AMERICAN AUDIO

LSM240 LSM480

Featuring:

Digital loudspeaker management system

Quick Start and Reference Guide

8/09

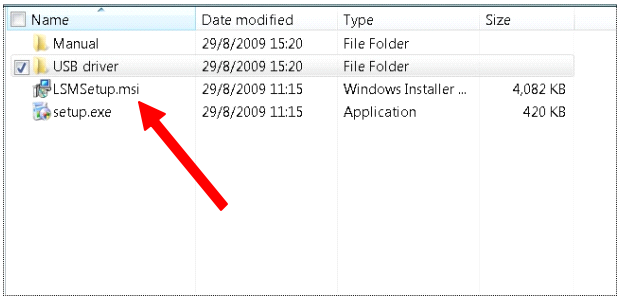
LOADING THE SOFTWARE

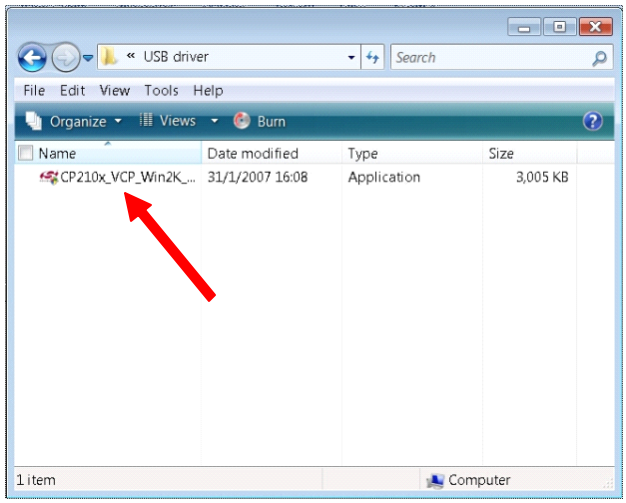
There are two files on the disk that need to be loaded prior to connecting the LSM series.

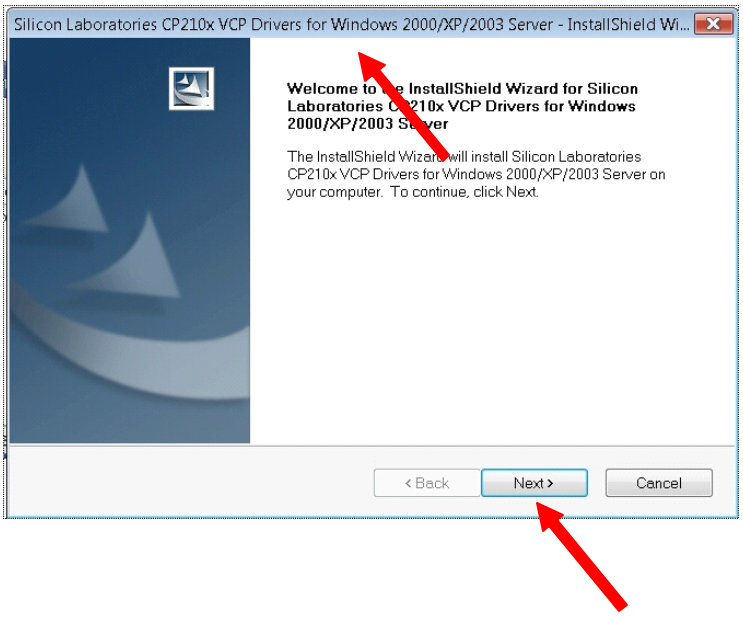
- setup.exe (v1.01)
- USB driver (CP210x USB to UART to Controller - USB\CP210x_VCP_Win2K_XP_S2K3.exe)

FOLLOW THE STEPS BELOW

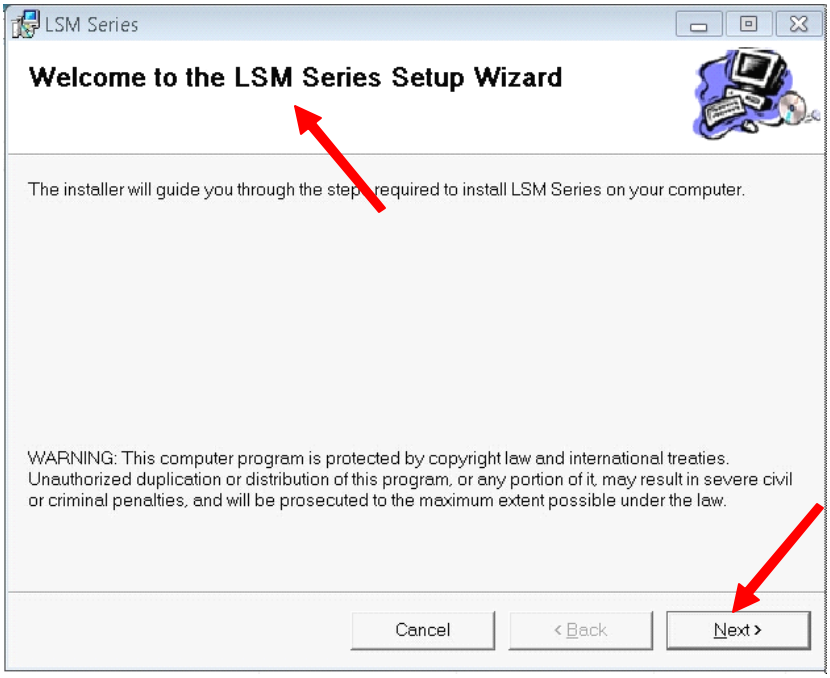
1. Open the USB driver folder and click on CP210x_VCP_Win2K_XP_S2K3.exe. Follow the Silicon CP210x prompt wizard.





