

## Contents

<b>1</b>	<b>First steps .....</b>	<b>1</b>
1.1	Start .....	1
1.2	Firmware Update.....	4
<b>2</b>	<b>Installation of the ASCENDO standard presets .....</b>	<b>5</b>
2.1	SYSTEM Preset.....	5
2.2	SNAPSHOT Preset.....	8
<b>3</b>	<b>Load preset.....</b>	<b>9</b>
<b>4</b>	<b>ASCENDO standard presets and Neutrik + Phoenix connectors pinout.....</b>	<b>9</b>
4.1	THE18 SUB PRO PASSIVE SEALED SHALLOW .....	9
4.1.1	4 x THE18 SUB PRO PS SH - 2500 W - WaveForming .....	9
4.1.2	4 x THE18 SUB PRO PS SH - 2500 W - Input1.....	10
4.2	THE18-2 SUB PRO PASSIVE SEALED SHALLOW .....	10
4.2.1	2 x THE18-2 SUB PRO PS SH - 5000 W Bridged - WaveForming.....	10
4.2.2	2 x THE18-2 SUB PRO PS SH - 5000 W Bridged - Input1.....	11
4.3	THE18/21 SUB PRO PASSIVE SEALED .....	11
4.3.1	4 x THE18/21 SUB PRO PS - 2500 W - WaveForming .....	11
4.3.2	4 x THE18/21 SUB PRO PS - 2500 W - Input1 .....	11
4.3.3	2 x THE18/21 SUB PRO PS - 5000 W Bridged - WaveForming.....	13
4.3.4	2 x THE18/21SUB PRO PS - 5000 W Bridged - Input1.....	13
4.4	THE24/32 SUB PRO PASSIVE SEALED .....	14
4.4.1	2 x THE24/32 SUB PRO PS - 5000 W Bridged - WaveForming.....	14
4.4.2	2 x THE24/32 SUB PRO PS - 5000 W Bridged - Input1.....	14
4.4.3	1 x THE24/32 SUB PRO PS - 10.000 W .....	15
4.5	Further ASCENDO Subwoofer combinations .....	16
<b>5</b>	<b>Save presets / settings.....</b>	<b>17</b>
<b>6</b>	<b>Subwoofer adjustments .....</b>	<b>19</b>

## 1 First steps

### Installation

- 1) Follow the link below and save the operation software, the firmware updater and the 2 libraries of the ASCENDO standard presets to your computer. As of September 2023 the standard presets are already installed on your DSP4-10K2 amplifier.

<https://www.dropbox.com/scl/fo/e67hcv73s65jcqj84lkba/h?rlkey=9isjqdfvzu7upkftadcxn3ymq&dl=0>

- 2) Connect your DSP4-10K2 via LAN cable to your computer.



### 1.1 Start



A DHCP server is required for the assignment of the IP address.

We don't recommend using any switch/router with energy management, especially NETGEAR, ProSafe, Gigabit.

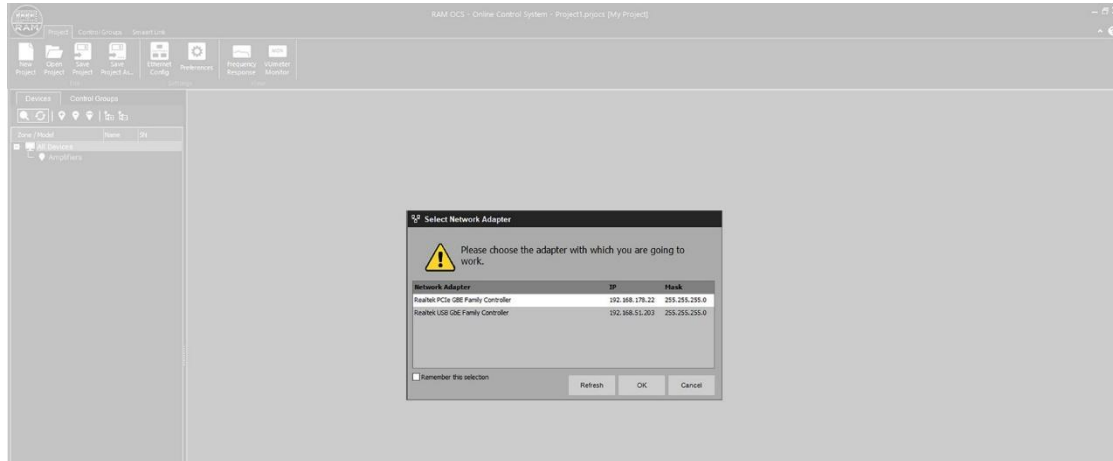


Please use only the operating software permitted for the respective firmware version. We recommend always using the latest software / firmware combination.

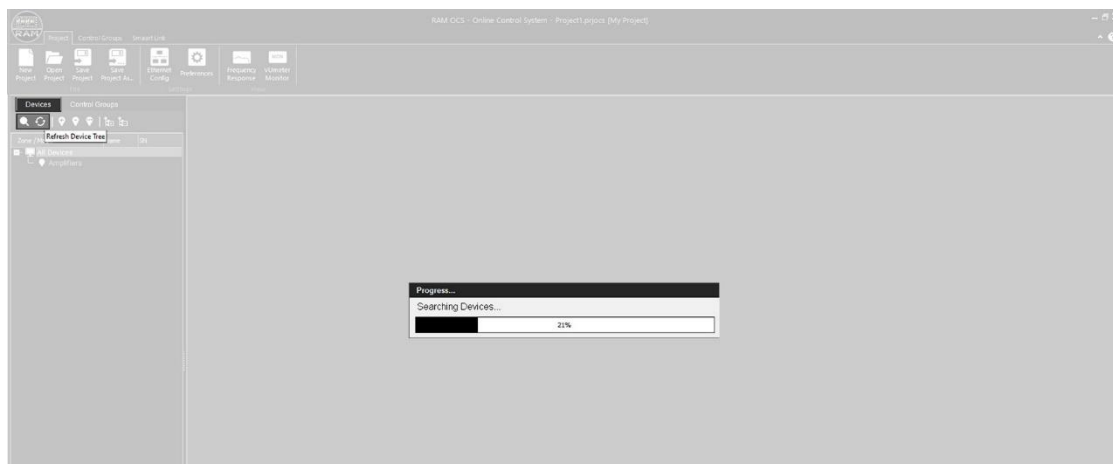
#### Permissible software / firmware combinations

Date	Operating Software	Firmware	Firmware	Firmware	
		DSP4-6K2	DSP4-10K2	DSP4-10K2 MKII	DSP4-20K2
	3.0.58	1.0.22			1.4.5
		1.0.4			
04.07.2022	4.0.10	2.0.0			2.0.0
07.09.2022	4.0.10	2.0.1			2.0.0
		2.0.4			
		2.0.5			
		2.0.7			
07.12.2022	4.0.10	2.0.10			2.0.1
		2.0.17			
		2.0.18			
24.10.2022	4.0.10	2.0.22	2.0.21		2.0.3

3) Start the ASCENDO operating software and confirm the correct LAN adapter.



