. 5).

Step 3. Install the A-5000 PC Software in the PC and start it (see p. 6 and p. 9).

Step 4. Receive date from unit and display its settings on the main screen (see p. 11).

Step 5. Set both unit and channel names (see p. 19).

Step 6. Set preset memory names and the preset memory number to be displayed when power is switched on (p. 40 and 41).

Step 7. Perform more detailed settings on the Flow View, actually outputting audio (see p. 21).

Step 8. Save settings to the preset memory (p. 43).

Step 9. Call up a different number of preset memory and repeat **Steps 6 – 8**.

4. STARTING THE SOFTWARE

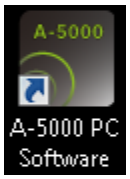
The following two different methods are available for starting the installed A-5000 PC Software:

4.1. Starting from the “Start” Menu

You can start the A-5000 PC Software from the start menu.

Click the Start button on the PC’s desktop, and select [Programs → TOA Digital Audio Control → A-5000 PC Software] to start.

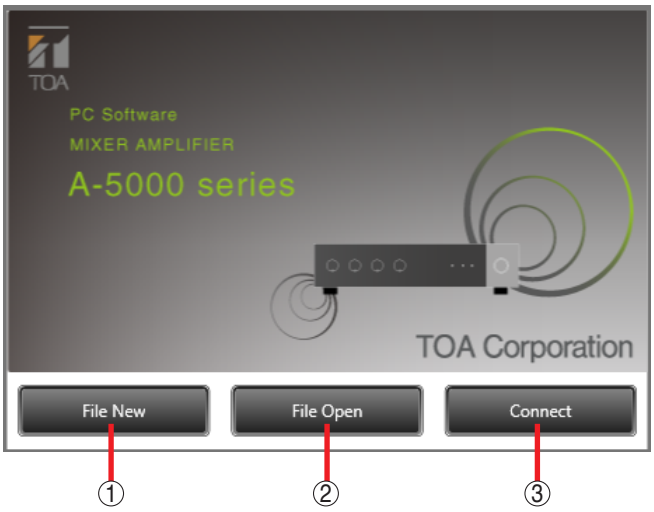
4.2. Starting from the Shortcut Icon

You can start the A-5000 PC Software by double-clicking the shortcut icon 

created on the desktop after installation completion.

5. MOVING FROM THE INITIAL OPERATION SELECTION SCREEN TO THE MAIN SCREEN

Connect the A-5000 Series unit to a PC and perform settings, actually outputting audio.
Starting up the A-5000 PC Software displays the initial operation selection screen. Select from among [File New], [File Open], and [Connect] depending on the type of work to be done.

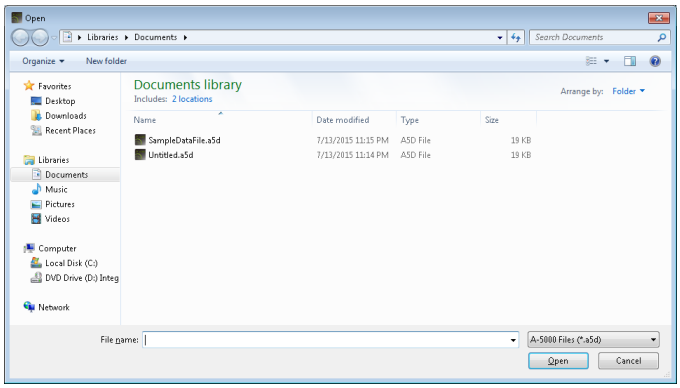


1. File New

Select this key to create a new setting file.
Clicking this key switches the screen display to the main screen (see p. 13).

2. File Open

Select this key to open a previously created settings file.
Clicking this key displays the “Open” dialog box.



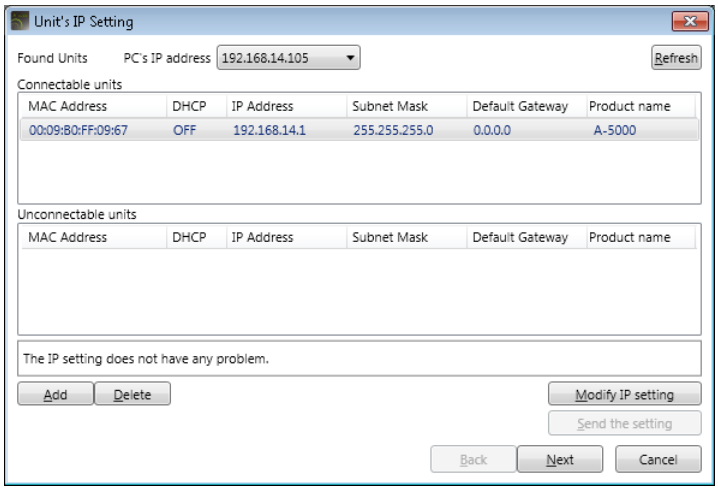
Select the desired file (extension: a5d) and click the [Open] button.
File is opened, and the screen display is switched to the main screen (see p. 13).

3. Connect

Select this key to receive the A-5000 Series unit's setting data via the LAN port and display it on the A-5000 PC Software's setting screen. Be sure the A-5000 unit is connected to the PC in advance by way of a switching hub (see p. 44.)

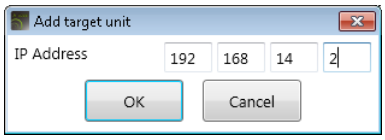
[Receiving Data]

Step 1. Click the [Connect] button on the initial operation selection screen.
Units are automatically detected and the Unit's IP Setting screen is displayed.

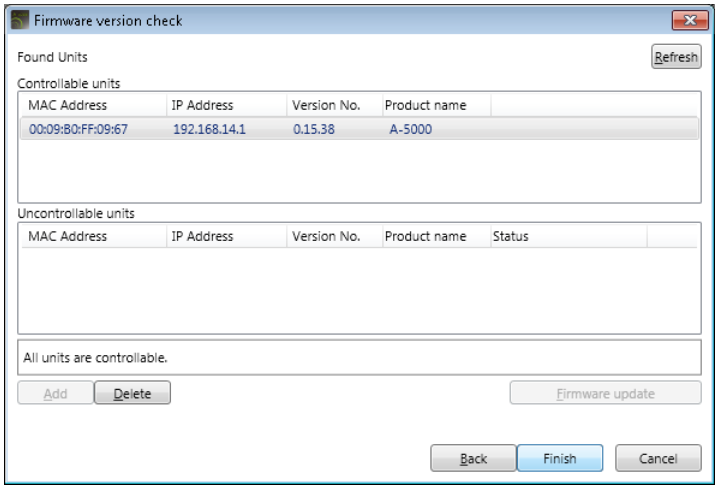


When the desired unit from which to receive data is not displayed:

The unit is not displayed in the above screen when connected via a router. Use the [Add] button to add the unit. If the [Add] button is clicked, the Add target unit screen (shown at right) for connected units is displayed. Enter the IP address of the desired connected unit.



Step 2. Select the desired unit from which to receive data, then click the [Next] button.
The Firmware version check screen is displayed.

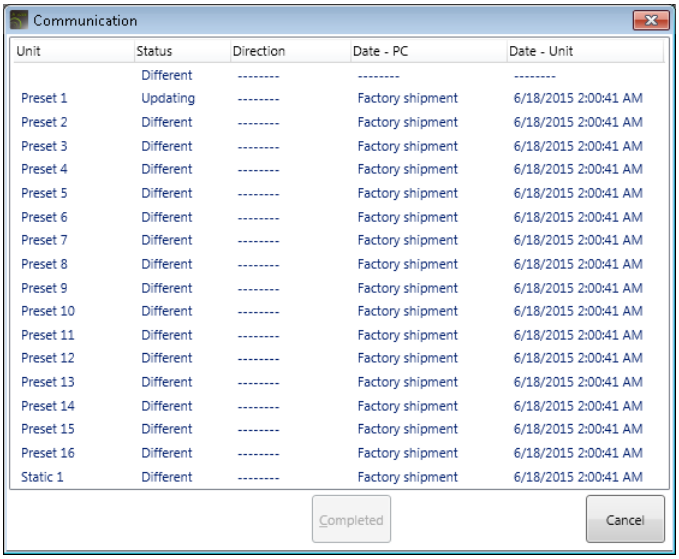


When the desired unit from which to receive data is listed among "Uncontrollable units" :

As the firmware version may be old and out of date, update the firmware using the [Firmware update] button. (See p. 47, **Step 6** of "Connection Settings.") Once the firmware is updated, the unit should then be displayed among the "Controllable units."

Step 3. Select the desired unit from among the "Controllable units" and click the [Finish] button.

Data reception is started and the Communication screen is displayed.



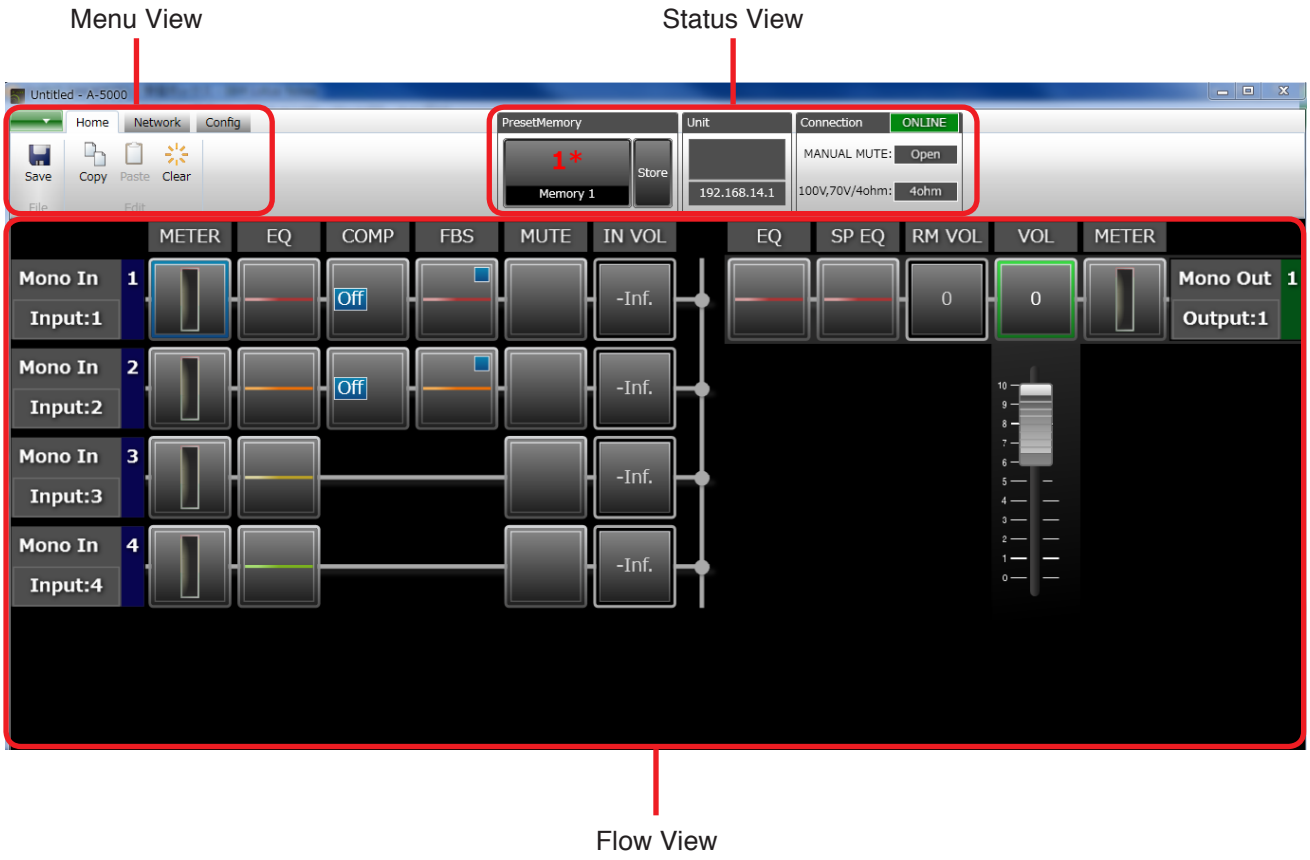
Tips

- Reception status is displayed in the Communication screen. (See p. 52 “Preset,” “Static.”)
- The display reverts to the initial operation selection screen if the [Cancel] button is clicked.

Step 4. Click the [Completed] button.
The screen display is switched to the main screen (see p. 13).

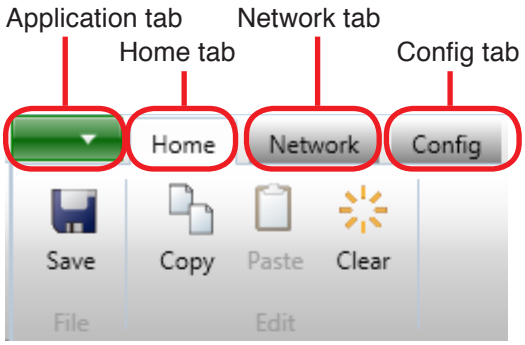
6. MAIN SCREEN AND INDIVIDUAL VIEWS

After initial operation selection settings, the Main screen is displayed.
The main screen consists of the Menu View, Status View and Flow View.



6.1. Menu View

The Menu view is located in the upper left section of the Main screen.
Clicking on the individual tabs in the Menu view displays the menu icons related to each corresponding function.
Click on a menu icon to execute its function.



Note: Clicking the ALT key displays the shortcut keys of the ribbon menu.

6.1.1. Application

New: Creates (sets) a new data file.
Open... : Calls up the existing data file.
Save: Overwrites the file being edited.
Save As... : Saves the file being edited to the disk under a different name.
Close: Closes the file being edited.
About... : Displays the A-5000 PC Software version number.
Exit: Exits the A-5000 PC Software.

6.1.2. Home

Save: Updates the file being edited.
Copy: Copies the value set for the function box selected on the flow view (see p. 17) to the clipboard.
Paste: Pastes the data in clipboard to the function box selected on the flow view.
Clear: Initializes the value set for the function box selected on the flow view.

6.1.3. Network

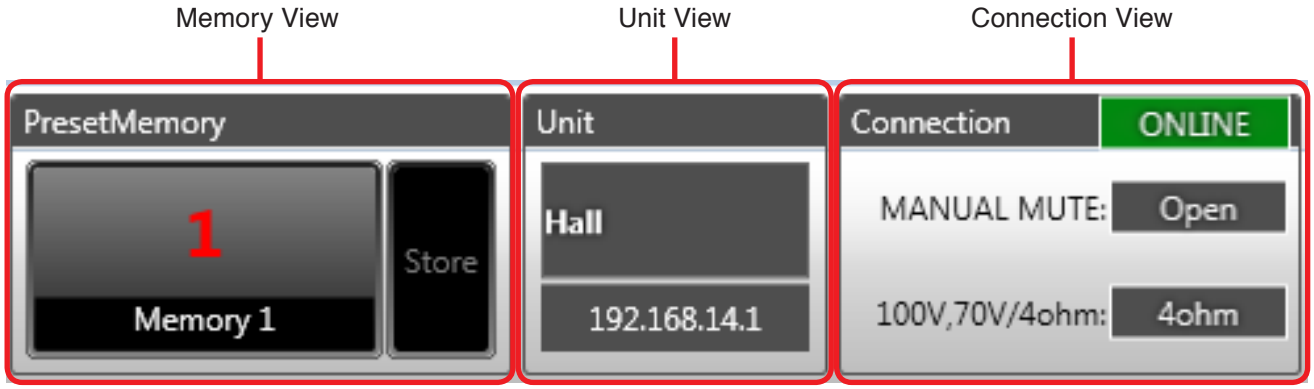
Connect: Connects the unit to a PC for online processing. (See p. 44.)
Disconnect: Disconnects the unit from a PC for offline processing. (See p. 49.)
Tip
The unit's setting does not change while in the offline state even if it is changed with a PC.
Connection Setting: Allows you to perform network settings and to designate the unit's IP address to which this software can access.
Auto Connect: Makes an automatic connection when the file is opened next time.

6.1.4. Config

Name: Displays the unit name setting dialog. (See p. 19.)
Preset Memory Setting: Displays the preset memory setting dialog. (See p. 40.)

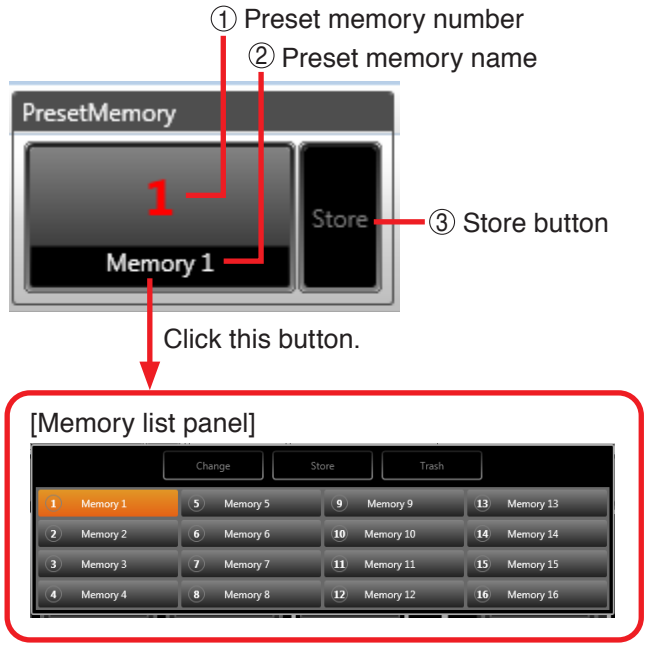
6.2. Status View

The Status view is located in the upper right section of the Main screen.
The Status view consists of Memory, Unit and Connection views.