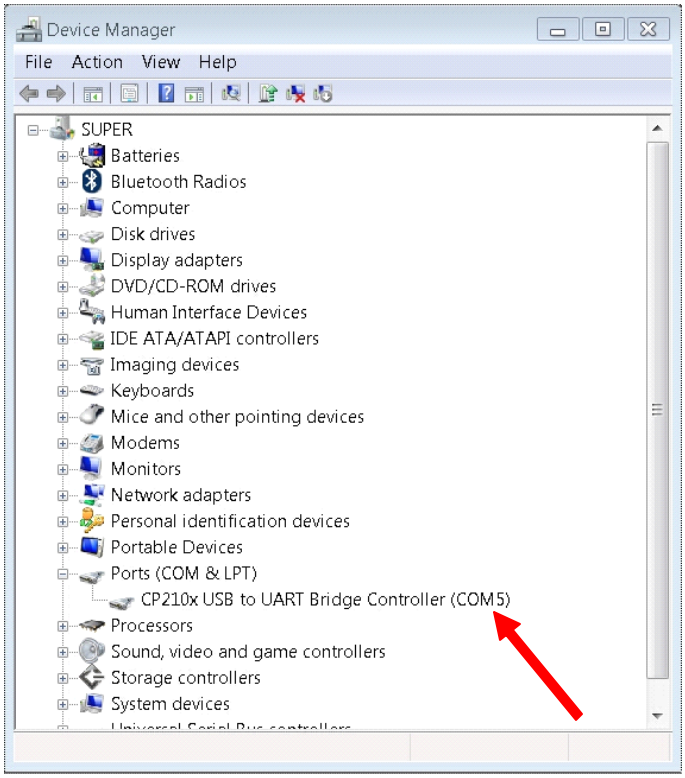


2. From the CD click on setup.exe file. Follow the wizard prompts until finished.

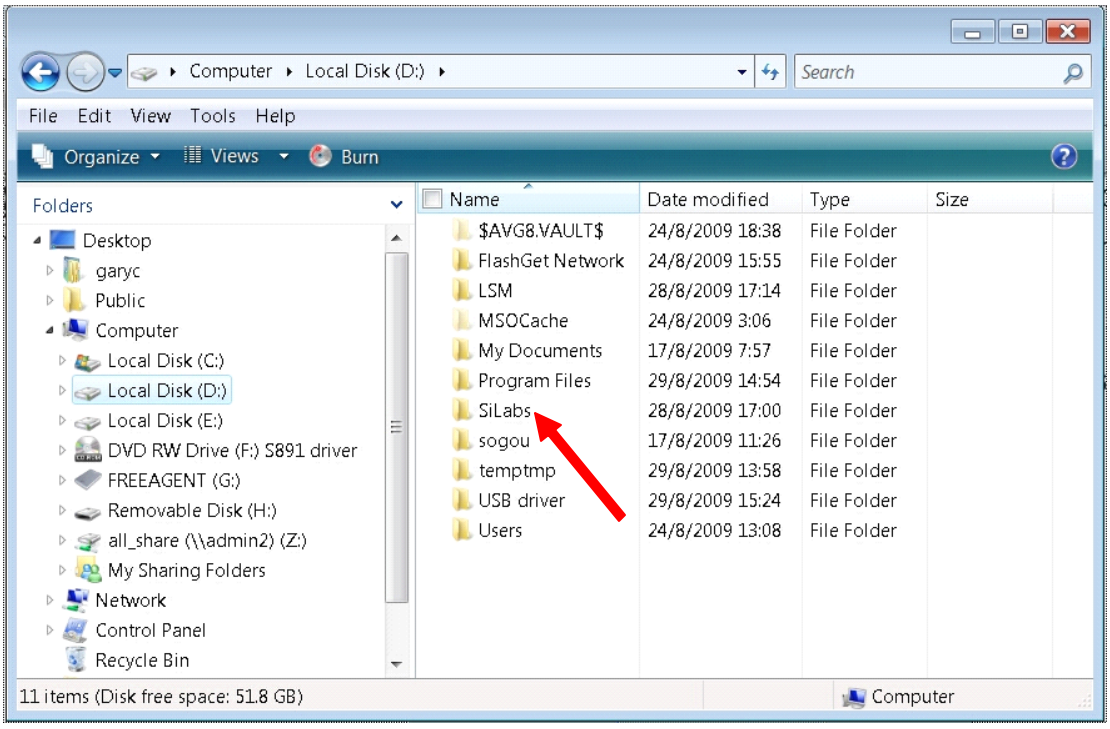


3. After both programs are installed you need to find out which COM Port in your computer is assigned to use with LSM controller. Connect a USB cable from the controller to your computer, turn on the power, Note: A prompt on your computer should pop up and say "New USB Device Found". Click on it and tell it to locate the USB driver automatically. After the computer matches the computer to the USB driver it must find which COM Port it was assigned to. Now you may find the red LED next to the USB connector on the device should be on.
   Note: If the controller is not connected to your computer, it will not indicate a COM Port

4. Finding the assigned COM Port. Follow these steps from your Windows desk top screen.