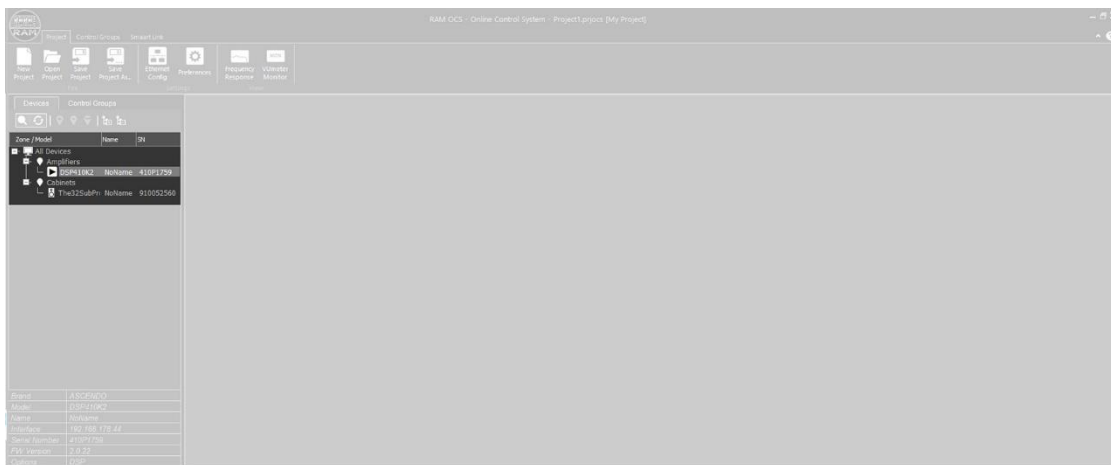
4) Click on the magnifying glass icon under Device to start the search for the connected devices.



5) The connected ASCENDO amplifiers and subwoofers are listed on the left under Device. Confirm the device you want to change settings for by double clicking with the mouse.

If firmware version and operating software version do not match, there may be connection problems. In this case, please remove the CAT cable and connect your computer to the DSP4-10K2 via USB cable.

We strongly recommend to use the correct firmware and operating software versions.



## 1.2 Firmware Update



The firmware update overwrites all installed presets. Please back up your system- and snapshot libraries to your hard drive before updating.

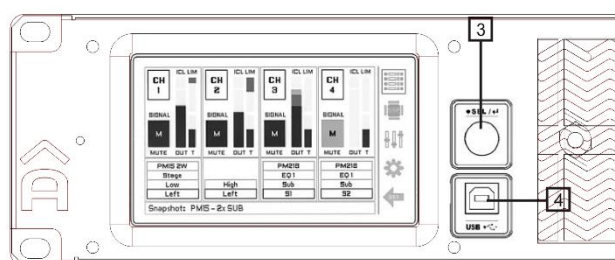
The above download link always leads to the latest firmware/operating software combination. The folder name contains the firmware version number.

If the latest firmware version is not installed, please perform a firmware update.



Save all installed presets (chapter 2).

- 1) Run the Firmware updater.
- 2) Turn off the DSP4.
- 3) Press and hold encoder [3] while turning the amplifier back on.
- 4) Connect your DSP4 Amplifier [4] via USB cable to your computer.
- 5) Click on Connect Button.
- 6) Click on Erase-Program-Verify button.
- 7) When the firmware upload is complete, turn off the DSP4. Wait a few seconds. Switch the DSP4 on again.
- 8) Remove the USB cable.
- 9) Reconnect the DSP4 to your computer via LAN cable.
- 10) Install your saved presets again (chapter 2).



## 2 Installation of the ASCENDO standard presets

The installing of the ASCENDO standard presets is done in 2 steps.

The first step is to install the ASCENDO System Preset Library in the System menu.

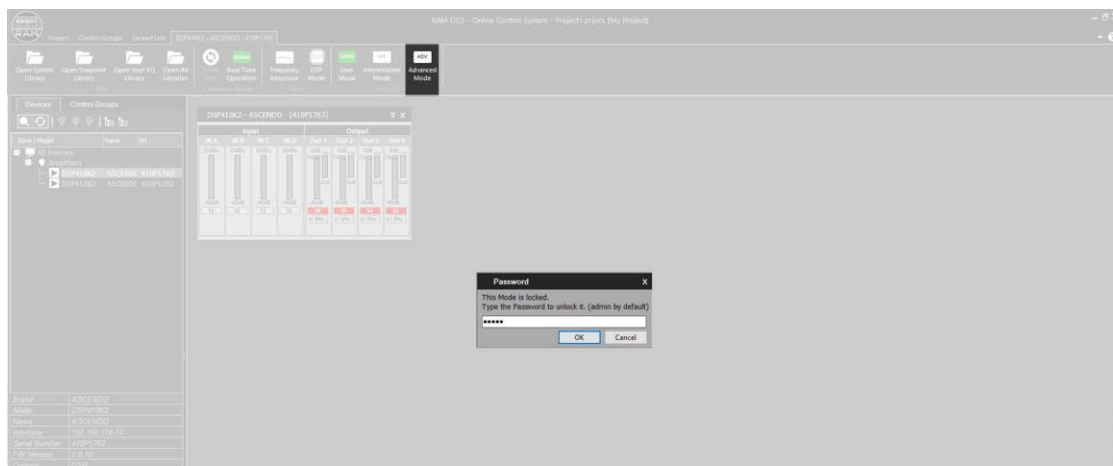
As a second step, the ASCENDO Snapshot Preset Library is installed in the Snapshot menu item.



It is mandatory to install the SYSTEM preset first.

### 2.1 SYSTEM Preset

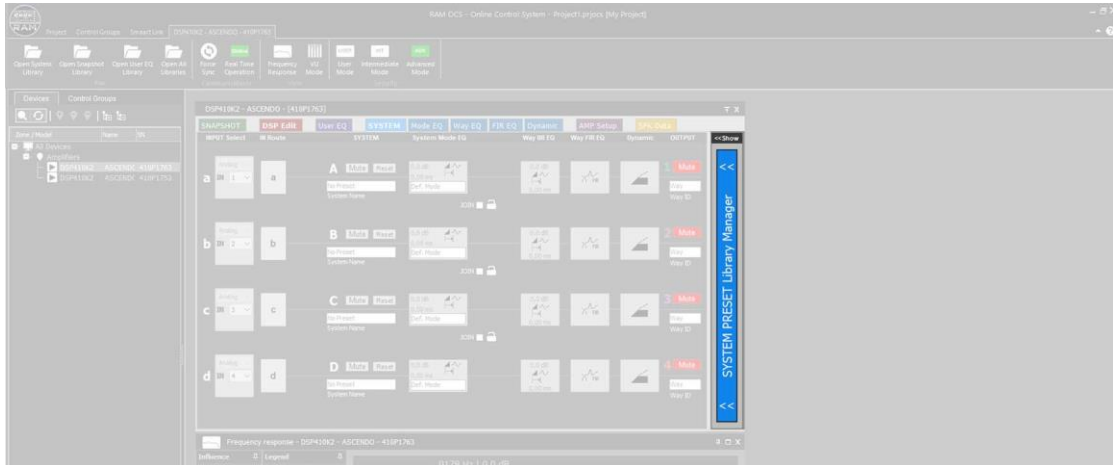
- 1) Click with the mouse on Advanced Mode.
- 2) Enter the password: **admin**.