The Status view displays information related to the unit to be set.

6.2.1. Memory view

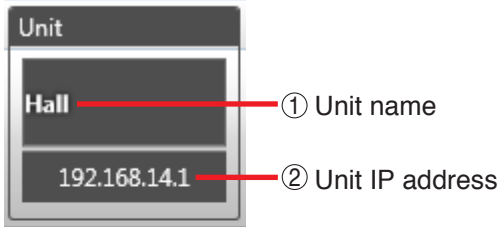


1. Preset memory number
Displays the number of the currently selected Preset Memory (see p. 40).
Click this button to display the Memory List panel.

2. Preset memory name
Displays the name of the currently selected Preset Memory (see p. 40).
Click this button to display the Memory List panel.

3. Store button
If this button is clicked, the contents set in the Flow View can be written to the currently selected preset memory.

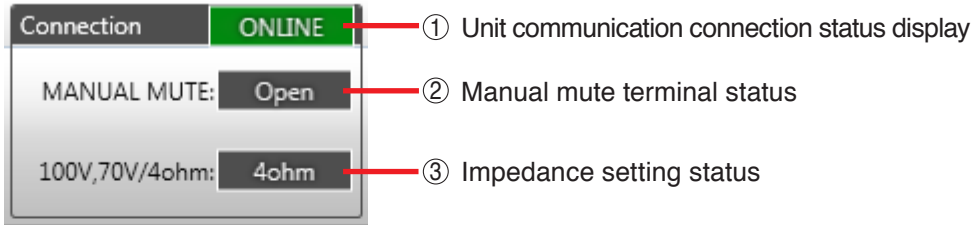
6.2.2. Unit view



1. Unit name
Unit's name is displayed.
The unit name can be set from the Menu View's "Config" tab (see p. 19).

2. Unit IP address
Unit's IP address is displayed.
For the unit's IP address, please read "Connection Settings" in "Communication Settings" on p. 45.

6.2.3. Connection view



1. Unit communication connection status display

Displays the status of communication with the unit.

OFFLINE : Unconnected (offline status)

ONLINE : Connected (online status)

2. Manual mute terminal status

Displays the manual mute terminal status.

Open : Open

Close : Close (muted)

3. Impedance setting status (status of DIP SW4 on the unit's rear panel)

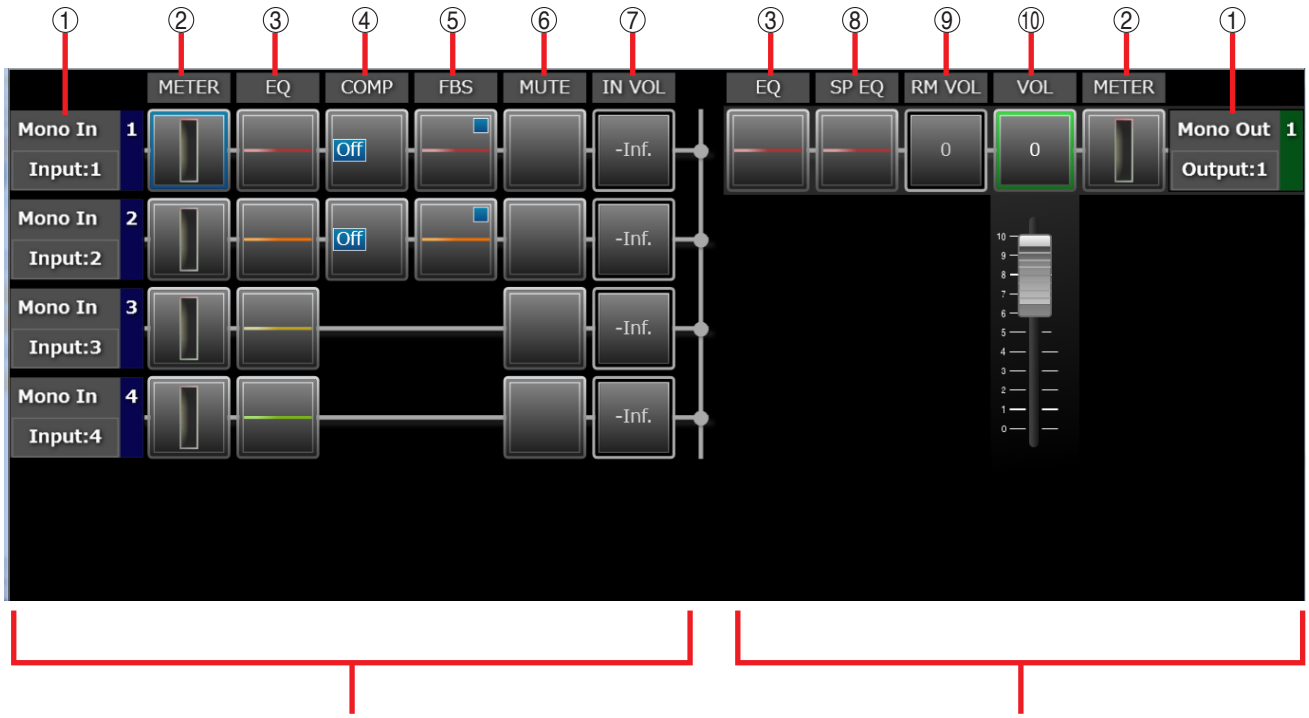
Displays the impedance setting status.

100V,70V : High impedance 100 V line or 70 V line (100 V, 70 V)

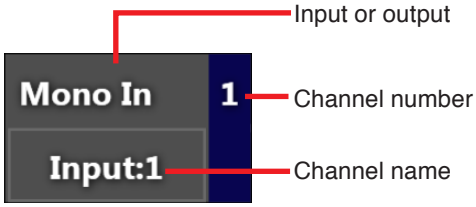
4ohm : Low impedance (4 Ω)

6.3. Flow View

Displays the unit's signal processing image.
The Flow View consists of Level Meter boxes ② and Function boxes ③ – ⑩ that show the unit's signal processing functions.



1. Channel information
Displays the input or output channel number and the channel name.



2. Level meter (only displayed when in online mode)
Displays the level of each input and output.

(For details, see p. 20.)

3. EQ (Equalizer)
Roughly displays the frequency characteristics curve set with the EQ.

Frequency characteristics are indicated by a flat straight line when all gains are set to 0 dB.
(For details, see p. 32.)

4. Compressor
These function boxes are only for monaural inputs 1 and 2, and display the On/Off status of compression settings and input and output levels.

(When in online mode)

(When in offline mode)

5. FBS
Roughly displays the frequency characteristics curve of the Feedback Suppressor (FBS) filter.

(For details, see p. 24.)

6. Mute

Displays muting status.

The display is as shown below while muting is enabled.

(When in online mode and muting is activated)

(When in offline mode or muting inactivated when in online mode)

(For details, see p. 27.)

7. Front panel-mounted volume control (only displayed when in online mode)

Displays the gain value of the volume control on the front panel.

8. SP EQ (Speaker equalizer)

Roughly displays the frequency characteristics curve set with the SP EQ.

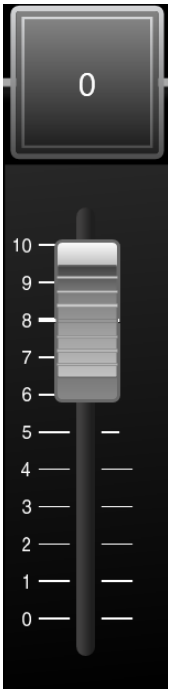
(For details, see p. 37.)

9. Remote master volume control (only displayed when in online mode)

Displays the gain value of the remote master volume output.

10. Master volume control

Allows operation of the master volume fader. The master volume's gain value display (shown in the upper part of the fader) is interlocked with the fader position.

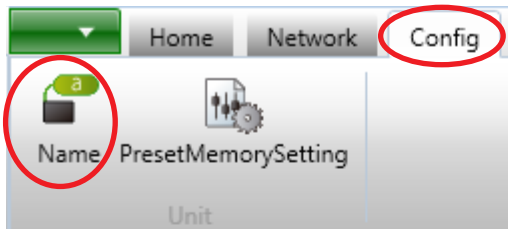


(For details, see p. 31.)

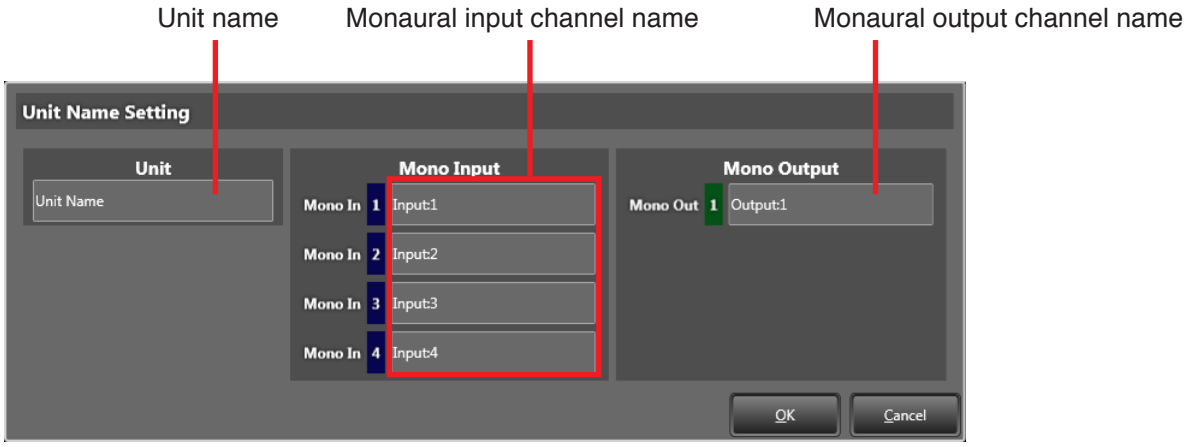
7. UNIT AND CHANNEL NAME SETTINGS

Set the names of units and each channel of monaural input and output.

Step 1. Select [Config → Name] in the Menu View.



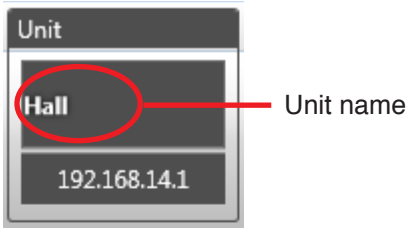
The Unit Name Setting screen is displayed.



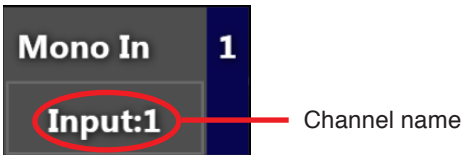
Step 2. Click a name box to enter a name.
Each name must be within 20 characters in length.

Step. 3. Click the [OK] button.
The name is set and reflected in both Unit View and Flow View.

[Unit View]



[Flow View] (channel information display)

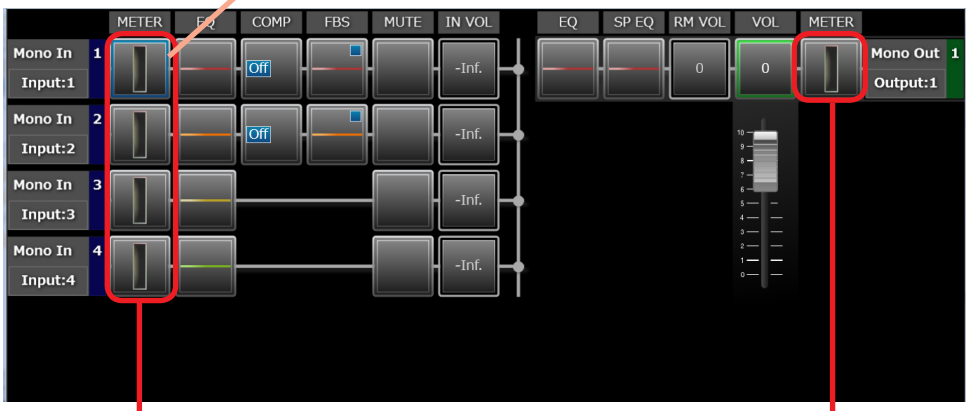


8. INPUT AND OUTPUT LEVEL MONITORING (Only possible in online mode)

When in online mode, clicking one of the level meter boxes displayed in Flow View displays the details of the level meters of all channels.

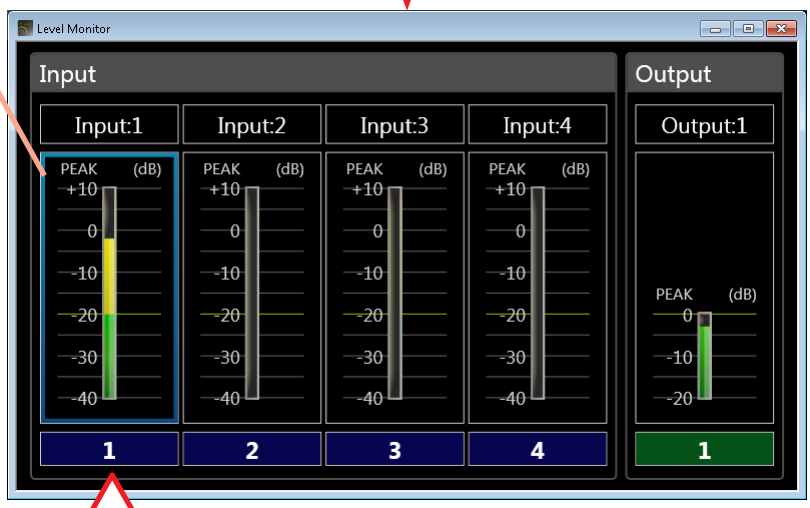
[Flow View]

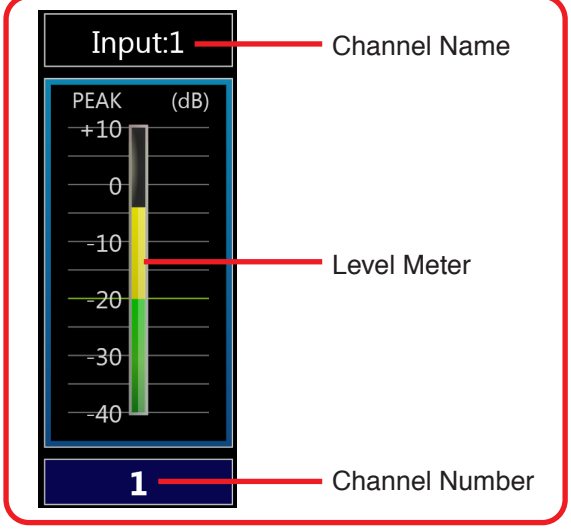
Clicked boxes are highlighted by a blue frame.



The level meter corresponding to the clicked box is displayed surrounded by a blue frame.

Click the Level Meter box.





The level meter displays signal levels in a bar graph.
Set the unit for operation within a level range that is not displayed in red.