   1. Start, 2. Control Panel, 3. System, 4.Hardware, 5. Device Manager, 6. Scroll to "Ports (COM & LPT). Click on the "+" sign and listed should be "CP210x USB to UART to Controller", followed by the assigned COM Port number. In this case it was COM5.



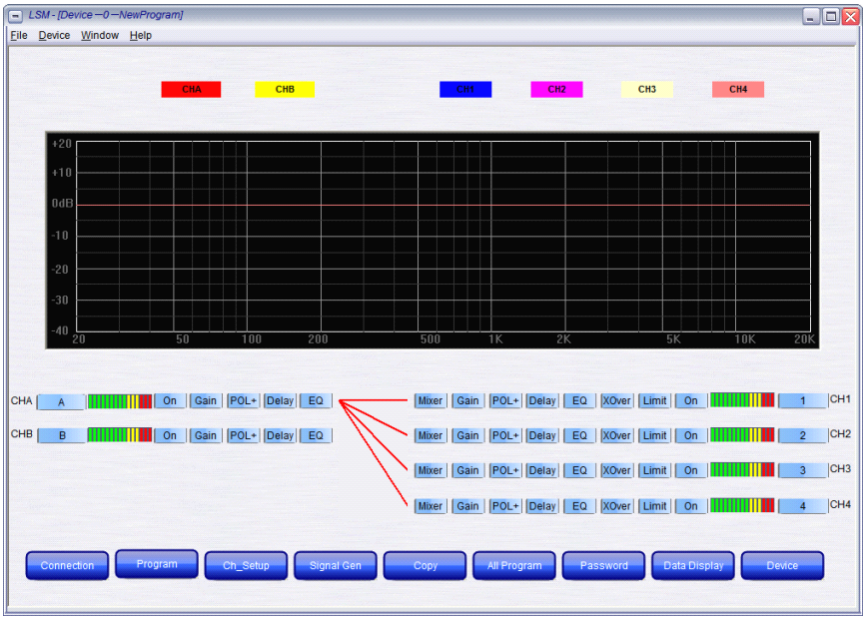
NOTE: In case the CP210x driver is not installed successfully, please re-install the driver or right click the CP210x, and select update driver software and browse to driver containing folder by default is under c:\ (or d:\ depending where you extract to) Silabs\MCU\CP210x\Windows_2KXP_S2K3 and click OK to install the driver again.



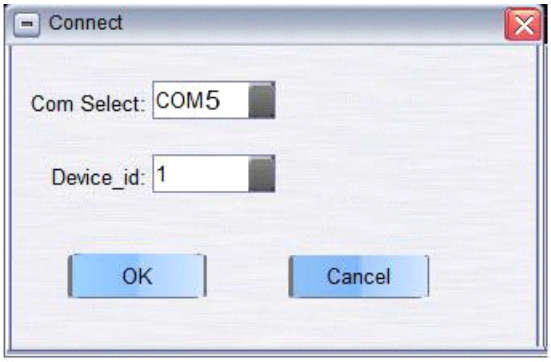
5. After you have located the COM Port you can open the LSM.exe control software. Go to Start, Programs, LSM Series, LSM.

6. When the LSM control software is open it should look like the following

7. Click on the LSM240 or LSM480 or click on the menu bar, Device, and choose either LSM240 or LSM480 to access the main control GUI.
Note: the main difference between LSM240 and LSM480 are just the number of Input and Output channels.