- 3) Click on System.

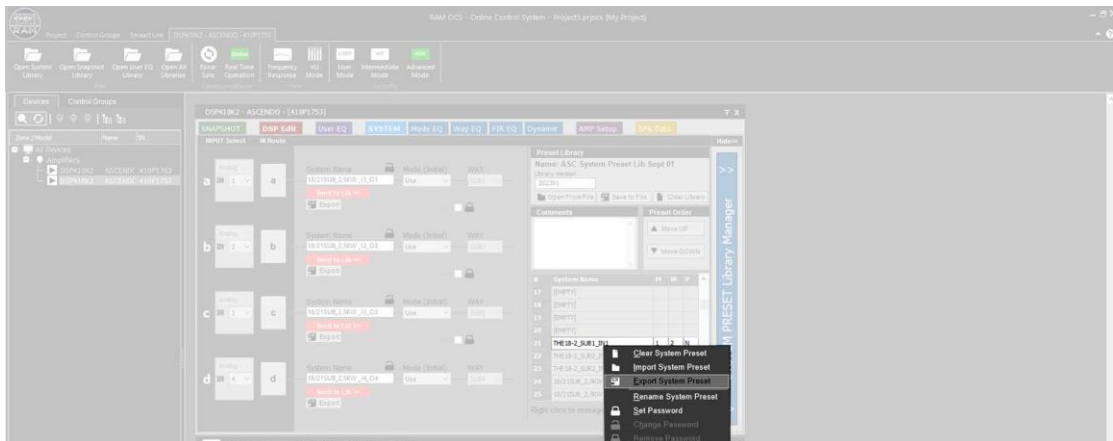


4) Click on SYSTEM PRESET Library Manager.

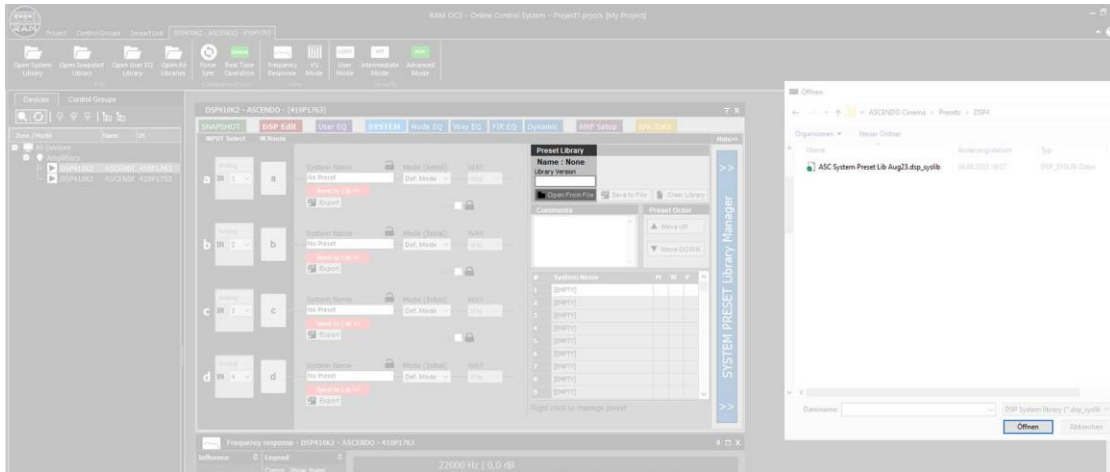


Save the already installed presets.

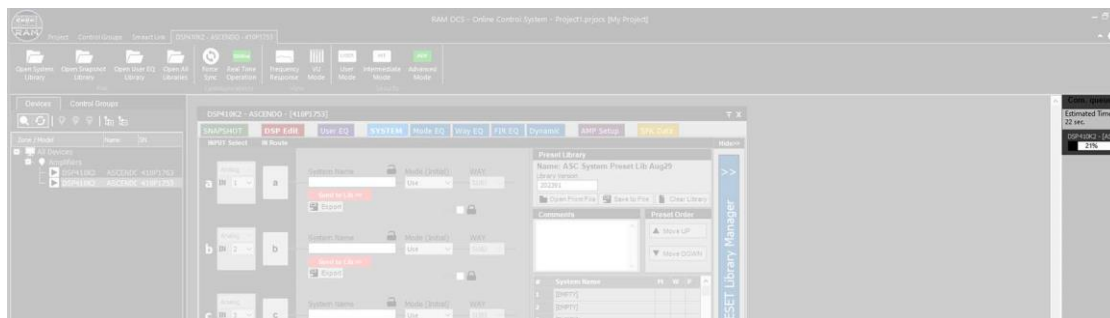
- 5) Right-click on each system preset you want to save.
- 6) Confirm Export System Preset. Save the preset to your hard disk.



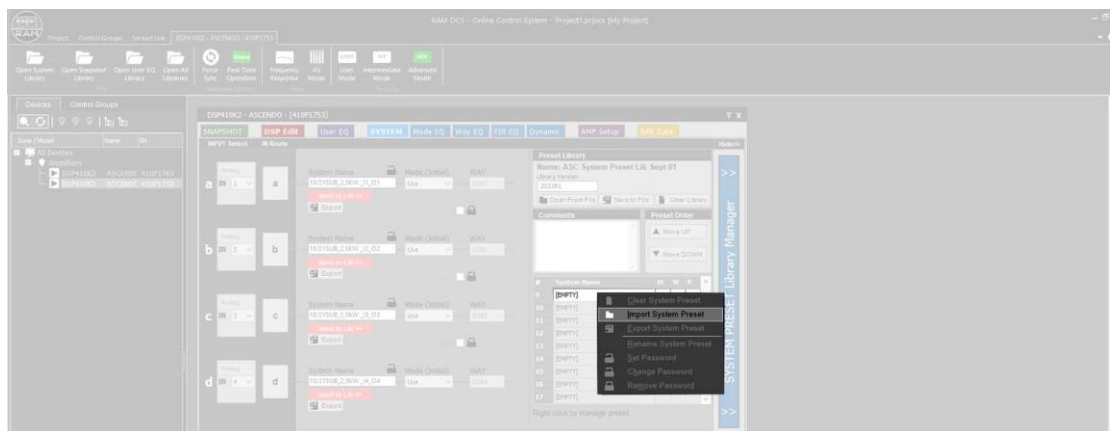
- 7) Confirm **Open From File**.
- 8) Open the ASCENDO System Library in the file manager.



The loading process takes approx. 20 sec. The loading progress indicator is located on the right.