Channel Classification	Mono In 1 & 2	Mono In 3 & 4	Mono Out
Signal Level	+7 dB to +10 dB (peak): Red –20 dB to +7 dB: Yellow Under –20 dB: Green	+7 dB to +10 dB (peak): Red –10 dB to +7 dB: Yellow Under –10 dB: Green	0 dB to +3 dB (peak): Red Under 0 dB: Green

9. SIGNAL PROCESSING DETAILED SETTINGS

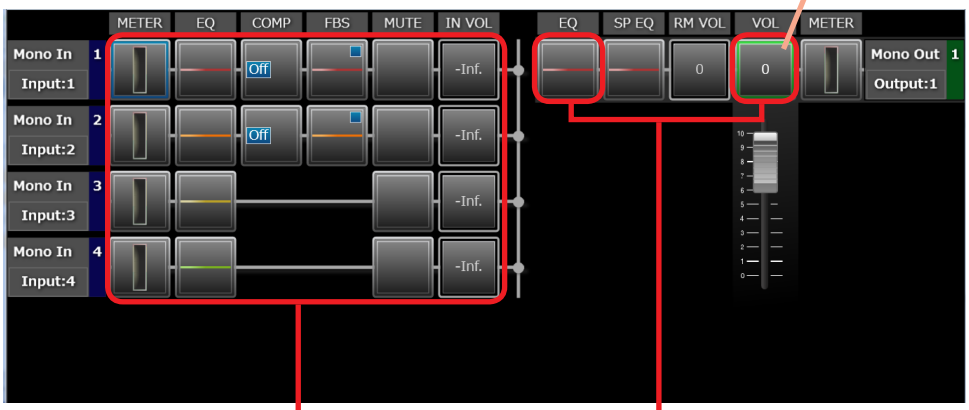
9.1. Basic Function Box Operation in Flow View

9.1.1. Display the Detailed Settings View to preform settings

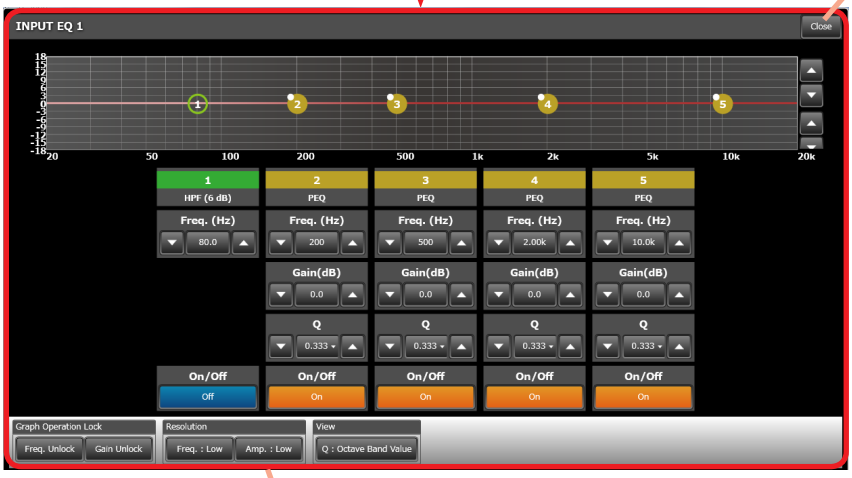
Clicking on a signal processing function box in Flow View displays the Detailed Settings View, allowing changes in setting.

[Flow View]

The clicked box is highlighted by a green frame.



Step 1. Click the function box.



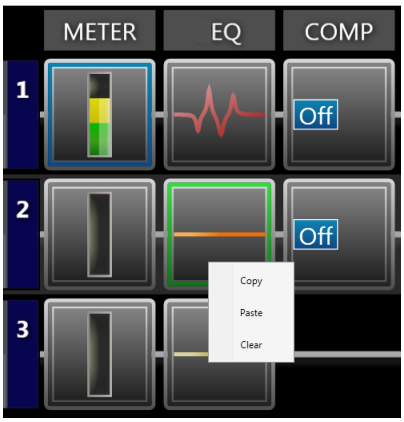
Step 2. Change the setting on the Detailed Settings View.

Step 3. Click the [Close] button or outside the Detailed Settings View.
The Detailed Settings View is closed.

9.1.2. Perform settings using the right-click menu or drag & drop

The following operations can be performed for each function box using the menu displayed by right-clicking the box.
Data can be copied and pasted by dragging and dropping the box.

- Copy: Copies the parameters set for the function box selected on the operation view to the clipboard.
- Paste: Pastes the data in clipboard to the function box selected on the operation view.
- Clear: Initializes the parameters set for the function box selected on the operation view.



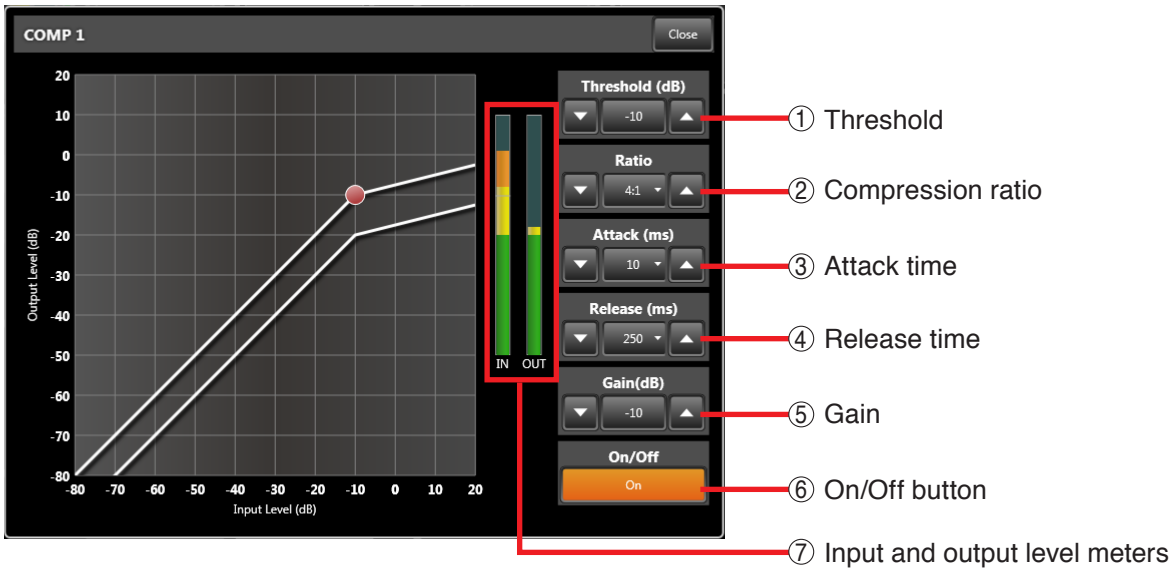
9.2. Compression Settings

9.2.1. What is compression?

Compression is a function that reduces the volume of an input signal when there is an excessive signal input. When an input signal exceeds the set threshold level, this function compresses the excessive sound volume to a predetermined ratio and controls the signal by means of a predetermined attack time (see p. 50). This function is used to prevent clipping distortion and damage to speakers.

9.2.2. Setting compression

Compression can be set for input channels 1 and 2.
In Flow View, click the Compression box, displaying the Detailed Compression Settings for the selected channel.



The numerical values of settings ① through ⑤ above can be increased with the UP button and decreased with the DOWN button. Clicking the central button opens the Settings dialog box. Settings are performed by either directly entering values or selecting given values.

1. Threshold
Sets the threshold value. Compression is performed on input signals that have a higher input level than the value set here.
[Threshold Settings dialog box]

2. Compression ratio
Sets the “input level increment to output level increment” compression ratio for the input signal. When compression is disabled, the ratio is “1:1”. The compression rate increases in steps of “1.1:1”, “1.2:1”….. with maximum compression at “Inf.:1”.
[Compression Ratio Setting dialog box]

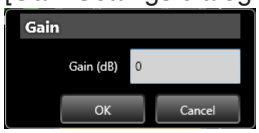
3. Attack time
Sets the reaction time (unit: ms) for compression to be initiated when excessive input is detected.
[Attack Time Settings dialog box]

4. Release time
Sets the response time (unit: ms) for release of compression after the input signal drops to below the threshold level.
[Release Time Settings dialog box]

5. Gain

Sets an amplification factor.

[Gain Settings dialog box]



6. On/Off button

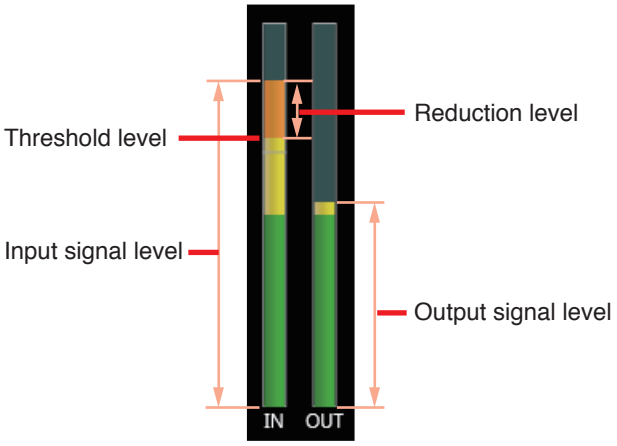
Sets to enable or disable compression.

: Compression enabled.

: Compression disabled.

7. Input and output level meters

When communication is in progress between the unit and PC, the input and output signal levels, reduction level (effective degree of compression) and threshold level are displayed in the bar graph as shown below:



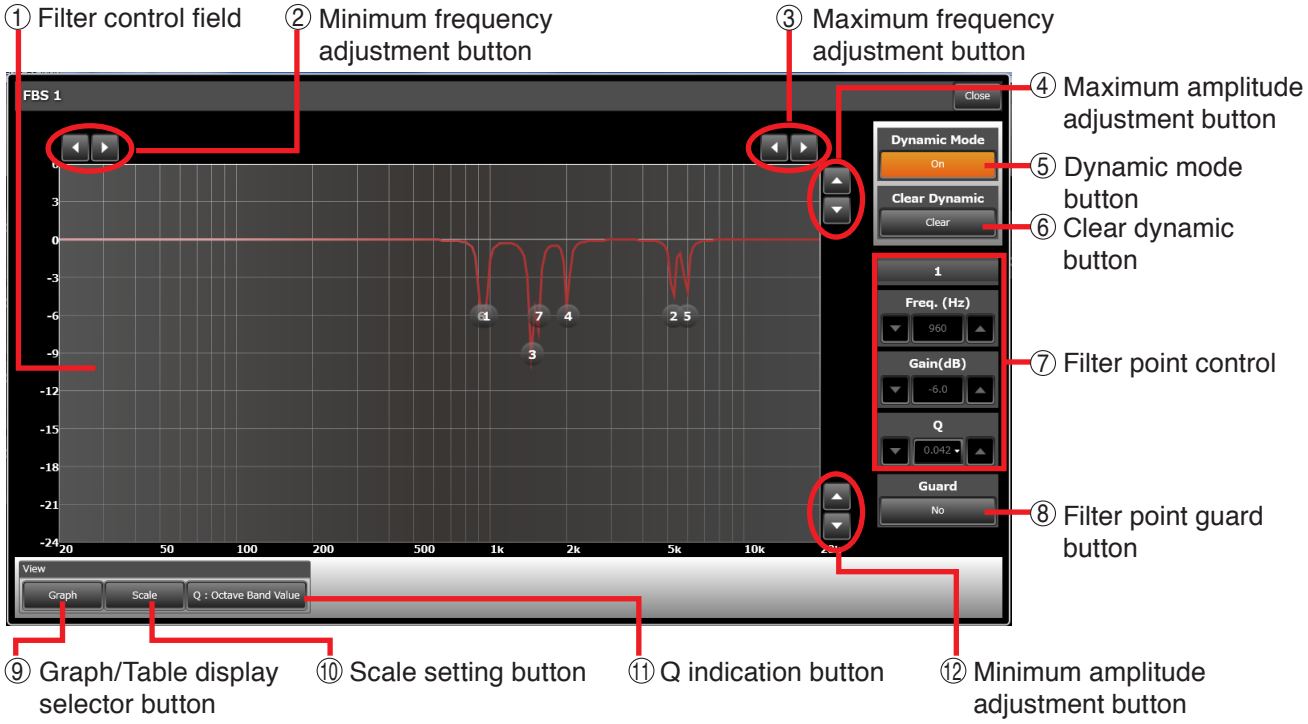
9.3. FBS Function Setting

9.3.1. What is FBS function?

Refers to the Feedback suppressor (FBS) function. Performs dynamic mode operation to suppress acoustic feedback in real time when it occurs.

9.3.2. Setting FBS function

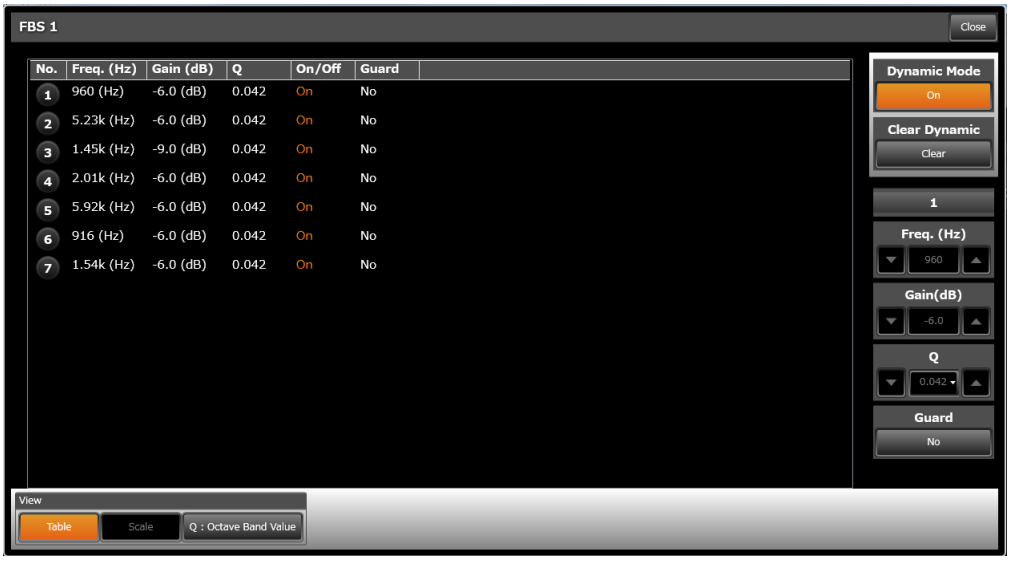
FBS function can be set for input channels 1 and 2.
In Flow View, click the FBS box, displaying the Detailed FBS Settings for the selected channel.



1. Filter control field

Displays the FBS frequency characteristics when in graph display mode. In table display mode, the FBS filter's parameter ON/OFF and guard settings are displayed in table formats.
To set the display mode, click the Graph/Table Display Selector Button (9).

(Table format display)



Select the filter point to be set in the Filter Point Control (7) menu.

2. Minimum frequency adjustment button
Sets the minimum frequency for the graph display. (Sets the left edge of a graph.)
The leftward pointing triangle button decreases the frequency, and the rightward pointing triangle button increases the frequency.

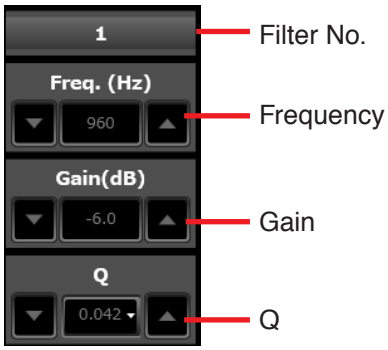
3. Maximum frequency adjustment button
Sets the maximum frequency for the graph display. (Sets the right edge of a graph.)
The leftward pointing triangle button decreases the frequency, and the rightward pointing triangle button increases the frequency.

4. Maximum amplitude adjustment button
Sets the maximum amplitude for the graph display. (Sets the upper limit of the graph.)
The downward pointing triangle button reduces the amplitude and the upward pointing triangle button increases the amplitude.

5. Dynamic mode button
Sets the dynamic FBS function ON/OFF.
Notes
- ON: When acoustic feedback is detected, the FBS filter's parameter is automatically enabled, dynamically suppressing the feedback.
- OFF: No automatic settings are performed for the FBS filter's parameter, and dynamic feedback suppression is not enabled.
- Switching the button from ON to OFF clears the filter that has been automatically created when acoustic feedback was detected in dynamic mode.

6. Clear dynamic button
Clears the set parameters of all FBS filter points that have been automatically created when acoustic feedback was detected in dynamic mode.
Notes
- Protected filter points are not cleared.
- This button can be operated only while in online mode.

7. Filter point control
Displays the selected FBS filter point's parameters.

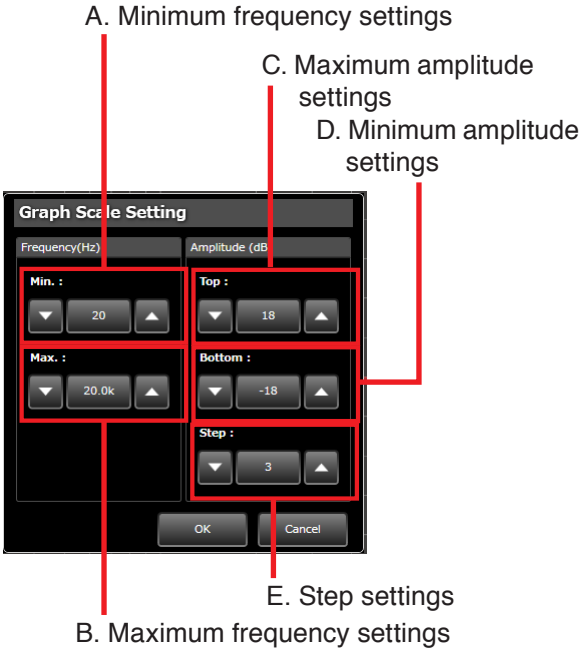


Note
The FBS filter's parameter is automatically set if the FBS function is set to ON. Parameters of unprotected points cannot be changed.

8. Filter point guard button
Sets the guard function for the selected FBS filter point.
The indication is displayed in yellow if "Yes" is selected, and in gray if "No" is selected.
Notes
- For the FBS filter set to "Yes," the filter parameter is not updated even if the dynamic FBS function has been set to ON with the Dynamic Mode button. Select "Yes" when not wishing to change the filter parameter because, for example, it is desirable to fix the frequency for feedback suppression.
- For the FBS filter set to "No," the filter parameter may be changed when feedback is newly detected.