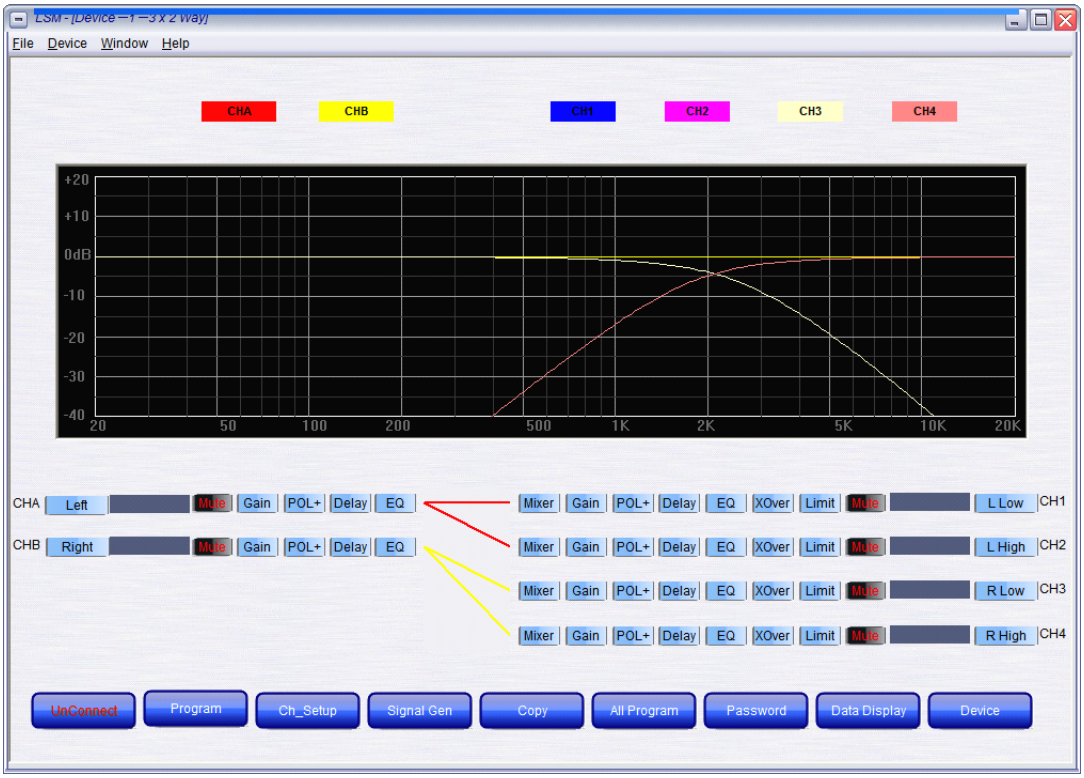


8. Connect to the device, click on the Connection button at the bottom left and a new menu pop up. Assign the device COM Port number that's given in step 4 (here in this case is COM5) and then click OK to connect. Leave the Device_id to 1 assuming your controller is assigned to Device_id to 1, otherwise you have to select match up id.



Once the correct COM Port and Device ID are selected , click OK and Connecting menu will pop up and communication between software and controller are built successfully.

GUI of LSM controller software



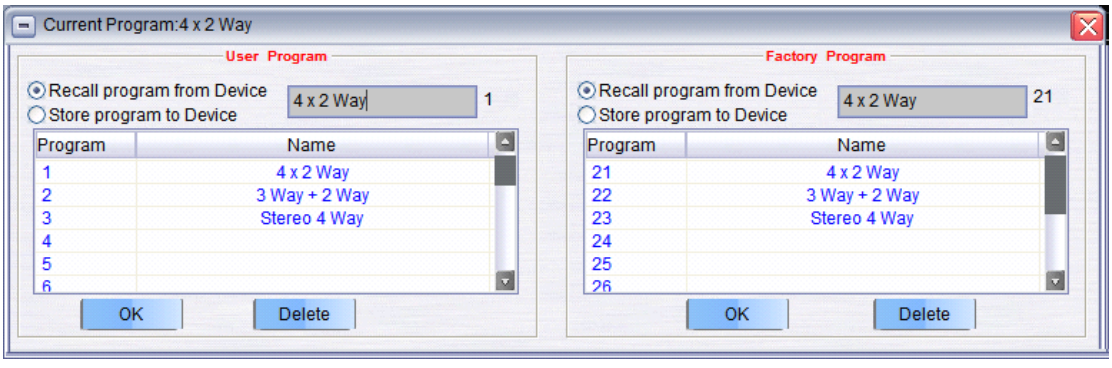
Using the software

From the bottom of the GUI, there are 9 menu buttons:-

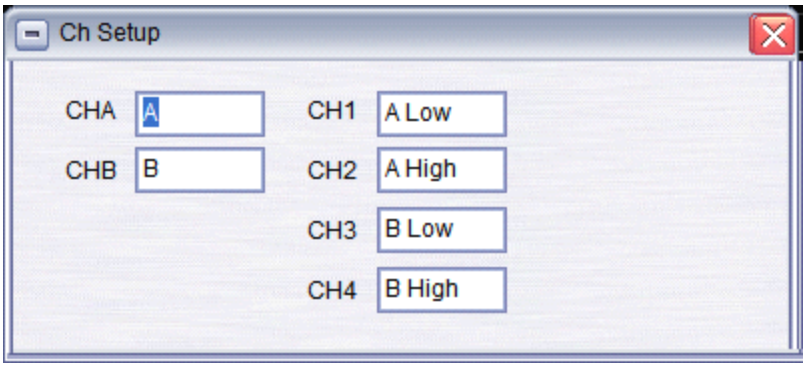
1. **Connection** – choose the COM Port and the Device ID in order to with connect to the controller