- 9) Click with the right mouse button on a free system preset slot.
- 10) Confirm **Import System Preset**. Save the system presets on your DSP4-10K2



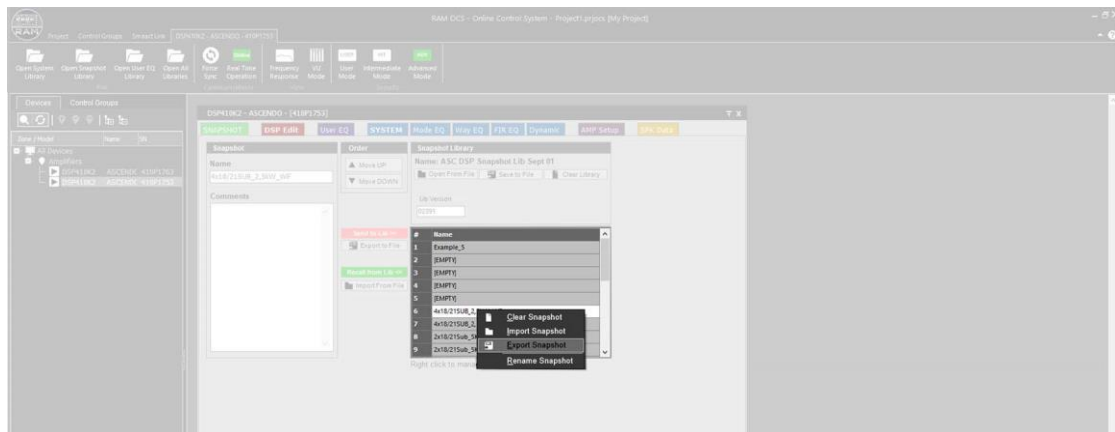
## 2.2 SNAPSHOT Preset

1) Go to the SNAPSHOT menu.

Only if snapshot presets are already installed on the DSP4-10K2.

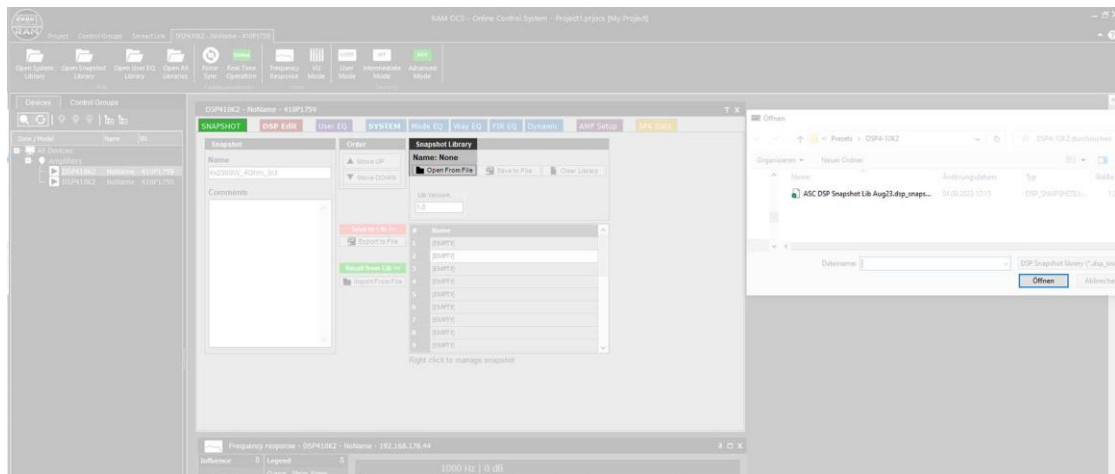
2) Right-click on each snapshot preset you want to save.

3) Confirm Export System Preset. Save the preset to your hard disk.



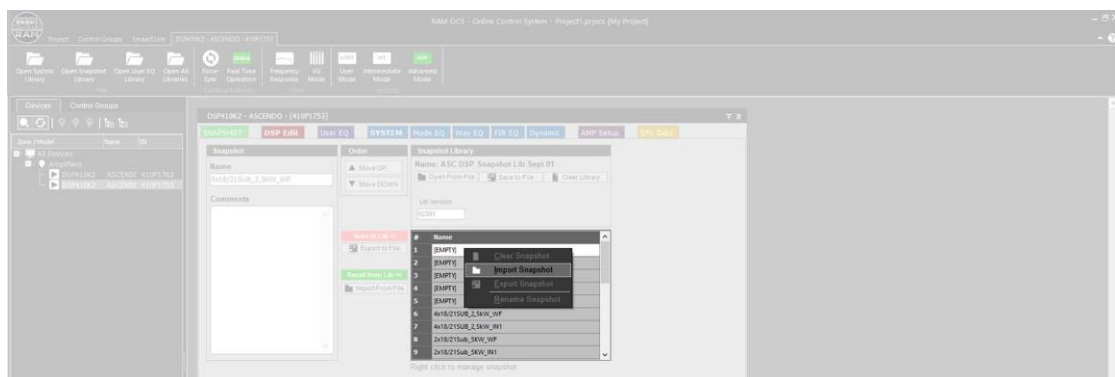
2) Confirm **Open From File**.

3) Open the ASCENDO Snapshot Library in the file manager.




4) Click with the right mouse button on a free snapshot preset slot.

5) Confirm Import Snapshot Preset. Save the snapshot presets on your DSP4-10K2



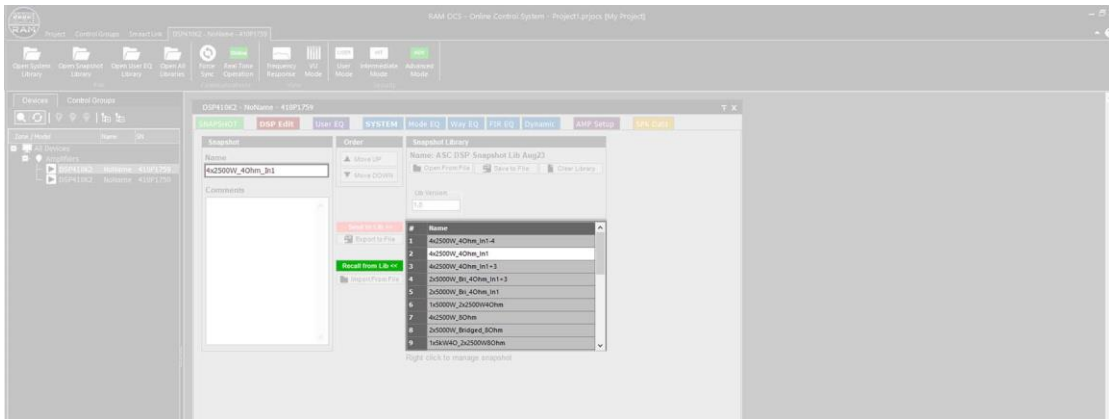


### 3 Load preset



**Do not confirm Send to Lib. This overwrites the preset.**

- 1) Go to SNAPSHOT menu.  
The installed presets are listed under Lib Version / Name.
- 2) Select the desired preset by mouse click.
- 3) Confirm **Recall from Lib.**  
The active preset is displayed under Snapshot / Name.