9. Graph/table display selector button
Switches the display of the filter control field.
"Graph": The button is displayed in gray and the filter control field is placed in graph display mode.
"Table": The button is displayed in orange and the filter control field is placed in table display mode.

10. Scale setting button
Clicking this button while the filter control field is in graph display mode displays the dialog for setting the graph's scale.



A. Minimum Frequency Settings
Sets the minimum frequency for the graph display (i.e. sets the left edge of the graph).
The downward pointing triangle button decreases the frequency and the upward pointing triangle button increases the frequency.
Clicking the frequency indication in the center opens the dialog for frequency entry.

B. Maximum Frequency Settings

Sets the maximum frequency for the graph display (i.e. sets the right edge of the graph).
The downward pointing triangle button decreases the frequency and the upward pointing triangle button increases the frequency.
Clicking the frequency indication in the center opens the dialog for frequency entry.

C. Maximum Amplitude Settings

Sets the maximum amplitude for the graph display (i.e. sets the upper limit of the graph).
The downward pointing triangle button decreases the amplitude and the upward pointing triangle button increases the amplitude.
The amplitude varies by the value set in the Step settings each time the button is clicked.
Clicking the amplitude indication in the center opens the dialog for amplitude entry.

D. Minimum Amplitude Settings

Sets the minimum amplitude for the graph display (i.e. sets the lower limit of the graph).
The downward pointing triangle button decreases the amplitude and the upward pointing triangle button increases the amplitude.
The amplitude varies by values set in the Step settings each time the button is clicked.
Clicking the amplitude indication in the center opens the dialog for amplitude entry.

E. Step Settings

Sets the spacing between amplitude scale lines in the graph display.
Set step values are also used as spacing for the amplitude set with the triangle buttons in the maximum and minimum amplitude settings of Items (C) and (D) above.

11. Q Indication Button

Used to switch the FBS filter's Q indication.
The following 3 methods are available:
(1) Numerical indication
Q values are indicated by a numerical figure.
(2) Oct/band fractional indication
The value of the octave bandwidth corresponding to the Q value is indicated by a fractional figure.
(3) Oct/band numerical indication
The value of the octave bandwidth corresponding to the displayed Q value is indicated by a numerical figure.
Example: When the Q value is 69.249
Numerical indication: 0.021
Oct/band fractional indication:
1/48 oct/band
Oct/band numerical indication:
69.249 oct/band

12. Minimum Amplitude Adjustment Button

Sets the minimum amplitude for the graph display. (Sets the lower limit of the graph.)
The downward pointing triangle button reduces the amplitude and the upward pointing triangle button increases the amplitude.

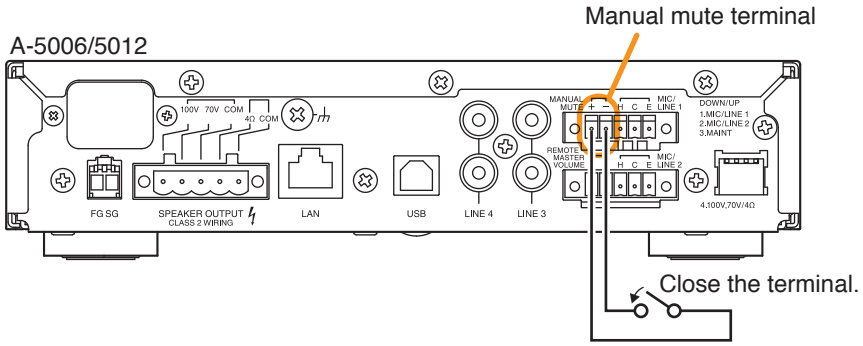
Tips

- The FBS filter stored in the Preset Memory cannot be recalled even when changing the Preset Memory while the FBS function is ON. The FBS filter currently in operation remains active and unchanged.
- The FBS filter point for which guard function is not set to "Yes" will be cleared when the A-5006/5012 is powered on.

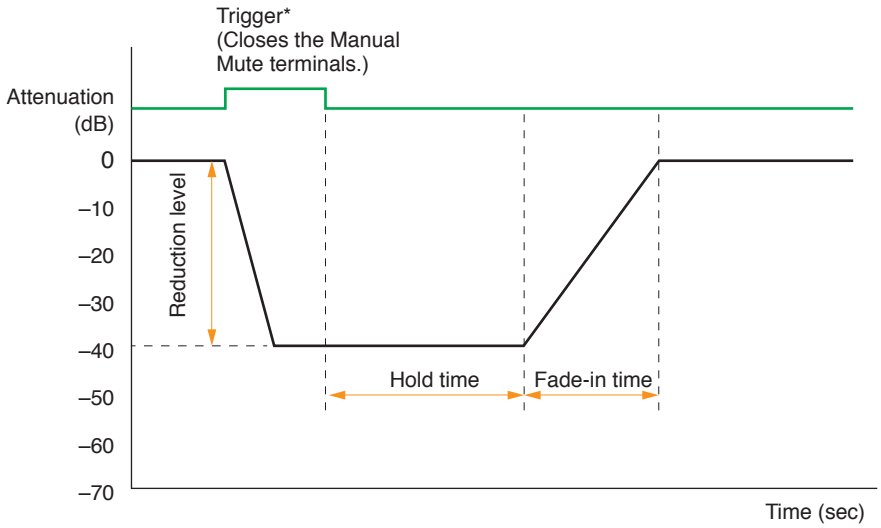
9.4. Mute Settings

9.4.1. What is mute?

Manual Mute is used to attenuate the input signal to the A-5000 Series unit. When the Manual Mute terminals are closed, the audio of the selected input is attenuated.
When Auto Mute is enabled, the audio input is muted whenever the volume level of Input Channel 1 exceeds the threshold level.



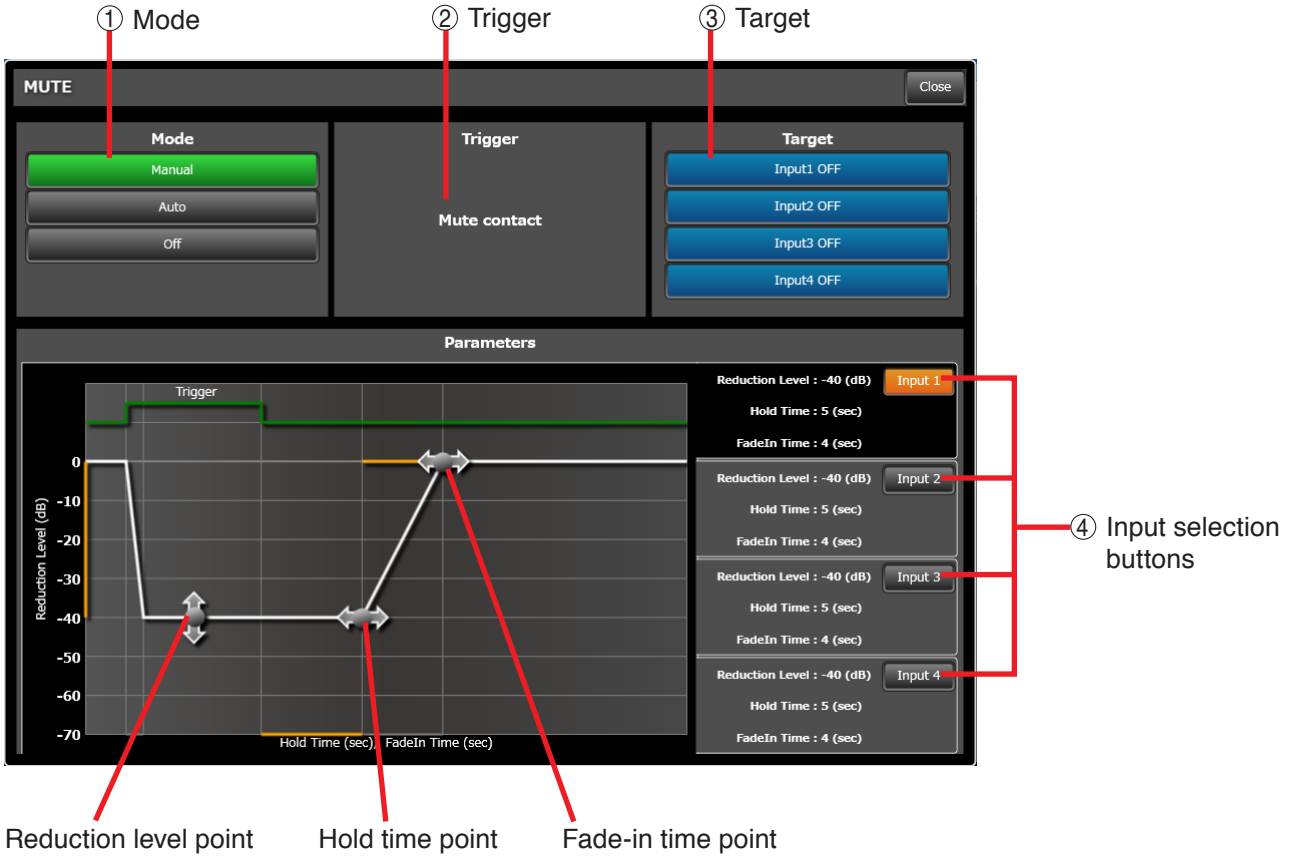
The reduction level (attenuation), hold time (time the audio attenuation is retained after being triggered) and fade-in time (time required to return to the unattenuated volume) can be independently set for each input.



* Trigger is not shown when in Auto Mute mode.

9.4.2. Setting mute

Set mute for each input channel (1 – 4 for manual mute and 2 – 4 for auto mute). (Refer to the next page for setting procedures.) Clicking the Mute box in the Flow View displays the Mute Detailed Settings View.



1. Mode

Used to set the mute function ON/OFF.

Manual : Manual mute enabled.

Auto : Auto mute enabled.

Off : Mute disabled.

- **If set to "Manual":**
  When the Manual Mute terminals on the rear panel receive a contact input, the audio of the input channel set to Target-ON is muted. The mute status is displayed in the Mute box (p. 18) of the Flow View.

- **If set to "Auto":**
  Whenever the level of Input Channel 1 exceeds the threshold level, the audio of those input channels that have Target Setting set to 'ON' is muted. The mute's operational status is displayed in the Flow view's Mute box (p. 18).

- **If set to "Off":**
  Manual Mute is disabled.

2. Trigger

Displays the Mute activation trigger.

- **If Mode is set to "Manual":**
  The indication "Mute contact" is displayed. The contact input to the unit's rear panel-mounted Manual Mute terminals is a mute trigger.

- **If Mode is set to "Auto" or "Off":**
  Nothing is displayed.

3. Target

Selects the input to be muted.

Input1 ON :

The input is set to be muted.

Input1 OFF :

The input is not set to be muted.

4. Input selection buttons

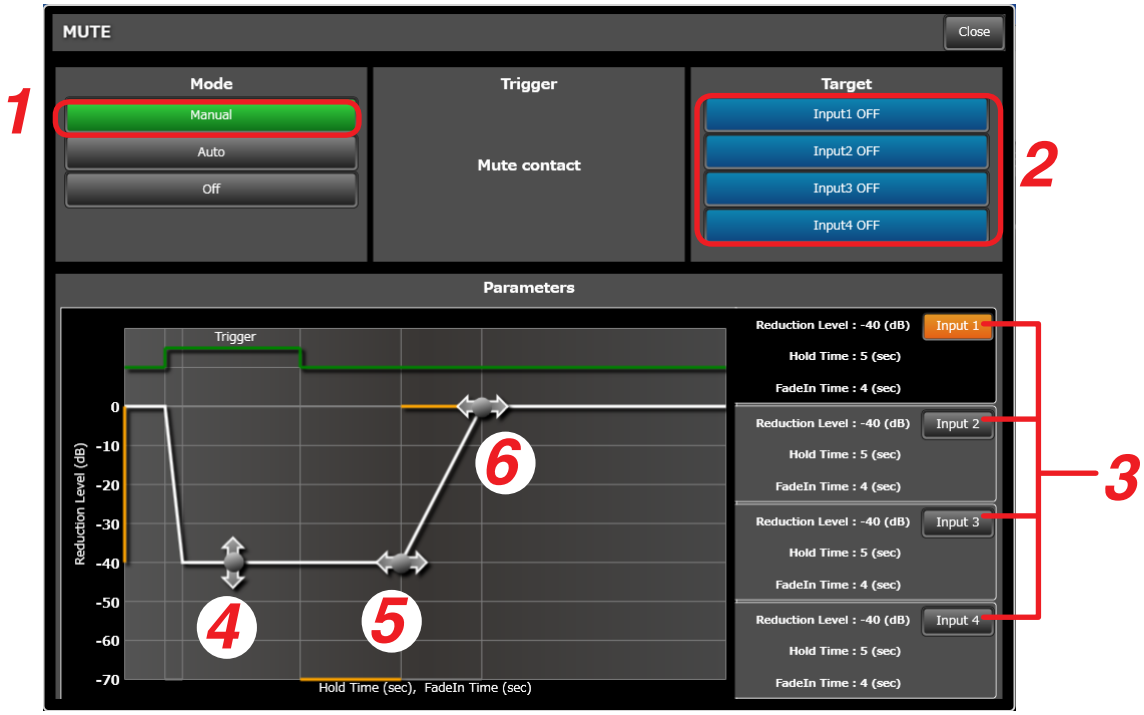
Used to set the following parameters individually for each input:

- **Reduction level**
  Sets the attenuation level. To set the level, drag the reduction level point up or down.

- **Hold time**
  Sets the hold time by dragging the hold time point right or left.

- **Fade-in time**
  Sets the fade-in time by dragging the fade-in time point right or left.

[Manual mute setting procedures]



Step 1. Click the [Manual] button.
The button lights green, enabling the Manual mute function.
The indication “Mute contact” is displayed in the Trigger field.

Step 2. Click the input that uses the Manual mute function.
The clicked input button lights orange, indicating that input can be muted. Multiple inputs can be selected.

Step 3. Click the input button for which detailed parameters are set.
The detailed settings for the clicked input are displayed graphically.

Step 4. Set the reduction level by dragging the reduction level point up or down.

Step 5. Set the hold time by dragging the hold time point right or left.

Step 6. Set the fade-in time by dragging the fade-in time point right or left.

Step 7. Repeat **Steps 3 – 6** to perform settings for all targeted inputs.

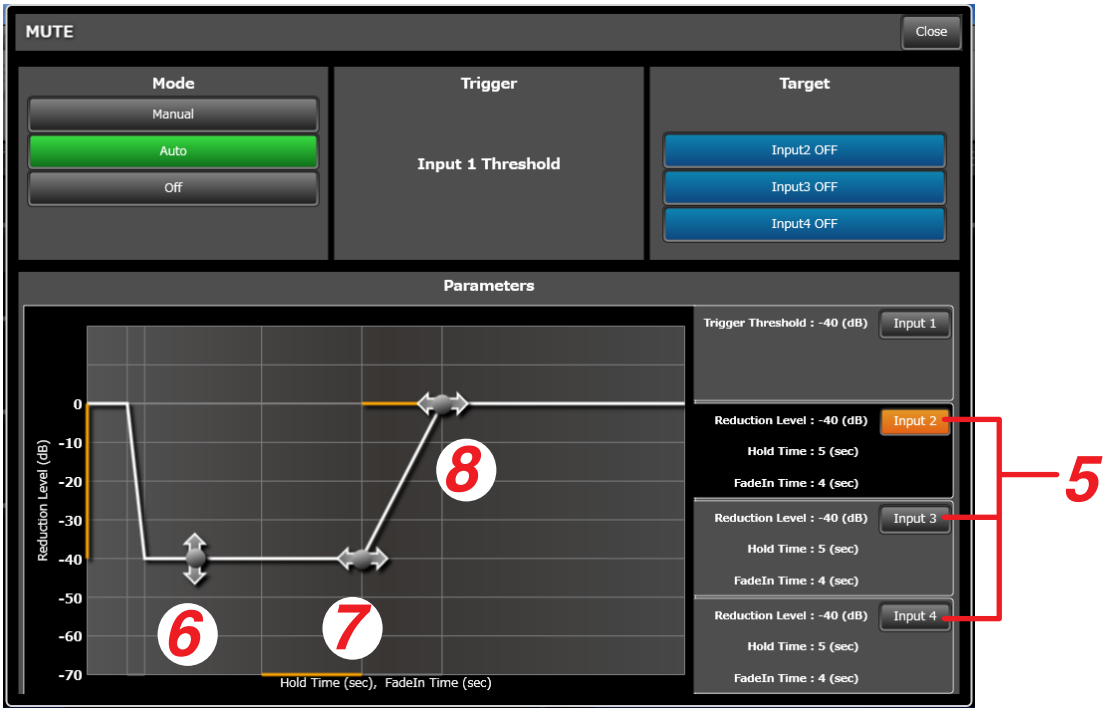
[Auto mute setting procedures]

Step 1. Click the [Auto] button.
The button lights green, enabling the Auto mute function.
The indication “Input 1 Threshold” is displayed in the Trigger field.