2. **Program** – user can store up to 30 programs to and from PC and controller

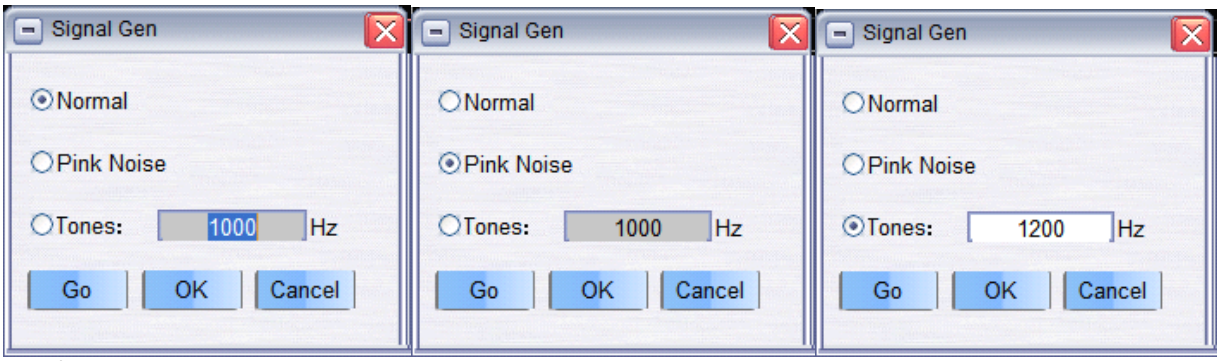
   User Program – user can store to PC or recall own program to and from controller (1-20 prog.)
   Factory Program – extra user space (21-30 prog.)



3. **Ch_Setup** – Custom Name can be assigned to each Channel input and output.

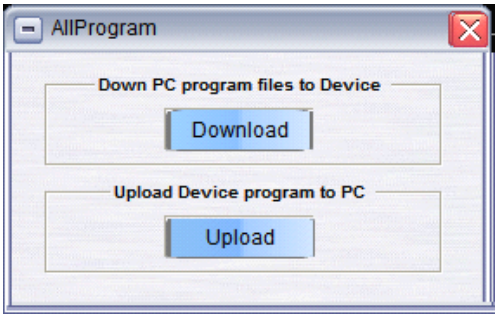


4. **Signal Gen** – Signal Generator with Normal, Pink Noise and Tones to help best system setup
By default all of the output channels can generate signals