## 4 ASCENDO standard presets and Neutrik + Phoenix connectors pinout

### 4.1 THE18 SUB PRO PASSIVE SEALED SHALLOW

#### 4.1.1 4 x THE18 SUB PRO PS SH – 2500 W – WaveForming

SUB1: 1 x 2500 W, Input 1 – Output 1

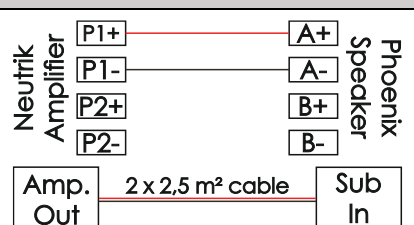
SUB2: 1 x 2500 W, Input 2 – Output 2

SUB3: 1 x 2500 W, Input 3 – Output 3

SUB4: 1 x 2500 W, Input 4 – Output 4

4 x XLR cable from AVR to DSP4-10K2

Snapshot Preset: Recall from Lib.: **4x18/21SUB\_2,5kW\_WF**

XLR Input	Power	Neutrik Output	Impedance	Neutrik / Phönix
1	2500 W	1	4 Ω	
2	2500 W	2	4 Ω	
3	2500 W	3	4 Ω	
4	2500 W	4	4 Ω	

#### 4.1.2 4 x THE18 SUB PRO PS SH – 2500 W – Input 1

SUB1: 1 x 2500 W, Input 1 – Output 1

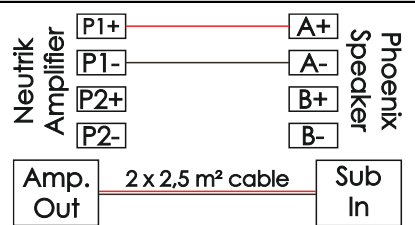
SUB2: 1 x 2500 W, Input 1 – Output 2

SUB3: 1 x 2500 W, Input 1 – Output 3

SUB4: 1 x 2500 W, Input 1 – Output 4

1 x XLR cable from AVR to DSP4-10K2

Snapshot Preset: Recall from Lib.: **4x18/21SUB\_2,5kW\_IN1**

XLR Input	Power	Neutrik Output	Impedance	Neutrik / Phönix
1	2500 W	1	4 Ω	
	2500 W	2	4 Ω	
	2500 W	3	4 Ω	
	2500 W	4	4 Ω	

#### 4.2 THE18-2 SUB PRO PASSIVE SEALED SHALLOW



All settings of both woofers of the THE18-2 PRO PS SH must be identical.

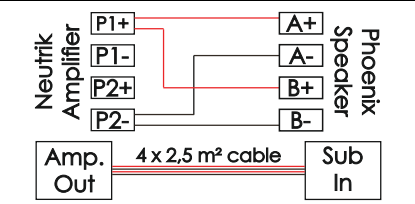
#### 4.2.1 2 x THE18-2 SUB PS SH – 5000 W Bridged – WaveForming

SUB1: 5000 W Bridged, Input 1 – Output 1

SUB2: 5000 W Bridged, Input 3 – Output 3

2 x XLR cable from AVR to DSP4-10K2

Snapshot Preset: Recall from Lib.: **2x18-2SUB\_2,5kW\_WF**

XLR Input	Power	Neutrik Output	Impedance	Neutrik / Phönix
1	5000 W	1 (1+2 bridged)	4 Ω	
3	5000 W	3 (3+4 bridged)	4 Ω	

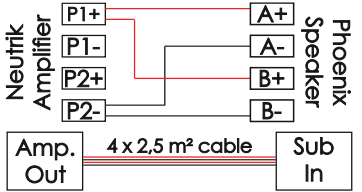
#### 4.2.2 2 x THE18-2 SUB PS SH – 5000 W Bridged – Input 1

SUB1: 5000 W Bridged, Input 1 – Output 1

SUB2: 5000 W Bridged, Input 1 – Output 3

1 x XLR cable from AVR to DSP4-10K2

Snapshot Preset: Recall from Lib.: **2 x 18-2SUB\_2,5kW\_IN1**

XLR Input	Power	Neutrik Output	Impedance	Neutrik / Phönix
1	5000 W	1 (1+2 bridged)	4 Ω	
	5000 W	3 (3+4 bridged)	4 Ω	

### 4.3 THE18 /21 SUB PRO PASSIVE SEALED

#### 4.3.1 4 x THE18/21 SUB PRO PS – 2500 W – WaveForming

SUB1: 1 x 2500 W, Input 1 – Output 1

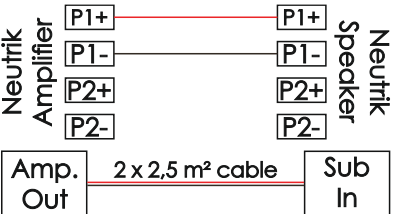
SUB2: 1 x 2500 W, Input 2 – Output 2

SUB3: 1 x 2500 W, Input 3 – Output 3

SUB4: 1 x 2500 W, Input 4 – Output 4

4 x XLR cable from AVR to DSP4-10K2

Snapshot Preset: Recall from Lib.: **4x18/21SUB\_2,5kW\_WaveF**

XLR Input	Power	Neutrik Output	Impedance	Neutrik
1	2500 W	1	4 Ω	
2	2500 W	2	4 Ω	
3	2500 W	3	4 Ω	
4	2500 W	4	4 Ω	

#### 4.3.2 4 x THE18/21 SUB PRO PS – 2500 W – Input 1

SUB1: 1 x 2500 W, Input 1 – Output 1

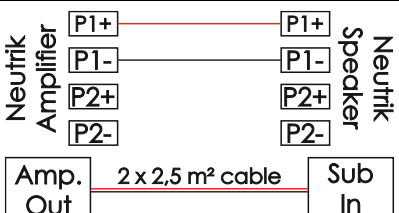
SUB2: 1 x 2500 W, Input 1 – Output 2

SUB3: 1 x 2500 W, Input 1 – Output 3

SUB4: 1 x 2500 W, Input 1 – Output 4

1 x XLR cable from AVR to DSP4-10K2

Snapshot Preset: Recall from Lib.: **4x18/21SUB\_2,58kW\_IN1**

XLR Input	Power	Neutrik Output	Impedance	Neutrik
1	2500 W	1	4 Ω	
	2500 W	2	4 Ω	
	2500 W	3	4 Ω	
	2500 W	4	4 Ω	

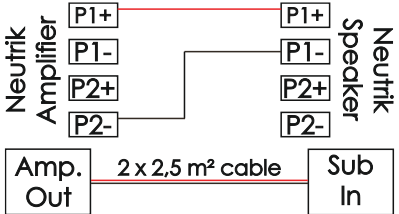
**4.3.3 2 x THE18/21 SUB PRO PS – 5000 W Bridged – WaveForming**

SUB1: 1 x 5000 W bridged, Input 1 – Output 1

SUB2: 1 x 5000 W bridged, Input 3 – Output 3

2 x XLR cable from AVR to DSP4-10K2

Snapshot Preset: Recall from Lib.: **2x18/21Sub\_5kW\_WF**

XLR Input	Power	Neutrik Output	Impedance	Neutrik
1	5000 W	1 (1+2 bridged)	4 Ω	
3	5000 W	3 (3+4 bridged)	4 Ω	