Step 2. Click the input that uses the Auto mute function.
The clicked input button lights orange, indicating that input can be muted. Multiple inputs can be selected.

Step 3. Click the input 1 button.

Step 4. Set the start threshold by dragging the threshold point up or down.



Step 5. Click the input button for which detailed parameters are set.
The detailed settings for the clicked input are displayed graphically.

Step 6. Set the reduction level by dragging the reduction level point up or down.

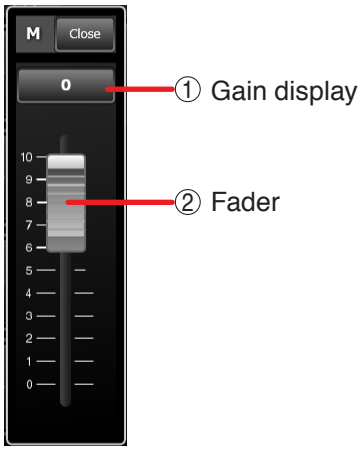
Step 7. Set the hold time by dragging the hold time point right or left.

Step 8. Set the fade-in time by dragging the fade-in time point right or left.

Step 9. Repeat **Steps 5 – 8** to perform settings for all targeted inputs.

9.5. Master Volume Settings

If the Master Volume function box is clicked in the Flow View, the Detailed Setting View for the Master Volume is displayed.

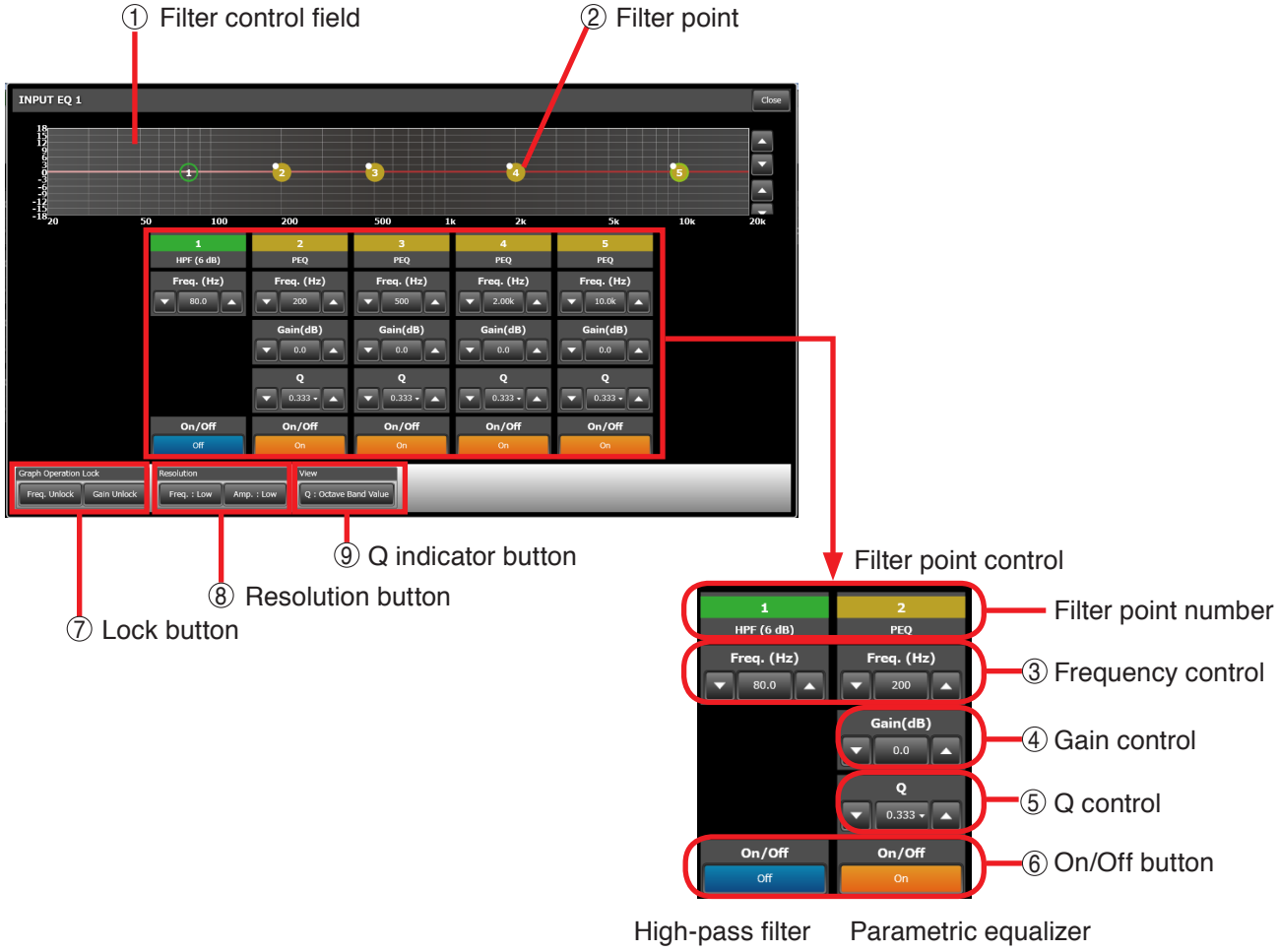


1. Gain display
Displays the Master Volume gain.
Clicking the Gain display opens the dialog box for gain entry.

2. Fader
Used to set the Master Volume gain. The fader knob is displayed in the position corresponding to the gain value. Drag the fader knob to adjust the setting.

9.6. EQ Settings (Input)

If the input EQ (equalizer) function box is clicked in the Flow View, the Detailed Setting View for the EQ function is displayed. The frequency characteristics of each input can be corrected by 1-point high-pass filter and 4-point parametric equalizer.



The numerical values of settings ③ through ⑤ above can be increased with the UP button and decreased with the DOWN button. Clicking the central button opens the Settings dialog box. Settings are performed by either directly entering values or selecting given values.

1. Filter control field

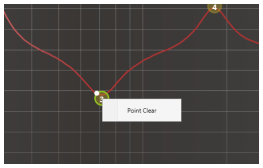
EQ frequency characteristics are displayed by a graph.

Each filter can be set by dragging its corresponding filter point.

2. Filter point

Filter points are indicated by 5 circles within the filter control field. Frequencies and gains can be changed by dragging the filter points.

The setting value of each point can be initialized by selecting the “Point Clear” from the menu displayed when you right-click on the filter point on a graph.



3. Frequency control

Sets each filter point’s frequency.

[Frequency Settings dialog box]

4. Gain control

Sets each filter point’s gain.

[Gain Setting dialog box]

5. Q control

Sets each filter point's Q.

[Q Setting dialog box]

6. On/Off button

Sets each filter point to On or Off.

On: Filter is enabled (orange display).

Off: Filter is disabled (blue display).

The filter is bypassed if set to Off.

7. Lock button

Used to enable or disable the locking of frequencies or gains when dragging filter points.

Clicking "Freq. Unlock" at left changes the indication, locking the frequency.

If the frequency is locked, it becomes unchangeable even if the filter point is dragged left and right.

Clicking the same button again restores the previous display and releases the lock. Clicking "Gain Unlock" at right changes the indication, locking the gain.

If the gain is locked, it becomes unchangeable even if the filter point is dragged up and down.

Clicking the same button again restores the previous display and releases the lock.

Both the frequency and gain can be locked.

Note

Frequencies and gains can only be locked for the filter point operation. The frequency and gain controls can be used to change settings even while in locked mode.

8. Resolution button

Used to set the resolution for frequency and amplitude settings.

If "Freq. : Low" at left is clicked, the indication changes and the frequency settings resolution is set to "High."

Clicking the same button again restores the previous display and sets the frequency settings resolution to "Low." The frequency settings resolution is as follows:

Low: 1/24 octave

High: 3-digit significant figure

If "Amp: Low" at right is clicked, the indication changes and the amplitude settings resolution is set to "High."

Clicking the same button again restores the previous display and sets the amplitude settings resolution to "Low." The amplitude settings resolution is as follows:

Low: 0.5 dB

High: 0.1 dB

9. Q indicator button

Used to switch the Q display method of each filter point.

The following 3 different display methods are available:

(1) Numerical indication
Q values are indicated by a numerical figure.

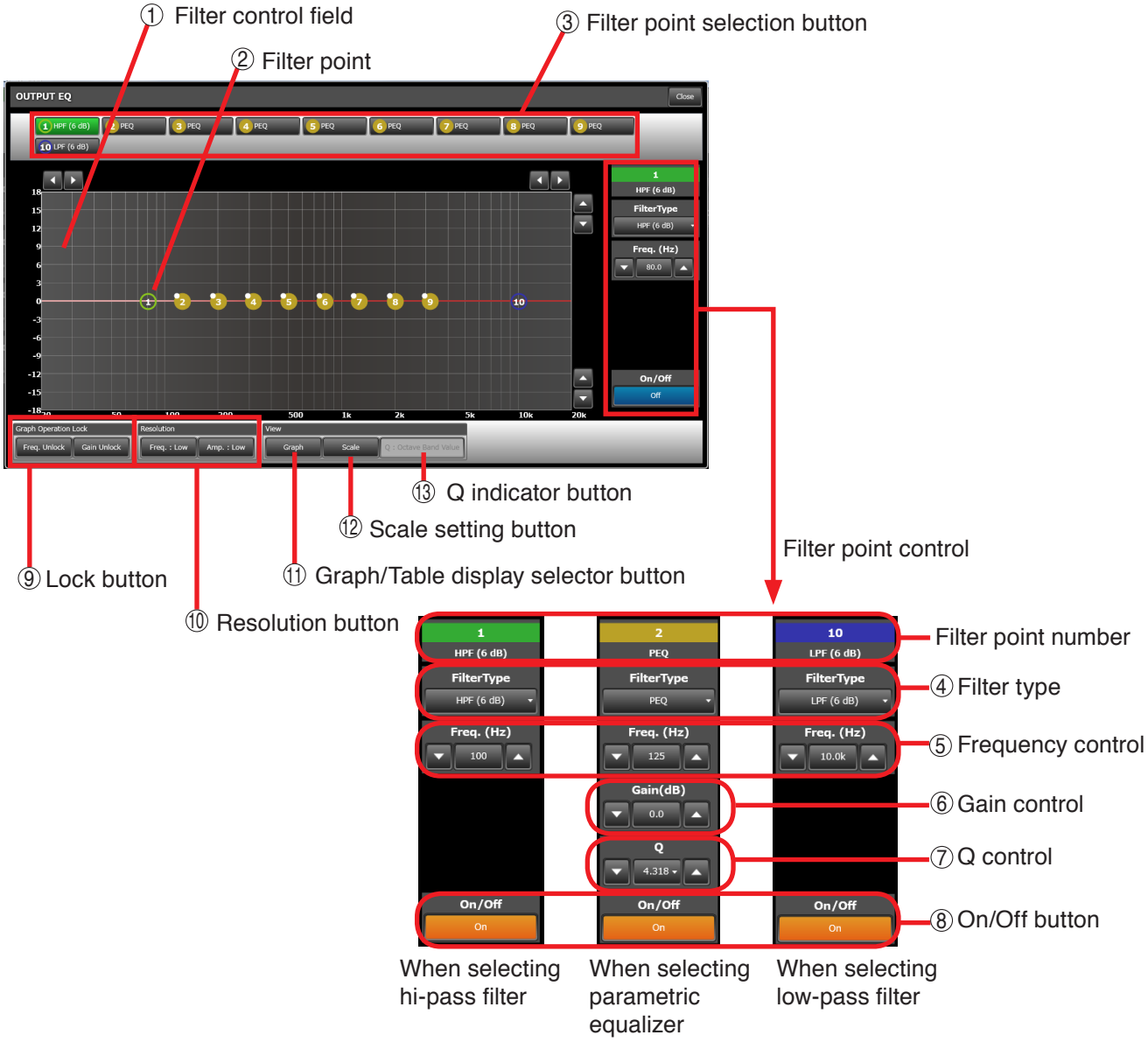
(2) Oct/band fractional indication
The value of the octave bandwidth corresponding to the Q value is indicated by a fractional figure.

(3) Oct/band numerical indication
The value of the octave bandwidth corresponding to the Q value is indicated by a numerical figure.

Example: When the Q value is 4.318
Numerical indication: 0.333
Oct/band fractional indication:
1/3 oct/band
Oct/band numerical indication:
4.318 oct/band

9.7. EQ Settings (Output)

If the output EQ (equalizer) function box is clicked in the Flow View, the Detailed Setting View for the EQ function is displayed. The frequency characteristics of each output can be corrected by 10-point filter.



The numerical values of settings ⑤ through ⑦ above can be increased with the UP button and decreased with the DOWN button. Clicking the central button opens the Settings dialog box. Settings are performed by either directly entering values or selecting given values.

1. Filter control field

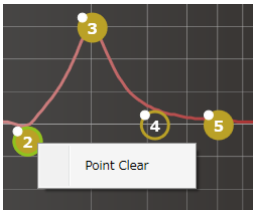
EQ frequency characteristics are displayed by a graph.

Each filter can be set by dragging its corresponding filter point.

2. Filter point

Filter points are indicated by 10 circles within the filter control field. Frequencies and gains can be changed by dragging the filter points.

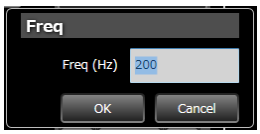
The setting value of each point can be initialized by selecting the “Point Clear” from the menu displayed when you right-click on the filter point on a graph.



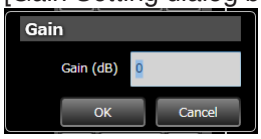
3. Filter point selection button
Selects filter point to set.

4. Filter type
Sets each filter point's filter type.

5. Frequency control
Sets each filter point's frequency.
[Frequency Settings dialog box]



6. Gain control
Sets each filter point's gain.
[Gain Setting dialog box]

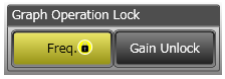


7. Q control
Sets each filter point's Q.
[Q Setting dialog box]

8. On/Off button
Sets each filter point to On or Off.
On: Filter is enabled (orange display).
Off: Filter is disabled (blue display).
The filter is bypassed if set to Off.

9. Lock button
Used to enable or disable the locking of frequencies or gains when dragging filter points.

Clicking "Freq. Unlock" at left changes the indication, locking the frequency.



If the frequency is locked, it becomes unchangeable even if the filter point is dragged left and right.
Clicking the same button again restores the previous display and releases the lock. Clicking "Gain Unlock" at right changes the indication, locking the gain.
If the gain is locked, it becomes unchangeable even if the filter point is dragged up and down.
Clicking the same button again restores the previous display and releases the lock.
Both the frequency and gain can be locked.

Note
Frequencies and gains can only be locked for the filter point operation. The frequency and gain controls can be used to change settings even while in locked mode.

10. Resolution button
Used to set the resolution for frequency and amplitude settings.

If "Freq. : Low" at left is clicked, the indication changes and the frequency settings resolution is set to "High."

Clicking the same button again restores the previous display and sets the frequency settings resolution to "Low." The frequency settings resolution is as follows:
Low: 1/24 octave
High: 3-digit significant figure
If "Amp: Low" at right is clicked, the indication changes and the amplitude settings resolution is set to "High."

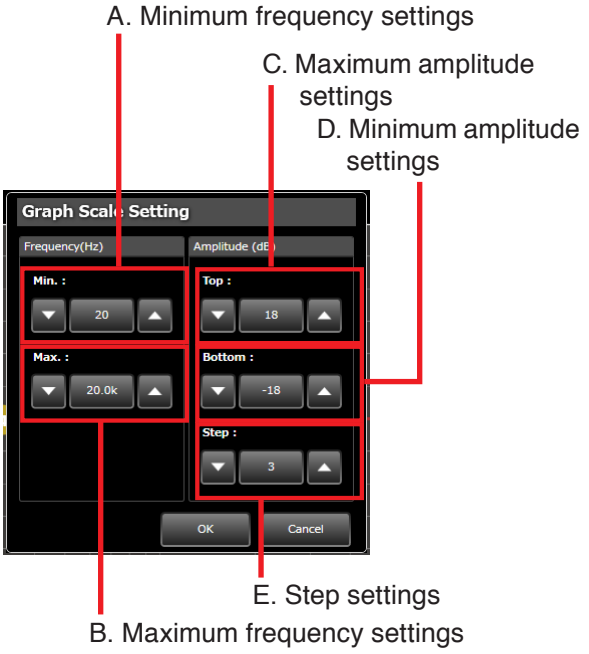
Clicking the same button again restores the previous display and sets the amplitude settings resolution to "Low." The amplitude settings resolution is as follows:
Low: 0.5 dB
High: 0.1 dB

11. Graph/Table display selector button
Switches the display of the filter control field.
"Graph": The button is displayed in gray and the filter control field is placed in graph display mode.
"Table": The button is displayed in orange and the filter control field is placed in table display mode.

12. Scale setting button

Clicking this button while the filter control field is in graph display mode displays the dialog for setting the graph's scale.