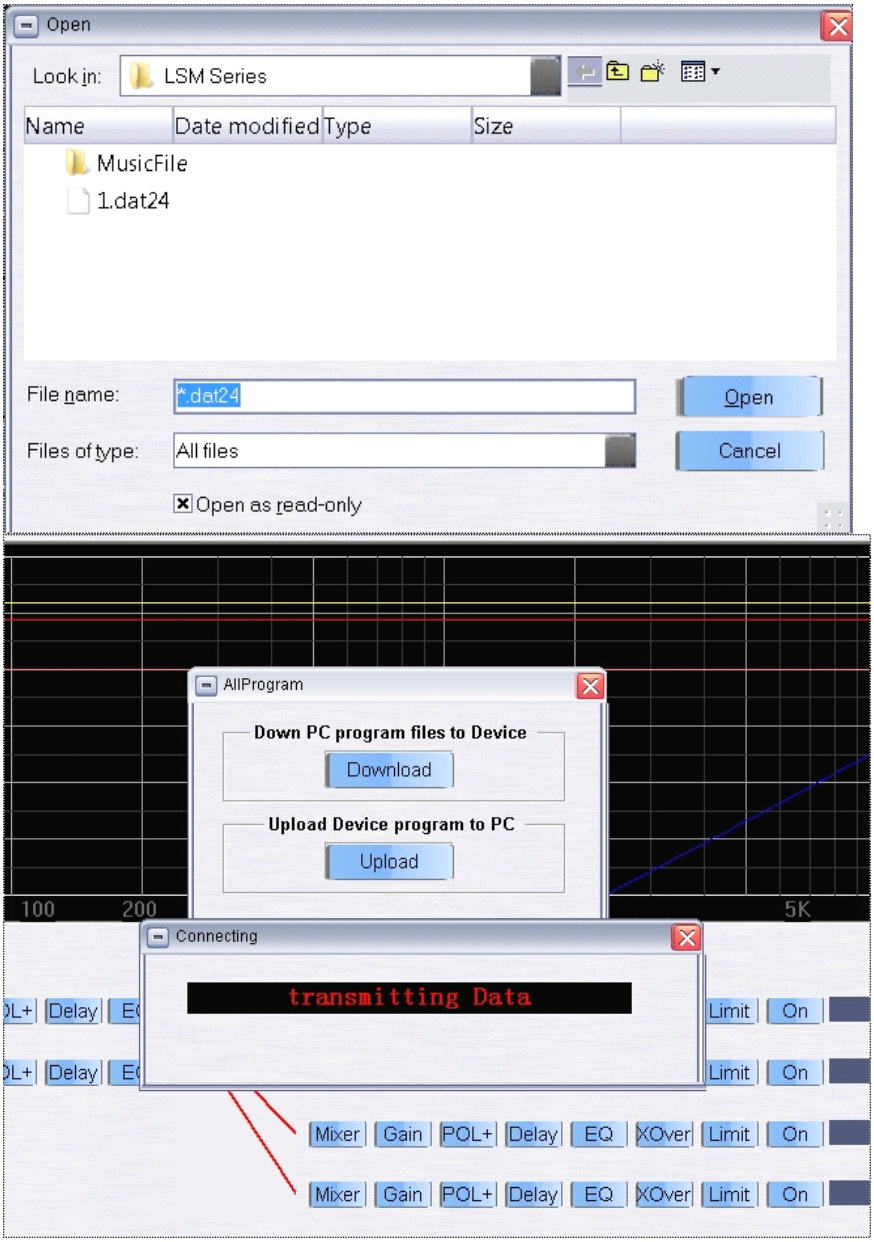


5. **Copy** – copy channel's setting from one channel to the others

6. **All Program** – Download stored programs from PC to controller. Or upload programs from controller and store in PC.



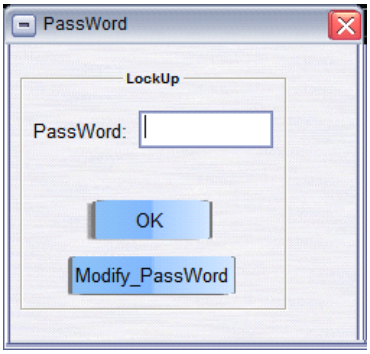
Click on **Download**, and select the pre-stored programs. A Transmitting Data menu popup, when it closes. Programs are download successfully.



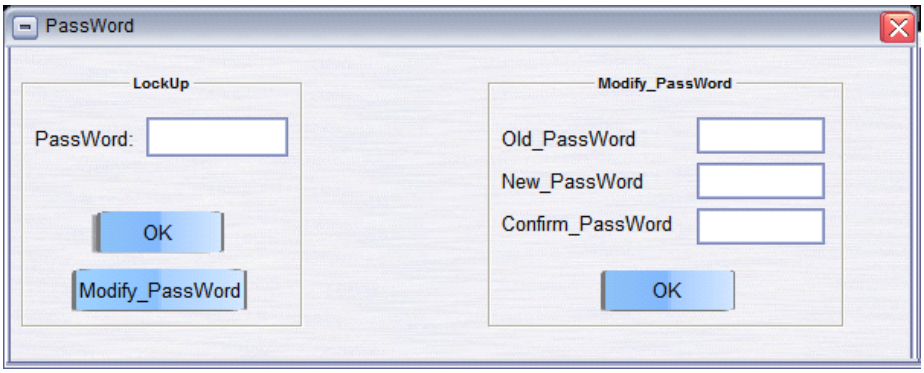
Click on **Upload** button, data is uploading to PC. Choose a file name and location where you want to save and click save

7. **Password** – Lock up the control software to prevent undesired changes in the setup. After type in the password, click OK in the popup menu to lock the software. To Unlock, type in the password.