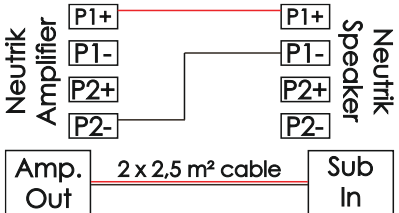
**4.3.4 2 x THE18/21 SUB PRO PS – 5000 W Bridged – Input 1**

SUB1: 1 x 5000 W bridged, Input 1 – Output 1

SUB2: 1 x 5000 W bridged, Input 1 – Output 3

1 x XLR cable from AVR to DSP4-10K2

Snapshot Preset: Recall from Lib.: **2x18/21Sub\_5kW\_IN1**

XLR Input	Power	Neutrik Output	Impedance	Neutrik
1	5000 W	1 (1+2 bridged)	4 Ω	
	5000 W	3 (3+4 bridged)	4 Ω	

## 4.4 THE24/32 SUB PRO PASSIVE SEALED



All settings of both voice coils of the THE24/32 SUB PRO PS must be identical.

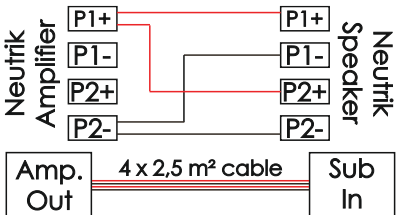
### 4.4.1 2 x THE24/32 SUB – 5000 W Bridged – WaveForming

SUB1: 5000 W Bridged, Input 1 – Output 1

SUB2: 5000 W Bridged, Input 3 – Output 3

2 x XLR cable from AVR to DSP4-10K2

Snapshot Preset: Recall from Lib.: **2x24/32SUB\_5kW\_WF**

XLR Input	Power	Neutrik Output	Impedance	Neutrik
1	5000 W	1 (1+2 bridged)	4 Ω	
3	5000 W	3 (3+4 bridged)	4 Ω	

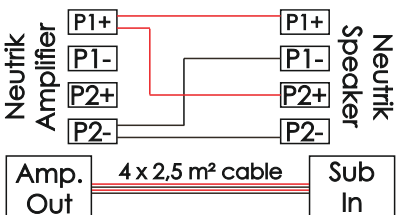
### 4.4.2 2 x THE24/32 SUB – 5000 W Bridged – 5000 W Bridged – Input 1

SUB1: 5000 W Bridged, Input 1 – Output 1

SUB2: 5000 W Bridged, Input 1 – Output 3

1x XLR cable from AVR to DSP4

Snapshot Preset: Recall from Lib.: **2x24/32SUB\_5kW\_IN1**

XLR Input	Power	Neutrik Output	Impedance	Neutrik
1	5000 W	1 (1+2 bridged)	4 Ω	
	5000 W	3 (3+4 bridged)	4 Ω	

4.4.3 THE24/32 SUB PRO PS – 10.000 W

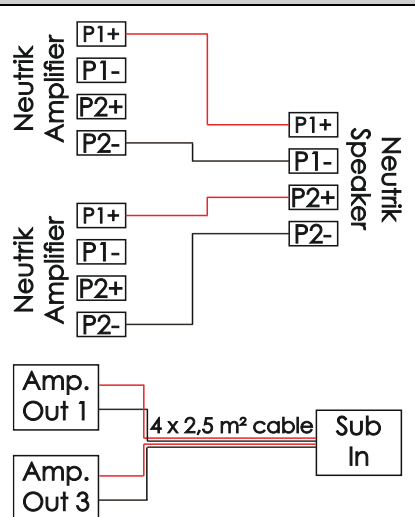
SUB1 **VC1**: 1 x 5000 W, Input 1 – Output 1

SUB1 **VC2**: 1 x 5000 W, Input 1 – Output 3

1 x XLR cable from AVR to DSP4

Snapshot Preset: Recall from Lib.: ..: **1x24/32SUB\_10kW**

Adjustment: Via **Mode EQ**

XLR Input	Power	Neutrik Output	Impedance	Neutrik
1	5000 W	1 (1+2 bridged)	VC1 / 4 Ω	
	5000 W	3 (3+4 bridged)	VC2 / 4 Ω	

#### 4.5 Further ASCENDO subwoofer combinations

XLR Input	Subwoofer	Neutrik Output	Power	Subwoofer Combination + Preset Name
1 3 4	The24/32 SUB The18/21 SUB The18/21 SUB	1 3 4	5000 W 2500 W 2500 W	1 x THE24/32 SUB, 2 x THE18 /21 SUB WF <b>Preset: 24/32+2x18/21_WF</b>
1	The24/32 SUB The18/21 SUB The18/21 SUB	1 3 4	5000 W 2500 W 2500 W	1 x THE24/32 SUB, 2 x THE18 /21 SUB Input 1 <b>Preset: 24/32+2x18/21_IN1</b>
1 3 4	THE18-2 SUB The18 SUB The18 SUB	1 3 4	5000 W 2500 W 2500 W	1 x THE18-2 SUB, 2 x THE18 SUB WF <b>Preset: 18-2+2x18_WF</b>
1	THE18-2 SUB The18 SUB The18 SUB	1 3 4	5000 W 2500 W 2500 W	1 x THE18-2 SUB, 2 x THE18 SUB Input 1 <b>Preset: 18-2+2x18_IN1</b>
1 2 3 4	THE15 SUB THE15 SUB THE15 SUB THE15 SUB	1 2 3 4	2500 W 2500 W 2500 W 2500 W	4 x THE15 SUB WF <b>Preset: 4x15SUB_2,5kw_WF</b>
1	THE15 SUB THE15 SUB THE15 SUB THE15 SUB	1 2 3 4	2500 W 2500 W 2500 W 2500 W	4 x THE15 SUB IN1 <b>Preset: 4x15SUB_2,5kw_IN1</b>
1 2 3	THE24/32 SUB THE15 SUB THE15 SUB	1 2 3	5000 W 2500 W 2500 W	1x24/32SUB, 2 x THE15 SUB WF <b>Preset: 24/32+2x15_WF</b>
1	THE24/32 SUB THE15 SUB THE15 SUB	1 2 3	5000 W 2500 W 2500 W	1x24/32SUB, 2 x THE15 SUB IN1 <b>Preset: 24/32+2x15_IN1</b>

## 5 Save presets / settings



For each DSP channel used, a system preset must be saved individually.