[Scale setting dialog]



A. Minimum frequency settings

Sets the minimum frequency for the graph display (i.e. sets the left edge of the graph).
The downward pointing triangle button decreases the frequency and the upward pointing triangle button increases the frequency.
Clicking the frequency indication in the center opens the dialog for frequency entry.

B. Maximum frequency settings

Sets the maximum frequency for the graph display (i.e. sets the right edge of the graph).
The downward pointing triangle button decreases the frequency and the upward pointing triangle button increases the frequency.
Clicking the frequency indication in the center opens the dialog for frequency entry.

C. Maximum amplitude settings

Sets the maximum amplitude for the graph display (i.e. sets the upper limit of the graph).
The downward pointing triangle button decreases the amplitude and the upward pointing triangle button increases the amplitude.
The amplitude varies by the value set in the Step settings each time the button is clicked.
Clicking the amplitude indication in the center opens the dialog for amplitude entry.

D. Minimum amplitude settings

Sets the minimum amplitude for the graph display (i.e. sets the lower limit of the graph).
The downward pointing triangle button decreases the amplitude and the upward pointing triangle button increases the amplitude.
The amplitude varies by values set in the Step settings each time the button is clicked.
Clicking the amplitude indication in the center opens the dialog for amplitude entry.

E. Step settings

Sets the spacing between amplitude scale lines in the graph display.
Set step values are also used as spacing for the amplitude set with the triangle buttons in the maximum and minimum amplitude settings of Items (C) and (D) above.

13. Q indication button

Used to switch the FBS filter's Q indication.

The following 3 methods are available:

(1) Numerical indication
Q values are indicated by a numerical figure.

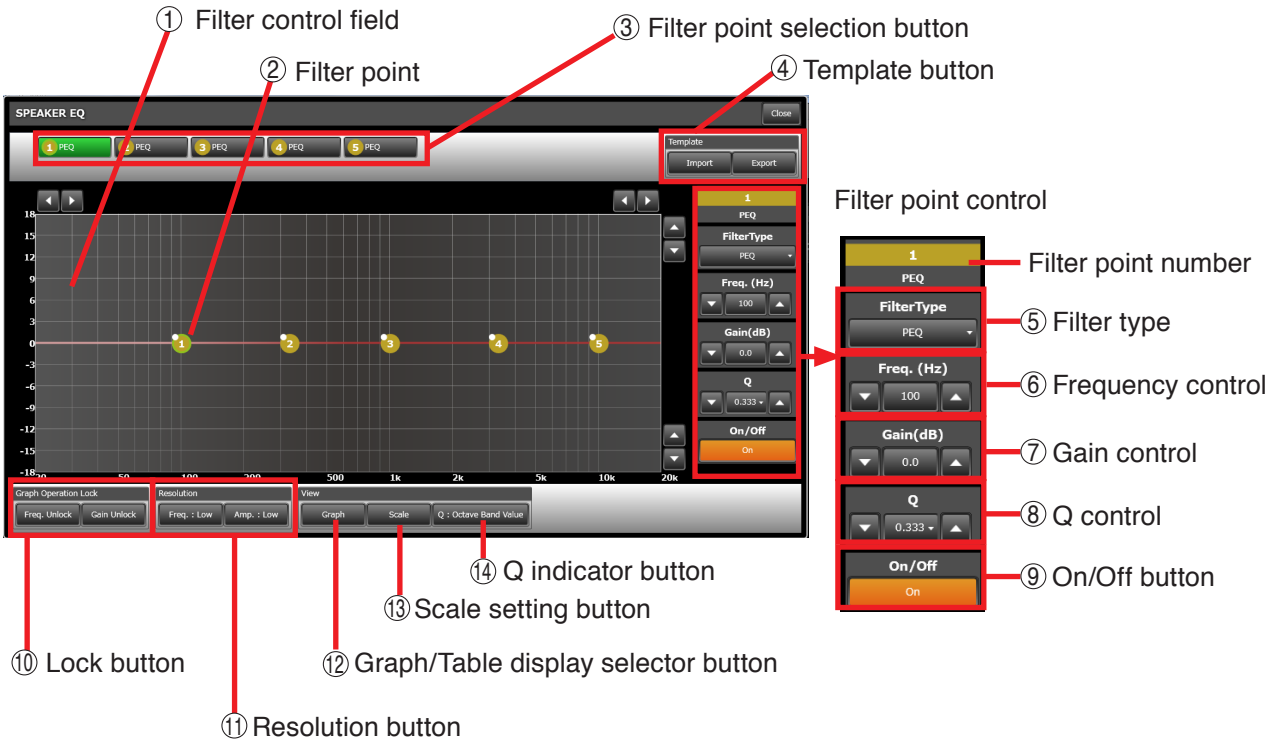
(2) Oct/band fractional indication
The value of the octave bandwidth corresponding to the Q value is indicated by a fractional figure.

(3) Oct/band numerical indication
The value of the octave bandwidth corresponding to the displayed Q value is indicated by a numerical figure.

Example: When the Q value is 69.249
Numerical indication: 0.021
Oct/band fractional indication:
1/48 oct/band
Oct/band numerical indication:
69.249 oct/band

9.8. SP EQ Settings (Output)

If the SP EQ (speaker equalizer) function box is clicked in the Flow View, the Detailed Setting View for the EQ function is displayed. The frequency characteristics for the speaker to be used can be corrected by 5-point filter.



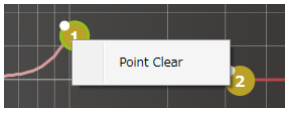
The numerical values of settings ⑥ through ⑧ above can be increased with the UP button and decreased with the DOWN button. Clicking the central button opens the Settings dialog box. Settings are performed by either directly entering values or selecting given values.

1. Filter control field

SP EQ frequency characteristics are displayed by a graph.
Each filter can be set by dragging its corresponding filter point.

2. Filter point

Filter points are indicated by 5 yellow circles within the filter control field. Frequencies and gains can be changed by dragging the filter points.
The setting value of each point can be initialized by selecting the “Point Clear” from the menu displayed when you right-click on the filter point on a graph.



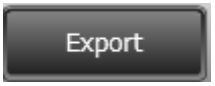
3. Filter point selection button

Selects filter point to set.

4. Template button

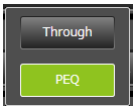
Clicking the Import button causes the speaker correction parameters to be read.

Clicking the Export button causes the speaker correction parameters to be saved.



5. Filter type

Sets each filter point’s filter type.
[Filter Type Settings dialog box]

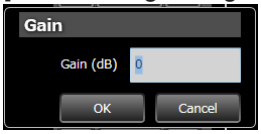


6. Frequency control

Sets each filter point’s frequency.
[Frequency Settings dialog box]

7. Gain control

Sets each filter point’s gain.
[Gain Setting dialog box]



8. Q control

Sets each filter point's Q.

[Q Setting dialog box]

9. On/Off button

Sets each filter point to On or Off.

On: Filter is enabled (orange display).

Off: Filter is disabled (blue display).

The filter is bypassed if set to Off.

10. Lock button

Used to enable or disable the locking of frequencies or gains when dragging filter points.

Clicking "Freq. Unlock" at left changes the indication, locking the frequency.

If the frequency is locked, it becomes unchangeable even if the filter point is dragged left and right.

Clicking the same button again restores the previous display and releases the lock. Clicking "Gain Unlock" at right changes the indication, locking the gain.

If the gain is locked, it becomes unchangeable even if the filter point is dragged up and down.

Clicking the same button again restores the previous display and releases the lock.

Both the frequency and gain can be locked.

Note

Frequencies and gains can only be locked for the filter point operation. The frequency and gain controls can be used to change settings even while in locked mode.

11. Resolution button

Used to set the resolution for frequency and gain settings.

If "Freq. : Low" at left is clicked, the indication changes and the frequency settings resolution is set to "High."

Clicking the same button again restores the previous display and sets the frequency settings resolution to "Low." The frequency settings resolution is as follows:

Low: 1/24 octave

High: 3-digit significant figure

If "Amp: Low" at right is clicked, the indication changes and the amplitude settings resolution is set to "High."

Clicking the same button again restores the previous display and sets the amplitude settings resolution to "Low." The amplitude settings resolution is as follows:

Low: 0.5 dB

High: 0.1 dB

12. Graph/table display selector button

Switches the display of the filter control field.

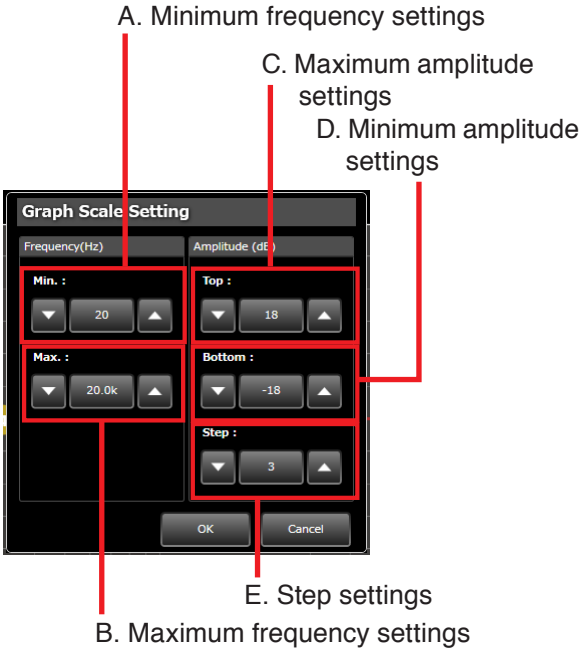
"Graph": The button is displayed in gray and the filter control field is placed in graph display mode.

"Table": The button is displayed in orange and the filter control field is placed in table display mode.

13. Scale setting button

Clicking this button while the filter control field is in graph display mode displays the dialog for setting the graph's scale.

[Scale setting dialog]



A. Minimum frequency settings

Sets the minimum frequency for the graph display (i.e. sets the left edge of the graph).
The downward pointing triangle button decreases the frequency and the upward pointing triangle button increases the frequency.
Clicking the frequency indication in the center opens the dialog for frequency entry.

B. Maximum frequency settings

Sets the maximum frequency for the graph display (i.e. sets the right edge of the graph).
The downward pointing triangle button decreases the frequency and the upward pointing triangle button increases the frequency.
Clicking the frequency indication in the center opens the dialog for frequency entry.

C. Maximum amplitude settings

Sets the maximum amplitude for the graph display (i.e. sets the upper limit of the graph).
The downward pointing triangle button decreases the amplitude and the upward pointing triangle button increases the amplitude.
The amplitude varies by the value set in the Step settings each time the button is clicked.
Clicking the amplitude indication in the center opens the dialog for amplitude entry.

D. Minimum amplitude settings

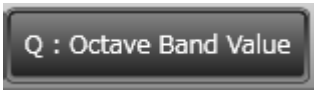
Sets the minimum amplitude for the graph display (i.e. sets the lower limit of the graph).
The downward pointing triangle button decreases the amplitude and the upward pointing triangle button increases the amplitude.
The amplitude varies by values set in the Step settings each time the button is clicked.
Clicking the amplitude indication in the center opens the dialog for amplitude entry.

E. Step settings

Sets the spacing between amplitude scale lines in the graph display.
Set step values are also used as spacing for the amplitude set with the triangle buttons in the maximum and minimum amplitude settings of Items (C) and (D) above.

14. Q indication button

Used to switch the FBS filter's Q indication.
The following 3 methods are available:



(1) Numerical indication
Q values are indicated by a numerical figure.
(2) Oct/band fractional indication
The value of the octave bandwidth corresponding to the Q value is indicated by a fractional figure.
(3) Oct/band numerical indication
The value of the octave bandwidth corresponding to the displayed Q value is indicated by a numerical figure.

Example: When the Q value is 69.249
Numerical indication: 0.021
Oct/band fractional indication:
1/48 oct/band
Oct/band numerical indication:
69.249 oct/band

10. PRESET MEMORY-RELATED SETTINGS AND OPERATIONS

10.1. What Is the Preset Memory?

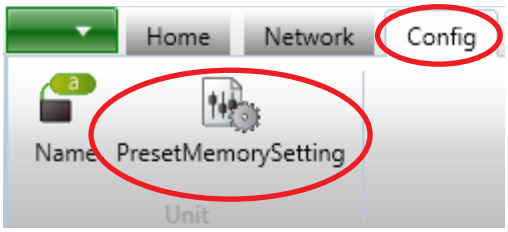
Parameters set in the Flow View can be stored as preset memory.
The following setting values are stored in the preset memory:

- Each channel's EQ gain, center frequency, Q and On/Off.
- Compression threshold, compression ratio, attack time, release time, gain and On/Off.
- FBS filter's gain, center frequency, Q and On/Off.
- Mute mode, On/Off for inputs 1 – 4, attenuation, hold time and fade-in time.
- Master volume.

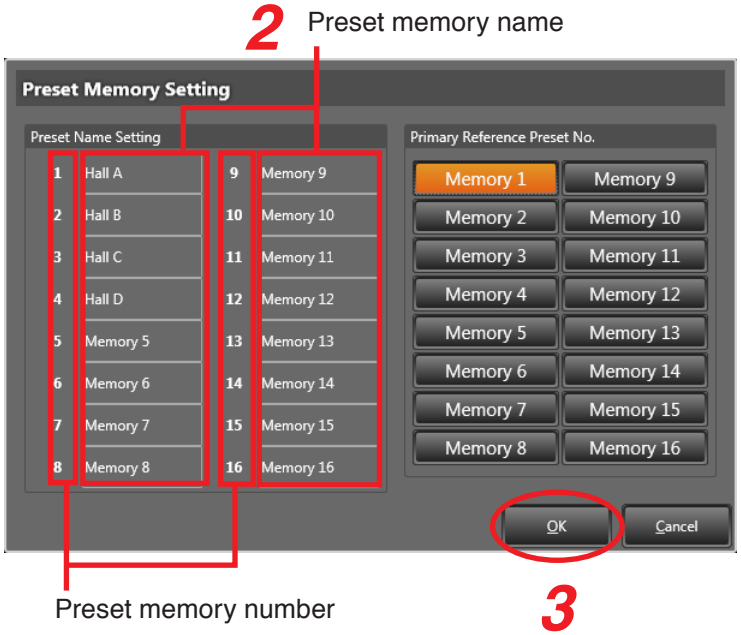
Up to 16 preset memories can be stored.
The initial preset memory number that is called up when the power is switched on can also be set.
It is also possible to call up a different preset memory number and use parameters set in advance corresponding to expected usage when the unit is connected to a PC online.

10.2. Preset Memory Name Settings

Step 1. Select [Config → Preset Memory Settings] in the Menu View.



The Preset Memory Settings screen is displayed.



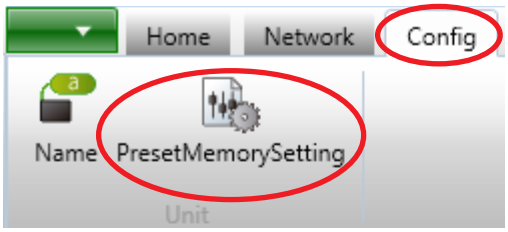
Step 2. Click the preset memory name field and enter a name of up to 20 characters.

Step 3. Click the [OK] button.

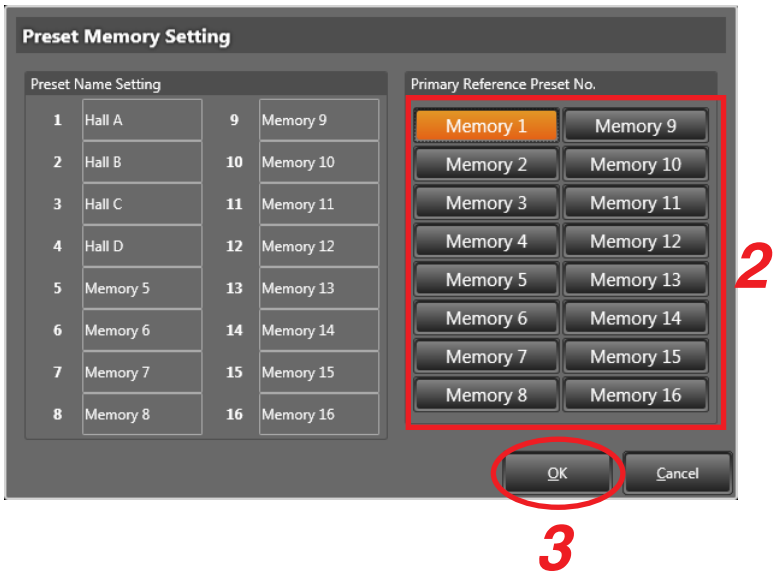
10.3. Setting the Preset Memory Number To Be Called Up When Power Is Switched On

Set the preset memory number that will be called up when the unit's power is switched on.

Step 1. Select [Config → Preset Memory Setting] in the Menu View.



The Preset Memory Setting screen is displayed.



Step 2. Click the button for the desired preset memory number to be called up when the power is switched on. The clicked button lights orange.

Step 3. Click the [OK] button.