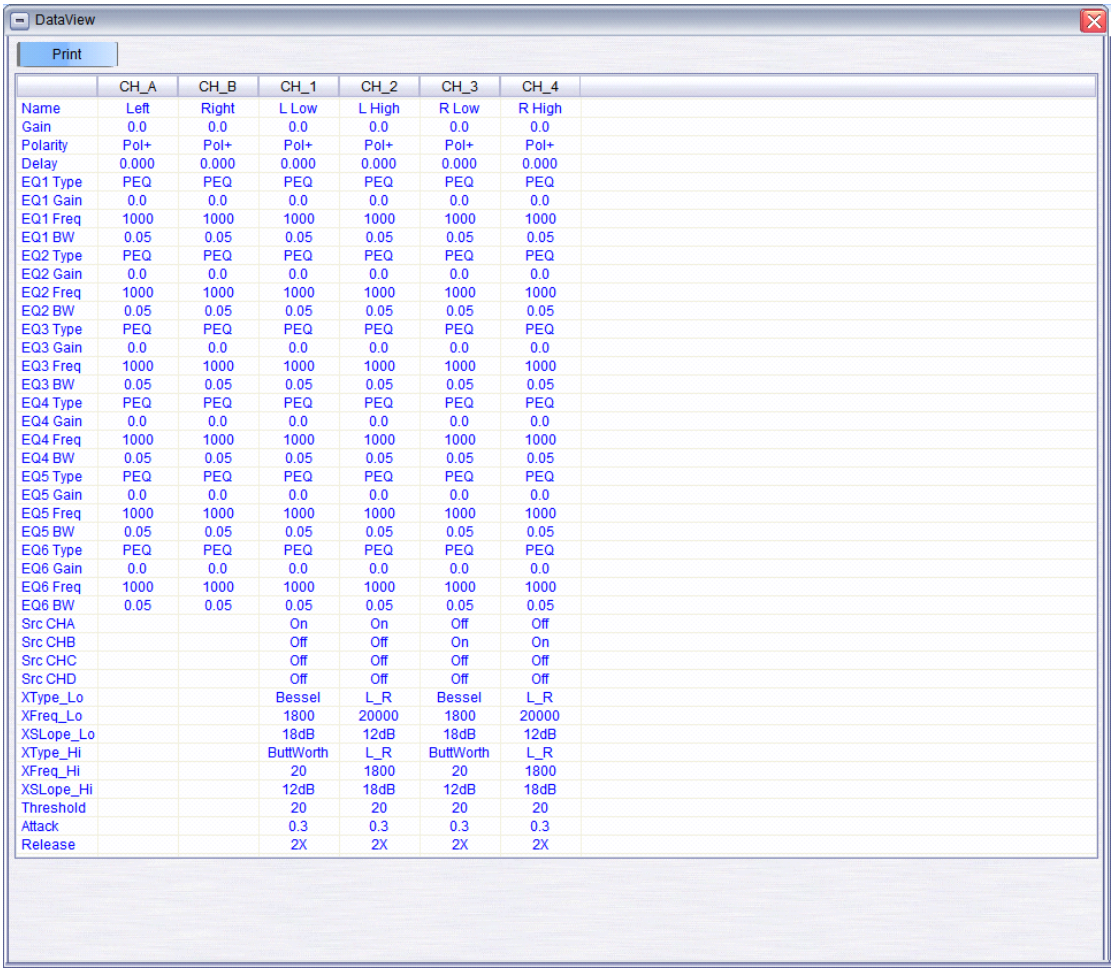
NOTE: the default password is 1 and universal password for the controller or control software is 666666.



You can change your password by click on Modify_PassWord.