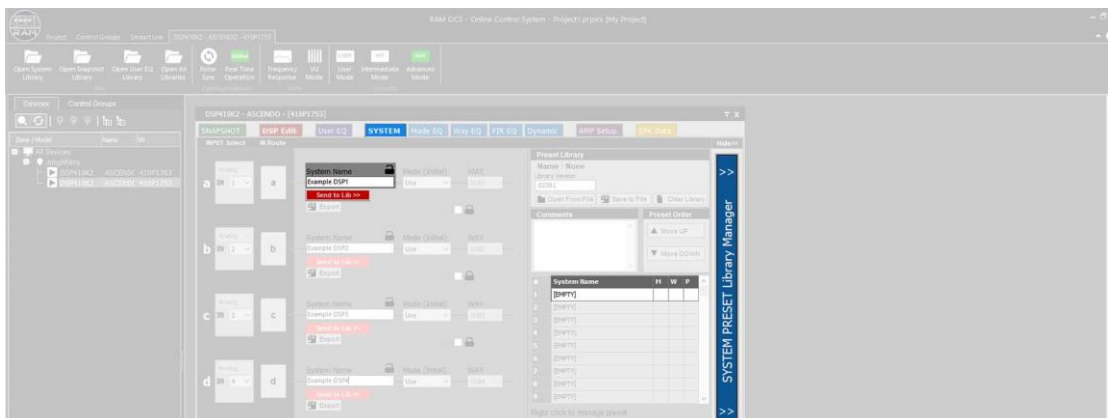
Single System Presets cannot be loaded individually. For this reason, it is necessary to save the combination of the active System Presets with a Snapshot Preset.

The saving of the DSP4-10K2 presets is done in 2 steps.

The first step is to save the individual preset for each DSP channel in the System menu.

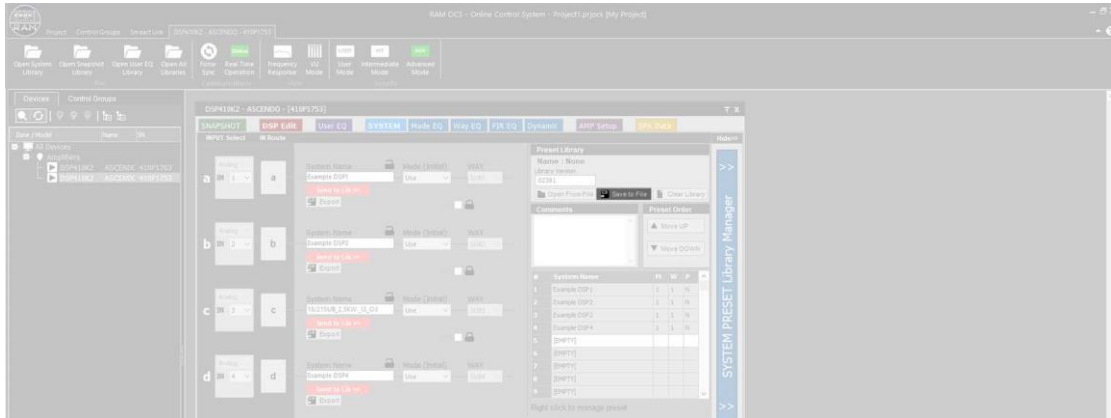
As a second step, the combination of the currently active system presets is saved in the Snapshot menu item.

- 1) Load the correct ASCENDO default Snapshot Preset for your ASCENDO subwoofer configuration.
- 2) Go to the Way EQ menu to make the frequency adjustments.  
Make the frequency adjustments in the Mode EQ menu when using the standard Snapshot preset 1 x 24/32\_10kW.
- 3) Go to System menu and confirm System Library Manager
- 4) Select the desired memory slot with a mouse click
- 5) Name the preset. Overwrite the displayed preset name with the new preset name.
- 6) Confirm Send to Lib
- 7) **Repeat step 4-6 for all used DSP channels**






8) Confirm Save to File to save the SYSTEM PRESET library to your hard drive.



9) Go to SNAPSHOT menu

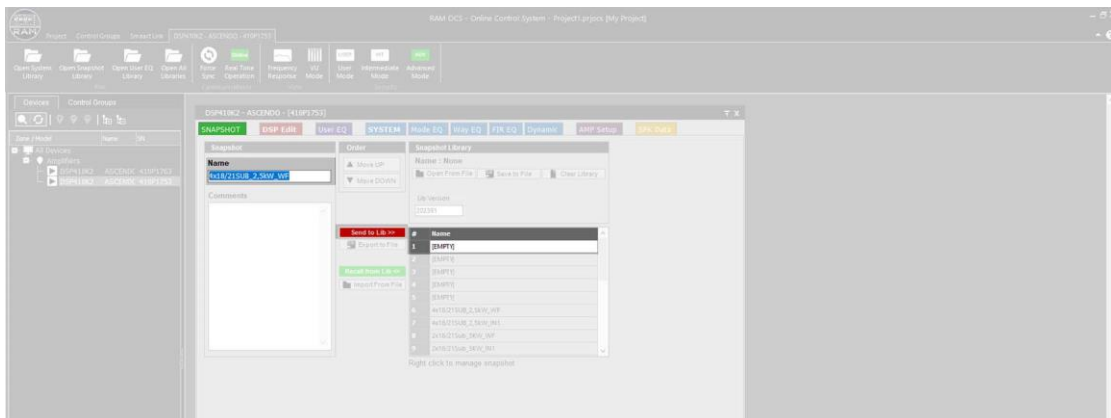


**Do not confirm Recall from Lib. This will activate other System Presets.**

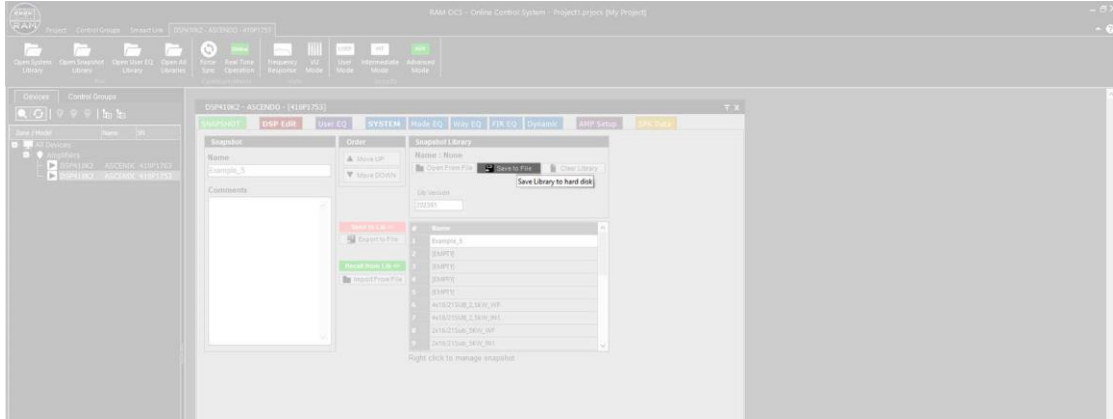
10) Select the desired memory slot with a mouse click.

10) Name the preset. Overwrite the displayed preset name with the new preset name.