10.4. Changing the Preset Memory Number To Be Called Up

By changing the selection of the preset memory number, a setting parameter stored under the newly selected number can be called up.

Step 1. Click the preset memory number/name button in the Memory View.
Memory List panel is displayed.

[Memory List panel]

The currently selected Preset Memory button is displayed in orange.

Step 2. Click the desired preset memory number/name button on the Memory List panel.
The selected button lights orange.

Step 3. Click the [Change] button.
The setting parameters for the preset memory number selected in **Step 2** are called up.

10.5. Storing Set Parameters in Preset Memory

10.5.1. When storing in a currently-selected preset memory number:

Step: Click the [Store] button in the Memory View.
Parameters set in the Flow View are stored in the current preset memory number.

Stored in the preset memory number shown here.

10.5.2. When storing parameters in a different preset memory number:

Step 1. Click the preset memory number/name button in the Memory View.
Memory List panel is displayed.

[Memory List panel]

The currently selected Preset Memory button is displayed in orange.

Step 2. Click the desired preset memory number/name button in the Memory List panel.
The selected button lights orange.

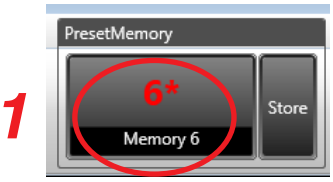
Step 3. Click the [Store] button.
Parameters set in the Flow View are stored in the memory number selected in **Step 2**.

10.5.3. Deleting Edited Contents Without Storing Them in Preset Memory

When wishing to return the parameters edited in the Flow View back to those currently stored, delete the edit.

Note: Once the edit contents have been deleted, they cannot be restored.

Step 1. Click the preset memory number/name button in the Memory View.
Memory List panel is displayed.



[Memory List panel]

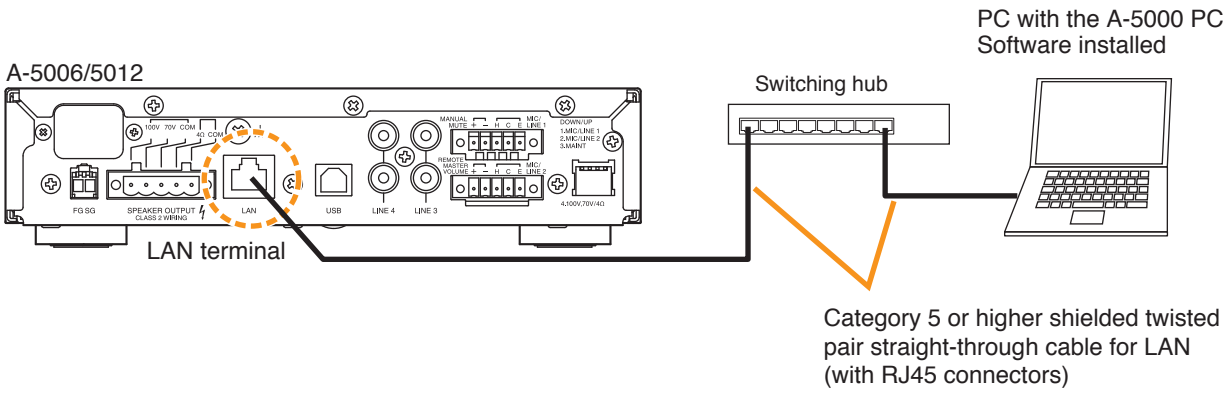
The currently selected Preset Memory button is displayed in orange.

Step 2. Click the [Trash] button.
After the edited contents are deleted, the parameters stored before the edit are called up.

11. COMMUNICATION SETTINGS

11.1. Connections between the PC and the Unit

Connect the unit's LAN terminal to the PC via a switching hub.
Connect a PC and the unit to a switching hub using LAN straight-through cables individually.



11.2. Method to Enable Communications between the PC and the Unit

Step 1. Perform network settings by selecting [Network → Connection Settings] from the menu view.
(See the next page "Connection Settings.")

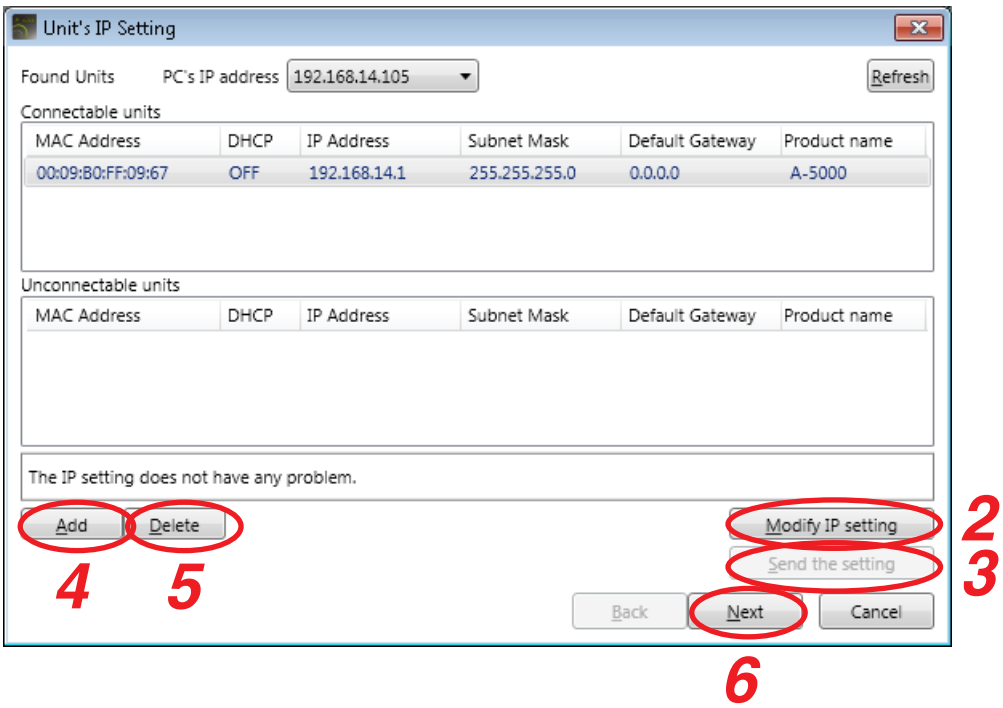
Step 2. Make Communications by selecting [Network → Connect] from the menu view.
(See p. 48 "11.4. Communications.")

11.3. Connection Settings

Perform settings needed to communicate with the units in this section.
Network settings can be made.

Step 1. Select [Network → Connection Setting] from the menu.
Network settings of the units found on the network are displayed.
The table below shows the factory preset settings for each unit.

IP address	192.168.14.1
Subnet mask	255.255.255.0
Default gateway	0.0.0.0
DHCP	Off



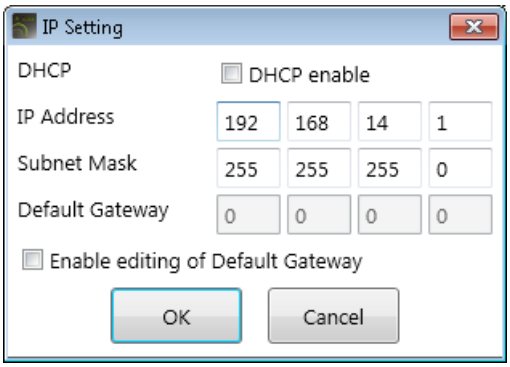
If no unit was detected:

Install the undetected unit within the reach of broadcast packet.
Communications may be interrupted when the PC is firewall-protected.

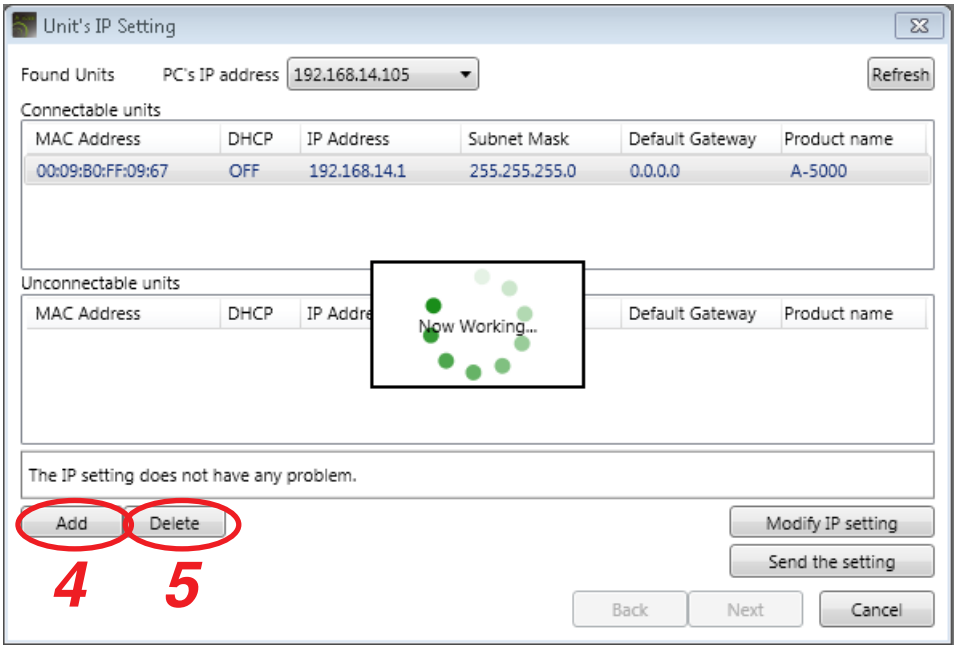
If a unit's IP address is duplicated or inappropriate network setting has been performed, such device is displayed in the Unconnectable units list.

- To change the unit's IP address setting, advance to **Step 2**.
- When transmitting the settings data changed in **Step 2** to the unit, advance to **Step 3**.
- When changing the PC's network settings, change them from the Windows Control Panel. PC network setting cannot be changed using the A-5000 PC software.
- When connecting to the unit via a router, network settings are not displayed on this screen. The unit network settings cannot be changed. Connect such unit to a LAN and perform the network settings in advance.
- If a unit needs to be connected via a router, advance to **Step 4** to add it.
- If the unit that should not be communicated with is displayed in the list, advance to **Step 5** to delete it from the list.
- Advance to **Step 6** when all the units to be connected are displayed in "Connectable units" list.
- When the PC has two or more IP addresses, select the unit and IP address to be communicated with from the PC's IP address.
- When the DHCP is set to be valid and the DHCP server is not found on the network, equipment detection cannot be performed until communications between the DHCP server and PC time out (approximately 30 seconds).
  Note that the DHCP is set to be invalid by default (see **Step 2** of the next page).

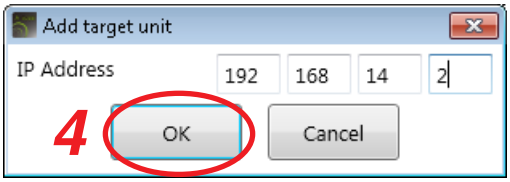
Step 2. Change the unit's network setting.
Select the unit for which you want to change the network setting, then click the [Modify IP setting] button. The IP Setting screen is displayed.
Set the IP address, then click the [OK] button.



Step 3. Transmit changed setting data to the unit.
Clicking the [Send the setting] button transmits the IP settings to the corresponding unit and network setting for the unit is changed.



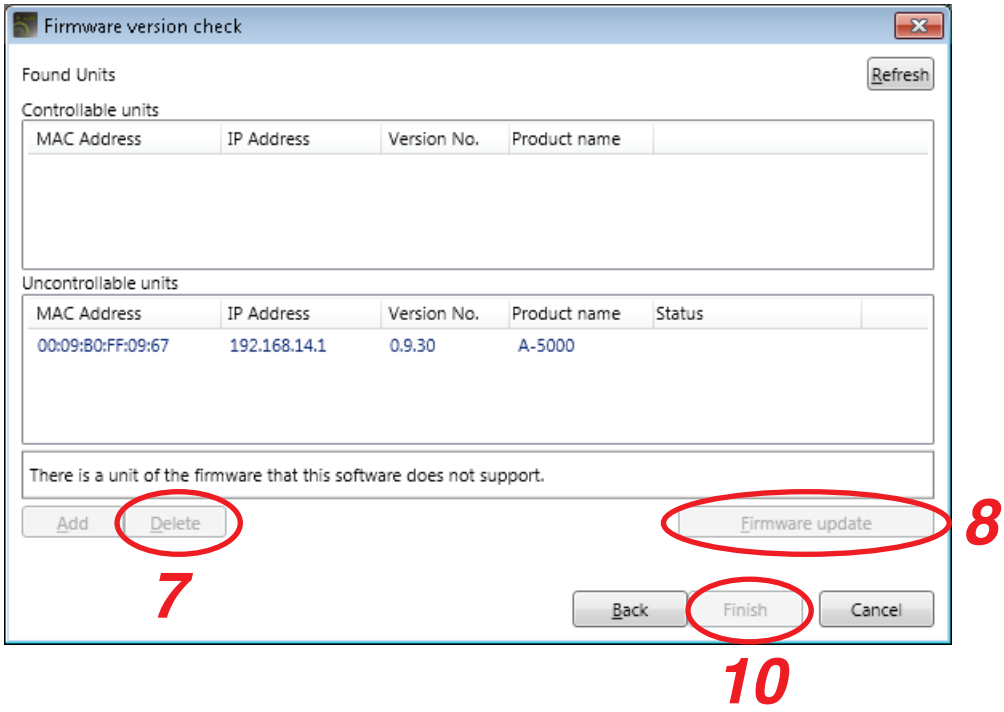
Step 4. Add the unit to be connected via a router in a list. Clicking the [Add] button displays the Add target unit screen. Enter the IP address of the added unit and click the [OK] button.



Note
Network setting for the unit to be connected via a router cannot be changed using the method described in **Step 2**.
If you need to change the network setting, connect such unit to a LAN and change the network setting in advance.

Step 5. Delete the unit from the list.
Select the unit to be deleted, then click the [Delete] button.
The selected unit is deleted from the list.

Step 6. Click the [Next] button, then the Firmware version check screen is displayed.



When the firmware version of the unit is older than that the A-5000 PC software supports, the unit is displayed in the Uncontrollable units list.

- If a unit that does not need to be controlled is displayed, advance to **Step 7** to delete it from the list.
- When updating firmware, advance to **Step 8** .
- If all units to be controlled are shown in the Controllable units list, advance to **Step 9**.

Step 7. Delete the unit from the list.
Select the unit to be deleted, then click the [Delete] button.
The selected unit is deleted from the list.

Step 8. Update the firmware.
Select the unit from the Uncontrollable units list and click the [Firmware update] button.
Firmware update starts.
The unit is moved to and displayed in the Controllable units list after the firmware update is complete.

Notes

- Do not switch off the unit's power under any circumstances during firmware update.
- Settings data is retained even if the firmware is updated.
- Firmware cannot be updated if the unit's maintenance switch (DIP Switch 3) is in the DOWN position. Be sure that the maintenance switch is in the UP position and restart the unit before updating.

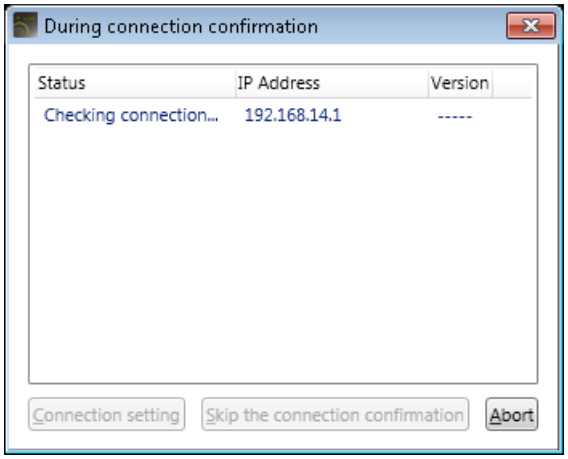
Step 9. Select the unit(s) from the Controllable units list.

Step 10. Click the [Finish] button.
Setting is complete.

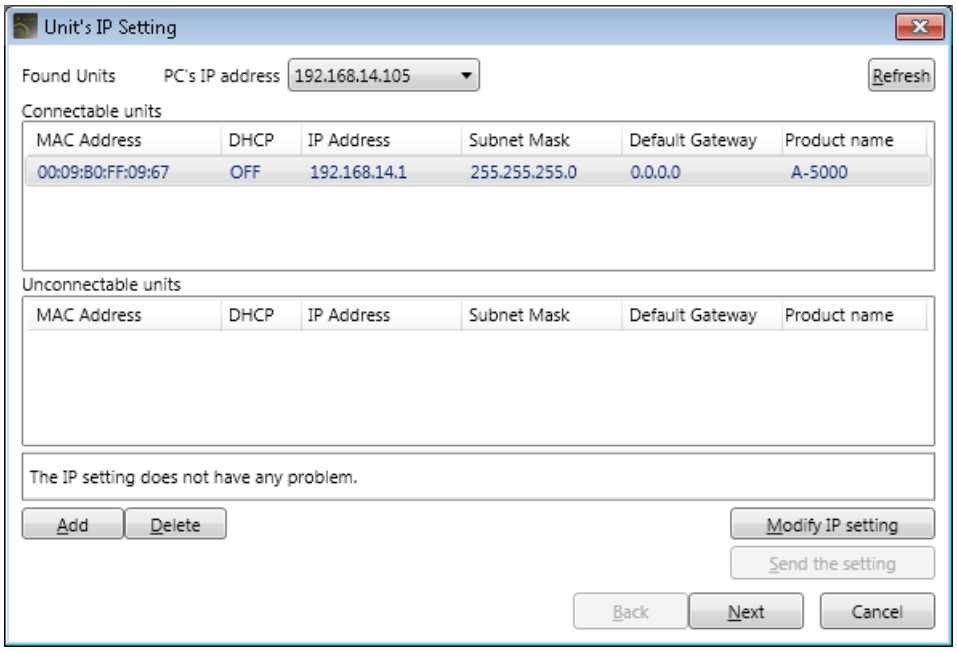
11.4. Communications

Connect to the unit displayed “Connectable units” field in the Unit’s IP setting screen.

