RAM_OCS v3 Quick Guide

INSTALLATION AND FIRST STEPS

Welcome to RAM OCS, the Online Control System for RAM Audio V/W Series DSP amplifiers. By using it you can control and monitor the DSP unit of a V/W amplifier through an Ethernet network or a USB connection, in a Windows system.

To start, install the software in a Windows system (XP, Vista, 7, 8 or 10) and connect the amplifiers to the Ethernet network or the USB port. Each amplifier is programmed from factory with a unique IP number inside the range 192.168.xxx.xxx. To detect initially the amplifiers you have to work inside this range. Change the computer IP to 192.168.0.10 for example, and use a mask 255.255.0.0. After detect the amplifiers inside this range you can change the IP of each one if required.

Execute the RAM OCS software using the Shortcut created in the desktop and start scanning the network. To do that, click in the loupe (1) icon placed near to the left top side of the window. The system has to detect all amplifiers you have connected in your network or connected using the USB port. To open an amplifier you have to do a double click on the amplifier showed in the devices tree (2).

Create a virtual amplifier: if you do not have any amplifier connected to the system, you can add an offline amplifier clicking with the right mouse button on the "Amplifiers" section of the devices tree (3), and selecting the Add device option.

To obtain some help for the different button functions, you can maintain the cursor over a button for two seconds to show a hint which can help you.

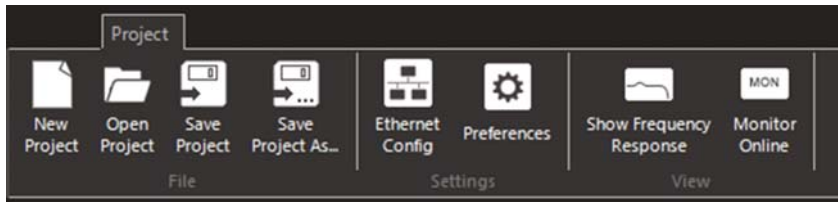The elements of the main screen are as follows:

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MAIN MENU DESCRIPTION

- Project Menu icons:

It contains different sections:

File section: contains different icons for manage your project, to open or save the structure of an amplifier group. Also you can create a new empty project.

Settings section: contains the following icons:
- *Ethernet devices*: pressing this icon you can change the name or the IP of an amplifier. Also you can send a buzz to a specific amplifier to do a blinking of the back panel LEDs to help you to identify an amplifier.
- *Preferences*: permits to change different software parameters, as can be the dB scale of the response window, humidity and temperature taken in account to calculate the speed of sound, wrapped or unwrapped phase representation, or write a resume of the current project. Also, contains a button for firmware update.

View section: contains the following icons:
- *Show Frequency Response*: shows the graphical window with the frequency response of your current DSP configuration.
- *Monitor Online*: turn on/off the monitor mode which permits to read the real time data of the current amplifier. You can see it in the Gain or Amp Setup tabs

- Amplifier Menu icons:
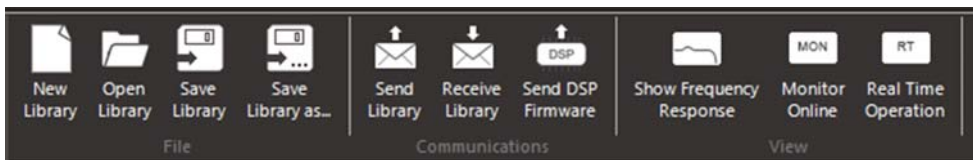
It contains different sections:

File section: contains different icons where you can manage your Library, to open or save the current PC Library. Also you can create a new empty Library.

Communications section: using the icons you can send or receive the current library to/from the amp. These icons are the same you have in the Sync Library section of the Library Tab. Also you can send to the amp a new DSP firmware to upgrade it in the future.

View section: contains the following icons:
- *Show Frequency Response*: shows the graphical window with the frequency response of your current DSP configuration.
- *Monitor Online*: turn on/off the monitor mode which permits to read the real time data of the current amplifier. You can see it in the Gain or Amp Setup tabs.
- *Real Time Operation*: turn on/off the real time mode, so any change you make in the DSP configuration or the amplifier setup is replayed instantaneously. When you enable this option, it will synchronize the amp and the PC configuration, sending the current configuration you have in the PC to the amplifier.

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DSP AMPLIFIER WINDOW

When you open a DSP amplifier appears a window which contains different tabs. The description of these Tabs are as follows:

1- Library (green tab): this tab shows the complete presets library, which contains 65 Input presets, 99 Output Presets and 64 Global Presets. Using this tab you can manage the Library to make different functions:

- Send the Input/Output/Global Presets to the amp
- Open/Save a Library file from/to the PC
- Send/Receive the complete Library to/from the amp

You can assign Input and Output presets for each channel individually, or you can make a combination of different input and output presets defining a Global Preset, to assign the desired combination of input and output presets to all channels simultaneously. To create the presets you have to use the following tab DSP Edit.