11) Confirm Send to Lib

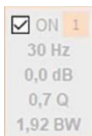
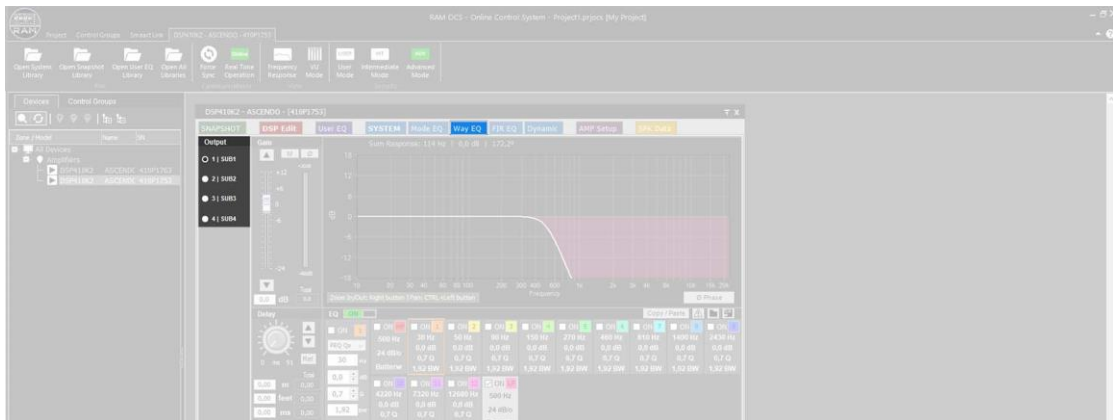


12) Confirm Save to File to save the snapshot library to your hard drive.



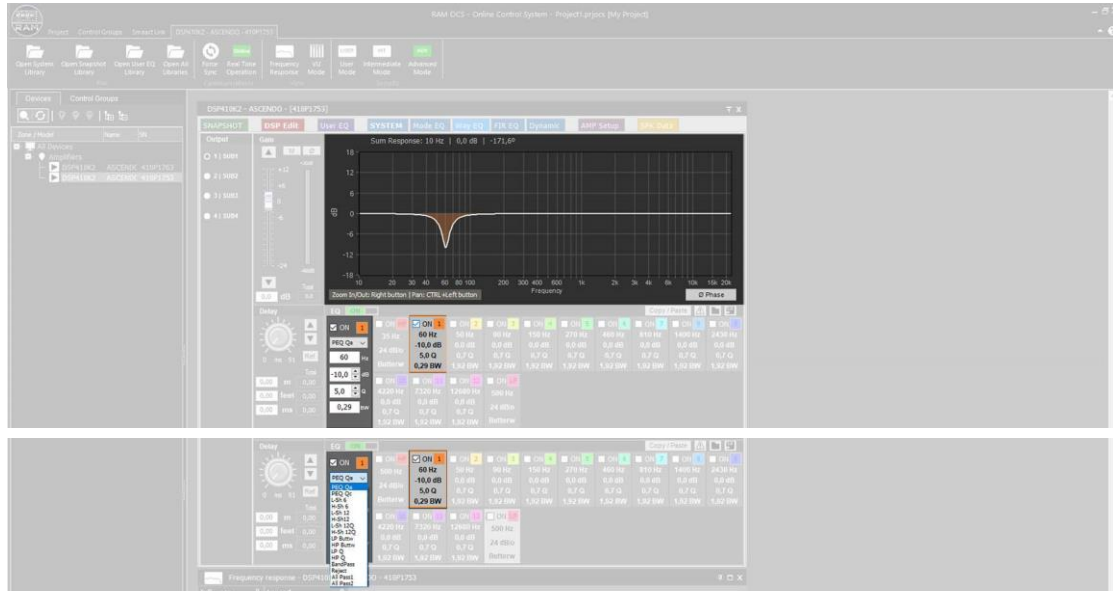
## 6 Subwoofer adjustments

- 1) Load the correct ASCENDO default Snapshot Preset for your ASCENDO subwoofer configuration.
- 2) Go to Way EQ menu
- 3) Click on the output channel you want to adjust in the left column.

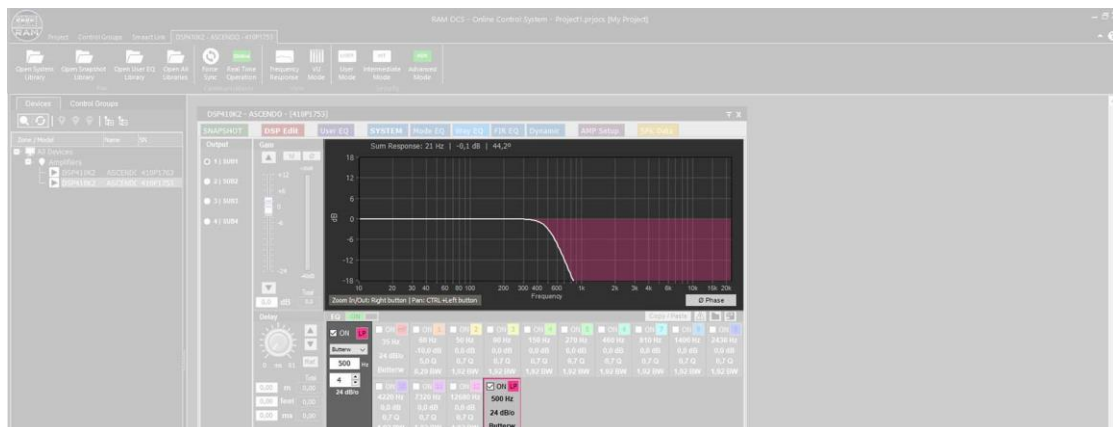


- 4) Click on the white box to activate the filter.

5) Select the desired filter type and enter the values for Hz, dB and Q.



6) Make LPF settings exclusively on the last preset.

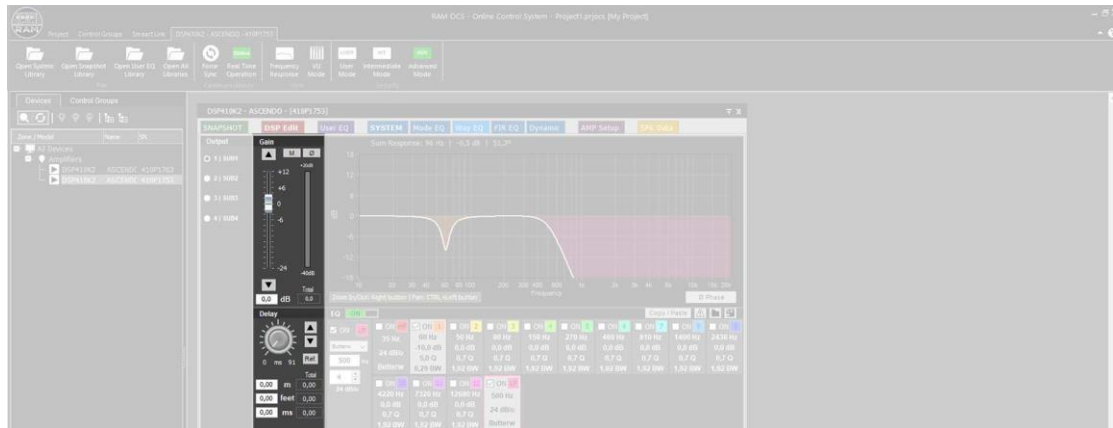


6) Make HPF settings exclusively on the first preset.



7) Further functions in the Way EQ menu are

- Gain
- Delay
- Phase Inversion
- Mute



8) save your settings (chapter 5).