Step 1. Select [Network → Connect] from the menu.
While the screen below is displayed, the target unit designated with the connection settings are being detected.



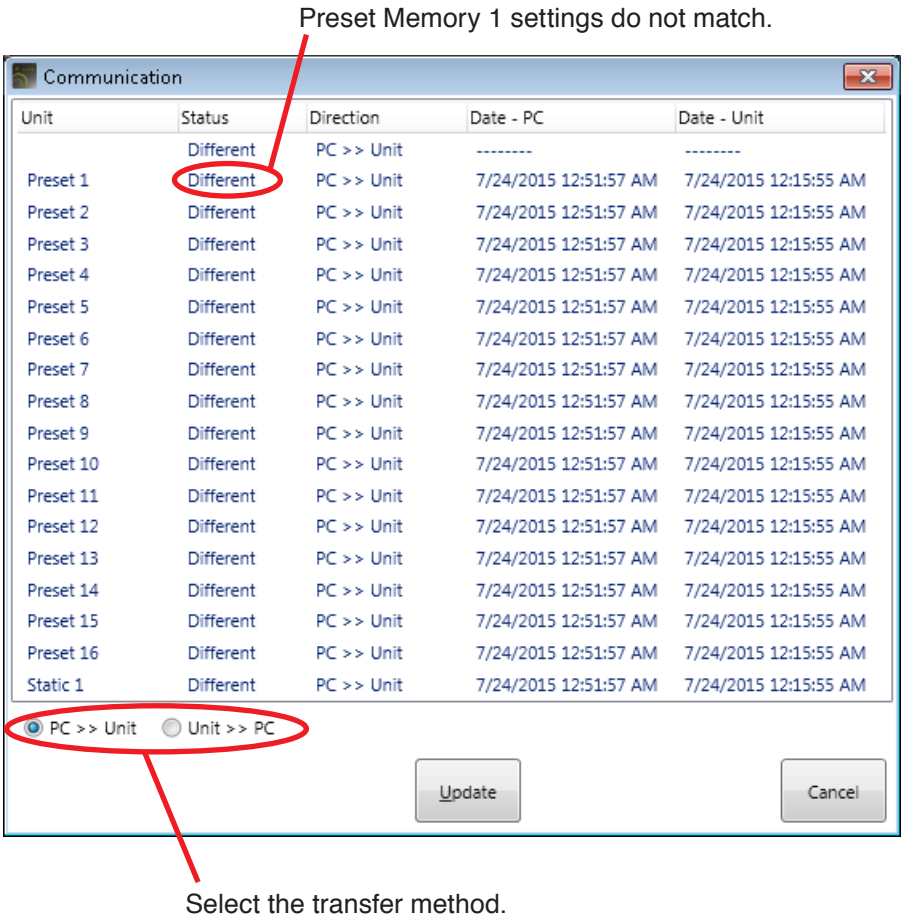
Note
If no units on the network have been set for the connection settings, the Unit’s IP Setting screen is displayed.
Perform network settings in the same manner as in the steps on p. 45, “Connection Settings.”
On completion of network settings, the units listed in “Connectable units” field start being connected.



Step 2. Match both setting data of the PC and the unit if not identical.
To enable communications between the PC and the unit, both setting data* must be the same.
If data is different between the PC and the target unit, the Communication screen appears indicating "Different" in the Status column during connection.
Designate the transfer direction "PC >> Unit" or "Unit >> PC," and click the [Update] button. Then, all unmatched setting data is simultaneously transferred in the designated direction.

* Set contents of preset memory Nos. 1 – 16 and parameters (static parameter) not stored in preset memory.

[Example of display that appears when the settings contents for the PC and the unit do not match]



Step 3. Select [Network → Disconnect] from the menu.
This terminates communications between a PC and the unit.

12. GLOSSARY

12.1. PC Software Screen

12.1.1. Flow view

Displays the A-5000 series's signal processing flow, and is used to perform advanced settings of each individual signal processing function.

12.1.2. Box

Refers to the box expressing each signal processing function in the Flow view and Operation view. The Box is also termed as Function box.

12.1.3. Detail setting panel

A screen used to perform detailed parameter settings for the signal processing function box.

12.2. Signal Processing Function

12.2.1. Compressor function

Compresses the difference between the maximum sound output and minimum sound output. This function can be set for Inputs 1 and 2.
Threshold Level, Compression Ratio, Attack Time, Release Time and Gain can all be individually adjusted.

12.2.2. FBS

Refers to the Feedback suppressor (FBS) function. Performs dynamic mode operation to suppress acoustic feedback in real time when it occurs.

12.2.3. FBS filter point guard function

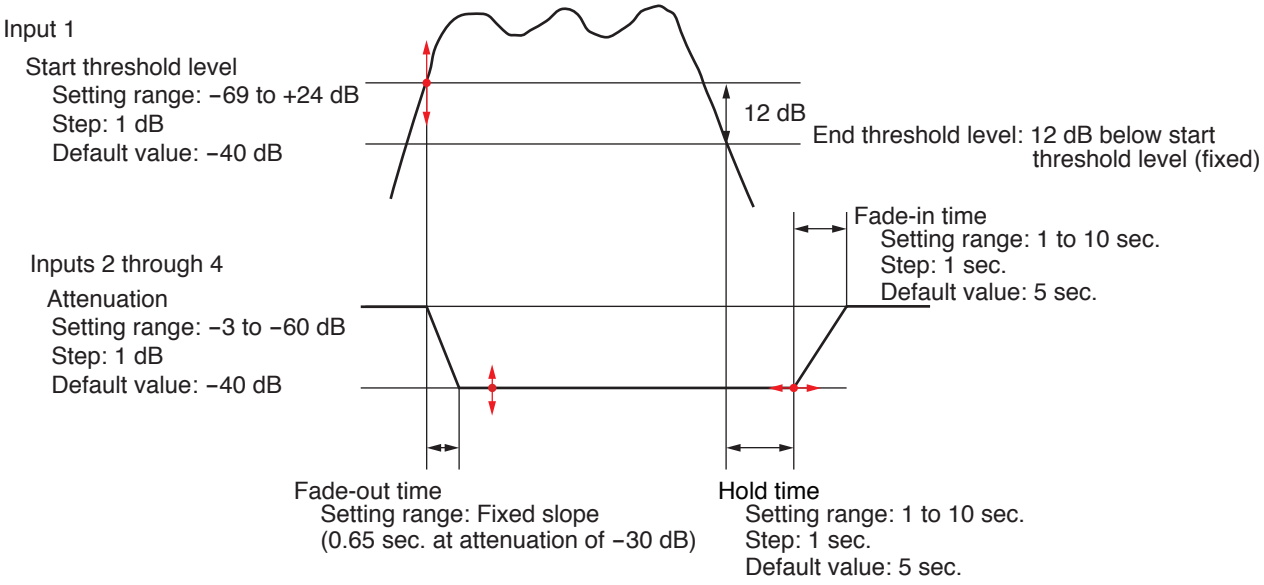
A function that individually guards the created filter point.
It prevents the existing filter point from being overwritten by the dynamic filter to be created subsequently.

12.2.4. Manual mute function

Input signal is muted by closing the unit's Manual Mute terminals.
Mute can be individually set for each input (1 – 4).

12.2.5. Auto mute function

A function that enables announcement broadcast to be heard clearly by attenuating the BGM level when the announcement is made during BGM broadcast.
Auto Mute operates on each input of Input Channels 2 – 4, with the input of Input Channel 1 used as a trigger.
The figure below shows the operation of the Automatic mute function, and the meaning and setting range of each parameter.



12.2.6. Volume function

The following volume control functions are also provided:
- Input Volume Controls
  Each of these front panel-mounted controls can be rotated to adjust its corresponding signal level.
- Remote Master Volume Controls
- Master Volume Controls

12.2.7. EQ function (input)

Performs 1-point high-pass filter and 4-point parametric equalizer processing on each input channel.

12.2.8. EQ function (output)

Performs 10-point filter processing on each output channel.
Each filter point's filter type can select from following 6 types.
- Through
- High-pass filter (6 dB/oct)
- High-pass filter (12 dB/oct)
- PEQ filter
- Low-pass filter (6 dB/oct)
- Low-pass filter (12 dB/oct)

12.2.9. SP EQ function

Performs filter processing for TOA speakers on output channels.
The speaker correction parameters can be read or saved.

12.3. System Function

12.3.1. Preset

Refers to the Preset memory.

12.3.2. Static

A parameter that cannot be stored in the Preset memory.

12.3.3. During editing (Edit state)

A state that even a part of the parameters to be stored in the Preset memory is currently being changed.

12.3.4. Preset resume function

A function that resumes the editing after power-on even if power is turned off while editing is in progress not completing the store into a specific Preset memory.

12.4. Communication Related Terms

12.4.1. Online state

A state that the PC and target A-5000 series unit are communicating with each other.
“When in online mode” is a state that the A-5000 series unit is in online state.

12.4.2. Offline state

A state that the PC and target A-5000 series unit are not communicating with each other.
“When in offline mode” is a state that the A-5000 series unit is in offline state.

12.5. External Control Functions

12.5.1. Manual mute function

Input signal is muted by closing the unit’s Manual Mute terminals.

12.5.2. Remote master volume control function

Adjusts the unit’s master volume with an external volume control.

12.6. Maintenance Function

12.6.1. Setting file

A file in which the setting data for a single A-5000 series unit is stored.
The file extension is “a5d.”

13. SPECIFICATIONS

13.1. Software Specification

Preset Memory: 16 memories

13.2. Setting/Display Items, Setting Ranges, and Default Settings

13.2.1. Unit data

Setting Item	Setting Range	Default Setting	Remarks	Online Setting	Storable in Preset Memory
Unit Name	20 alphanumeric characters			✓	×
IP Address	IPv4	192.168.14.1		✓	×
Subnet Mask	IPv4	255.255.255.0		✓	×
Default Gateway	IPv4	0.0.0.0		✓	×
DHCP	On, Off	Off		✓	×

13.2.2. Channel data

Setting Item	Setting Range	Default Setting	Remarks	Online Setting	Storable in Preset Memory
Channel Name	20 alphanumeric characters	Example: Mono In: 1, Mono Out: 1		✓	×

13.2.3. Signal processing box

[EQ (input)]

Setting Item	Setting Range	Default Setting	Remarks	Online Setting	Storable in Preset Memory
Gain	–15 to +15 (dB), 0.5 dB steps	0		✓	✓
Center Frequency	20 to 20 k (Hz), 1/24 octave steps	80 (HPF), 200 (PEQ), 500 (PEQ), 2 k (PEQ), 10 k (PEQ)	HPF (6 dB/oct) x 1 PEQ x 4	✓	✓
Q	0.267 to 69.249 (96 points)	4.318		✓	✓
On/Off	On, Off	On (PEQ) Off (HPF)		✓	✓

[EQ (output)]

Setting Item	Setting Range	Default Setting	Remarks	Online Setting	Storable in Preset Memory
Gain	–15 to +15 (dB), 0.5 dB steps	0		✓	✓
Center Frequency	20 to 20 k (Hz), 1/24 octave steps	80 (HPF), 125 (PEQ), 200 (PEQ), 315 (PEQ), 500 (PEQ), 800 (PEQ), 1.25 k (PEQ), 2.00 k (PEQ), 3.15 k (PEQ), 10.0 k (LPF)	Through, HPF (6 dB/oct), HPF (12 dB/oct), PEQ, LPF (6 dB/oct), LPF (12 dB/oct)	✓	✓
Q	0.267 to 69.249 (96 points)	4.318		✓	✓
On/Off	On, Off	On (PEQ) Off (HPF)		✓	✓

[SP EQ]

Setting Item	Setting Range	Default Setting	Remarks	Online Setting	Storable in Preset Memory
Gain	–15 to +15 (dB), 0.5 dB steps	0		✓	✓
Center Frequency	20 to 20 k (Hz), 1/24 octave steps	100, 330, 1.0 k, 3.30 k, 10.0 k	Through, PEQ	✓	✓
Q	0.267 to 69.249 (96 points)	4.318		✓	✓
On/Off	On, Off	On		✓	✓

[Compressor]

Setting Item	Setting Range	Default Setting	Remarks	Online Setting	Storable in Preset Memory
Threshold	–30 to +10 (dB), 1 dB steps	0		✓	✓
Ratio	1 : 1 to ∞ : 1, 17 steps	1 : 1		✓	✓
Attack time	0.2 to 5000 (ms), 25 steps	10		✓	✓
Release time	10 to 5000 (ms), 16 steps	500		✓	✓
Gain	–20 to +10 (dB), 1 dB steps	0		✓	✓
On/Off	On, Off	On		✓	✓

[Feedback suppressor (FBS) settings]

Setting Item	Setting Range	Default Setting	Remarks	Online Setting	Storable in Preset Memory
Dynamic Mode ON/OFF	On, Off	Off		✓	✓
Filter Guard ON/OFF	On, Off	Off		✓	✓
Gain	–15 to 0 (dB) 0.5 dB steps	0	Automatically set in Dynamic mode	–	✓
Center Frequency	20 to 20 k (Hz), 1/24 octave steps	1 k	Automatically set in Dynamic mode	–	✓
Q	0.267 to 69.249 (96 points)	4.318	Automatically set in Dynamic mode	–	✓
Filter On/Off	On, Off	Off	Automatically set in Dynamic mode	–	✓

[Graph indication range of FBS]

Setting Item	Setting Range	Default Setting	Remarks	Online Setting	Storable in Preset Memory
Graph Indication Range (Frequency: Min.)	20 to 19.9 k (Hz)	20	Max. value is always kept greater than min. value.	✓	–
Graph Indication Range (Frequency: Max.)	21 to 20.0 k (Hz)	20.0 k		✓	–
Graph Indication Range (Amplitude: Top)	–119 to +120	6	Top value is always kept greater than bottom value.	✓	–
Graph Indication Range (Amplitude: Bottom)	–120 to +119	–24		✓	–
Graph Indication Range (Amplitude: Step)	1 to 20 (dB), 1 dB steps	3		✓	–

[Mute]

Setting Item	Setting Range	Default Setting	Remarks	Online Setting	Storable in Preset Memory
Mute mode	Manual, Auto, Off	Manual		✓	✓
INPUT 1 – 4 On/Off	On, Off	Off		✓	✓
Start Threshold Level	–69 to +24 (dB), 1 dB steps	–40	INPUT 1 Only when Auto Mute mode	✓	✓
End Threshold Level	12 (dB) below Start Threshold Level (fixed)	–	INPUT 1 Only when Auto Mute mode	–	–
Attenuation	–60 to –3 (dB), 1 dB steps	–40		✓	✓
Hold Time	1 to 10 (sec), 1 sec steps	5		✓	✓
Fade-in Time	0 to 10 (sec), 1 sec steps	4		✓	✓

Display Item	Setting Range	Default Setting	Remarks	Online Setting	Storable in Preset Memory
Mute operation status	Mute enabled/ disabled	–		–	–
Manual Mute terminal status	Open/close	–	Unit's Manual Mute terminal status	–	–

[Volume control]

Display Item	Setting Range	Default Setting	Remarks	Online Setting	Storable in Preset Memory
Input volume control	–∞, –69 to +10 (dB), 1 dB steps	–		–	–
Remote master volume control	–∞, –69 to +10 (dB), 1 dB steps	–		–	–

Setting Item	Setting Range	Default Setting	Remarks	Online Setting	Storable in Preset Memory
Master volume control	–∞, –69 to +10 (dB), 1 dB steps	0		✓	✓

[Output selection switch]

Display Item	Setting Range	Default Setting	Remarks	Online Setting	Storable in Preset Memory
Output	100 V, 70 V/4 ohm	–	Use the unit's DIP switch to set.	–	–

Traceability Information for Europe

Manufacturer:
TOA Corporation
7-2-1, Minatojima-Nakamachi, Chuo-ku, Kobe, Hyogo, Japan

Authorized representative:
TOA Electronics Europe GmbH
Suederstrasse 282, 20537 Hamburg, Germany