The elements of this tab are as follows:

Global Preset list tab — Input Preset list tab — Output Preset list tab

Send buttons: to send the Global/In/Out Presets to the amp. You can send a single preset or all list.

Disk Library section: use these buttons to Open and Save a complete Library (Global+In+Out presets) as a file in the PC disk

Global/In/Out Preset list, includes the preset number and name information

Send & Recall button: to send and recall on the amp (place as current) a specific preset. In case of In/Out Preset you have to specify the Channel

Sync Library section: to synchronize the amp and PC Library. You can send the current Library to the amp, or receive the Library from the amp
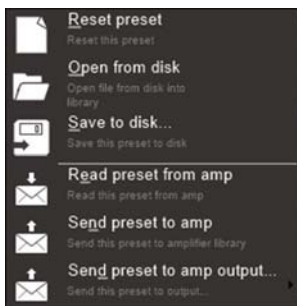
When you press the right mouse button over a Preset you open a menu with the next options:

Reset Preset: initializes completely a Preset erasing all data it contains.
Open from disk: you can open a file previously saved which contains all Preset information.
Save to disk: save a file to disk with all Preset information.
Read preset from amp: reads from the amplifier library the selected Preset.
Send preset to amp: sends to the amplifier library the selected Preset.
Send preset to amp output/input: sends to the amplifier library and recall the selected Preset to a specific output/input.

2- DSP Edit (blue tabs): using this tab you can create the Input/Output/Global Presets. You can access to the different parameters of the preset using the blue tabs next to DSP Edit tab (Gain, Delay, PEQ In, X-IIR, X-FIR, PEQ Out, RMS Dyn, PEAK Dyn) or pressing directly the icon of the parameter desired of each channel. After define all required parameters, to create a preset you have to assign a unique memory number, a name, and press the button Send. This creates an Input/Output preset, assigns it to a fix memory in the PC and amp library, and recall it in the amp (places it as current). If you are working with an offline amplifier (you have not connected an amplifier), then only sends it to the PC library.

You can create a preset and send it to the library using any channel you want. After that you can load it in any channel, selecting it using the up/down arrows and pressing the Load button. To send and recall (place as current) it to the amplifier, press the button Send.

The Global Preset contains the information of a combination of Input/Output presets memory and the Route section, to work easily with a fix combination of presets. So, you can define the different Input/Output presets you will use for each channel, define also the Route section and assign a number and name for the Global Preset. After that, press the button Send All and you will send all In/Out presets you have used to the library and also the definition of this combination together with the Route section to create a Global Preset. After that, you can Load it quickly searching the number using the up/down arrows of the global preset section and pressing the Load All button. Warning: pay attention to avoid overwrite any In/Out preset if you have defined it with the same memory number when you press the Send All button.

Using the Read Current button you transfer to the DSP Edit tab all parameters which are loaded as current in the amplifier.

The elements of the DSP Edit tab are as follows:
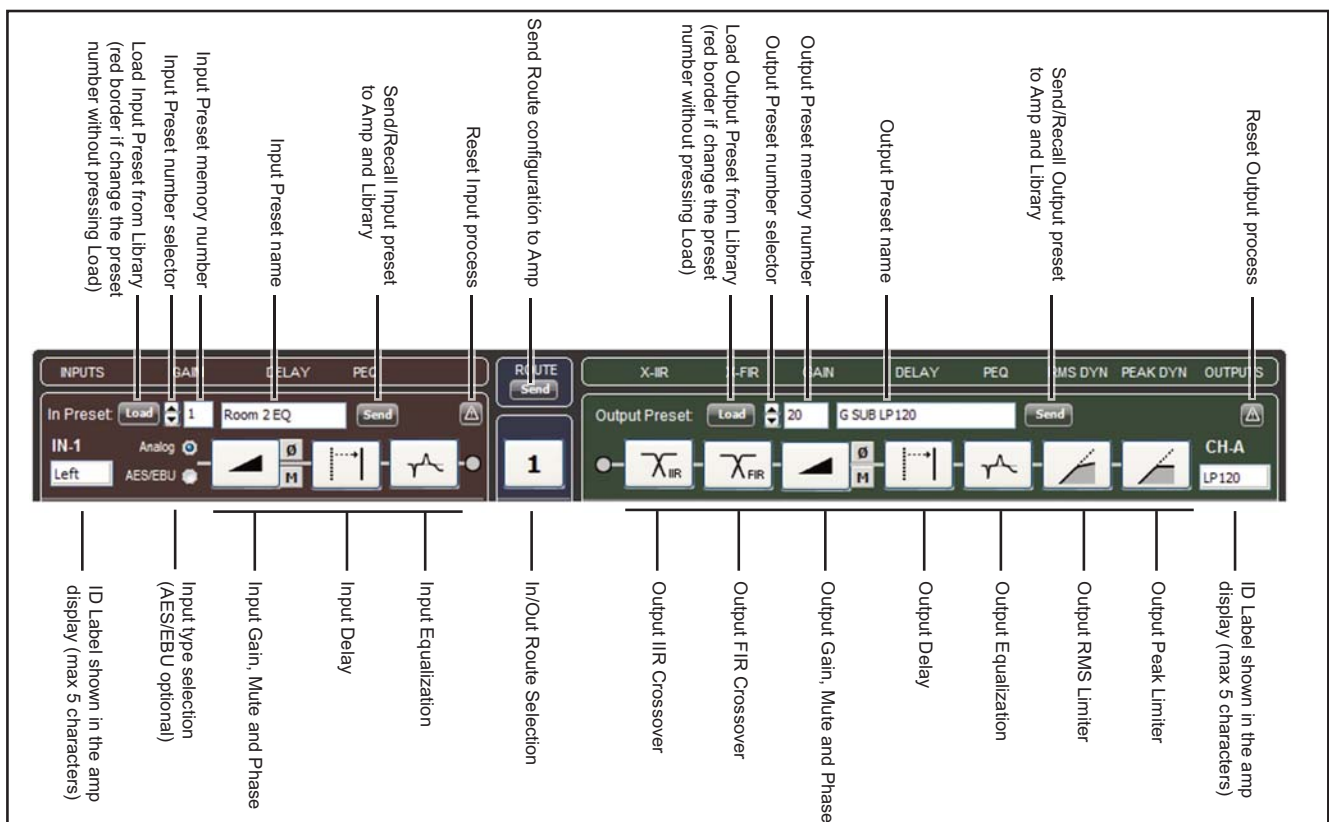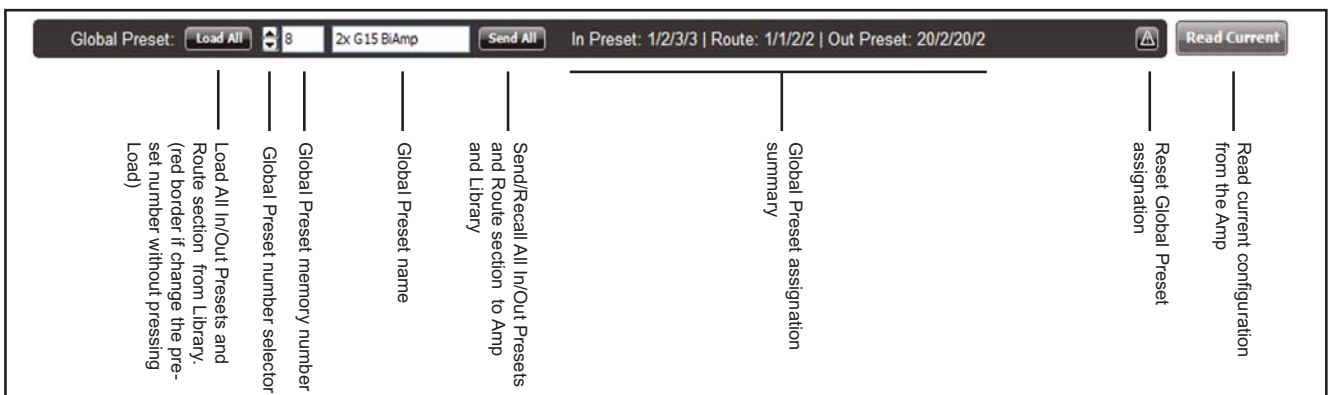
When you access to the DSP Edit tab, the Frequency Response curve window is automatically open. You can also open or close this window using the corresponding icon in the main menu.

The elements of the Frequency Response window are as follows:

Show the influence of the selected parameters on the curve

Channel selection: you can select which curve is shown, including the sum of all channels (Add). You can change the plot colors. Also you can show the Phase response. Use the Cursor marker to select the active curve to show in the Cursor Information section

Frequency response plot: shows the frequency response of the 4 channels on the DSP Edit tab. You can change the dB scale (changing the Options in the Project menu). You can make a Zoom using the right mouse button and selecting the region towards the right side. If you select the region towards the left side you have a zoom out function. You can make a Pan function pressing the left mouse button together to the [Ctrl] key

Corner resize

3- Amp Setup: using this tab you can control different amplifier parameters. You can change the front panel potentiometers Level, Gain, configure bridge mode, disable the ICL system or Link the inputs (not available with DSP installed). Also you can monitor the output voltage, current (if installed option), temperature and show the LED status. The system measures in real time the impedance of the load connected to each channel (if installed option). To activate all monitor functions you have to press the Monitor Online icon in the top menu. Also, optionally you have the turn on/off button.

4- Speaker Data: you can load the response curve (magnitude and phase) of your acoustic system measured with different systems (Clio, Smaart, AP,MLSAA...) to show it directly in the final curve response. So you can view directly the influence of the DSP process in your true speaker response.