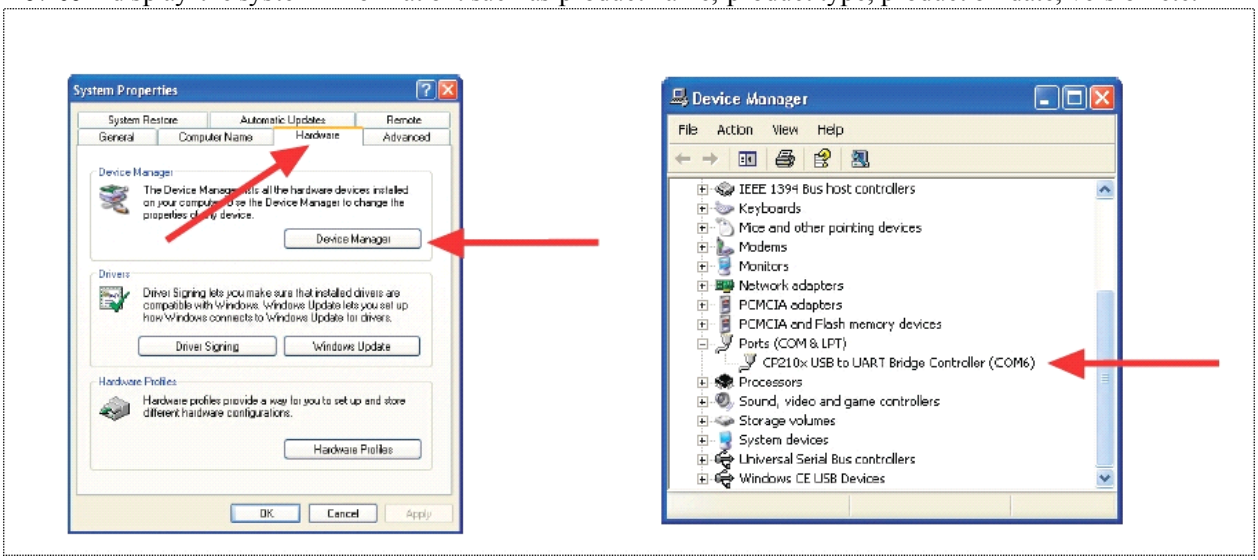


8. Data Display – display or print the complete setup parameters or configurations.



	CH_A	CH_B	CH_1	CH_2	CH_3	CH_4
Name	Left	Right	L Low	L High	R Low	R High
Gain	0.0	0.0	0.0	0.0	0.0	0.0
Polarity	Pol+	Pol+	Pol+	Pol+	Pol+	Pol+
Delay	0.000	0.000	0.000	0.000	0.000	0.000
EQ1 Type	PEQ	PEQ	PEQ	PEQ	PEQ	PEQ
EQ1 Gain	0.0	0.0	0.0	0.0	0.0	0.0
EQ1 Freq	1000	1000	1000	1000	1000	1000
EQ1 BW	0.05	0.05	0.05	0.05	0.05	0.05
EQ2 Type	PEQ	PEQ	PEQ	PEQ	PEQ	PEQ
EQ2 Gain	0.0	0.0	0.0	0.0	0.0	0.0
EQ2 Freq	1000	1000	1000	1000	1000	1000
EQ2 BW	0.05	0.05	0.05	0.05	0.05	0.05
EQ3 Type	PEQ	PEQ	PEQ	PEQ	PEQ	PEQ
EQ3 Gain	0.0	0.0	0.0	0.0	0.0	0.0
EQ3 Freq	1000	1000	1000	1000	1000	1000
EQ3 BW	0.05	0.05	0.05	0.05	0.05	0.05
EQ4 Type	PEQ	PEQ	PEQ	PEQ	PEQ	PEQ
EQ4 Gain	0.0	0.0	0.0	0.0	0.0	0.0
EQ4 Freq	1000	1000	1000	1000	1000	1000
EQ4 BW	0.05	0.05	0.05	0.05	0.05	0.05
EQ5 Type	PEQ	PEQ	PEQ	PEQ	PEQ	PEQ
EQ5 Gain	0.0	0.0	0.0	0.0	0.0	0.0
EQ5 Freq	1000	1000	1000	1000	1000	1000
EQ5 BW	0.05	0.05	0.05	0.05	0.05	0.05
EQ6 Type	PEQ	PEQ	PEQ	PEQ	PEQ	PEQ
EQ6 Gain	0.0	0.0	0.0	0.0	0.0	0.0
EQ6 Freq	1000	1000	1000	1000	1000	1000
EQ6 BW	0.05	0.05	0.05	0.05	0.05	0.05
Src CHA			On	On	Off	Off
Src CHB			Off	Off	On	On
Src CHC			Off	Off	Off	Off
Src CHD			Off	Off	Off	Off
XType_Lo			Bessel	L_R	Bessel	L_R
XFreq_Lo			1800	20000	1800	20000
XSLope_Lo			18dB	12dB	18dB	12dB
XType_Hi			ButtWorth	L_R	ButtWorth	L_R
XFreq_Hi			20	1800	20	1800
XSLope_Hi			12dB	18dB	12dB	18dB
Threshold			20	20	20	20
Attack			0.3	0.3	0.3	0.3
Release			2X	2X	2X	2X

9. Device – display the system information: such as product name, product type, production date, version etc.



Introduction of main User Interface

INPUT CHANNEL

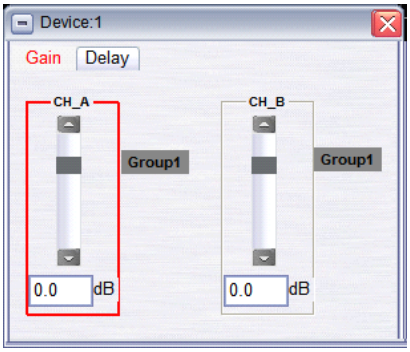
1.

or

Normal or Mute input channel

2.

Input gain control. You can click on the Group1 buttons to synchronize the level setting

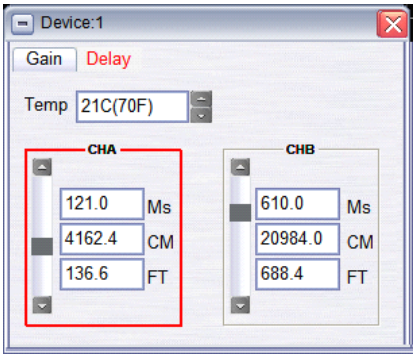


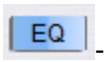
3.

Polarity setting + or –

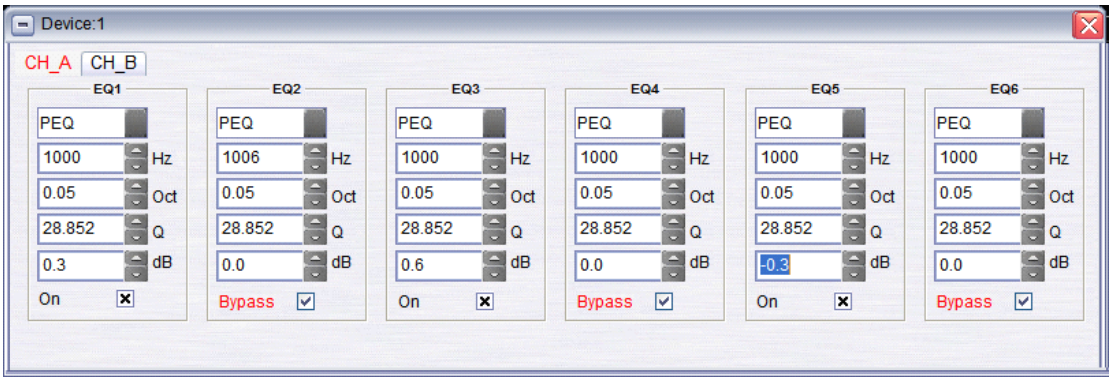
4.

Delay

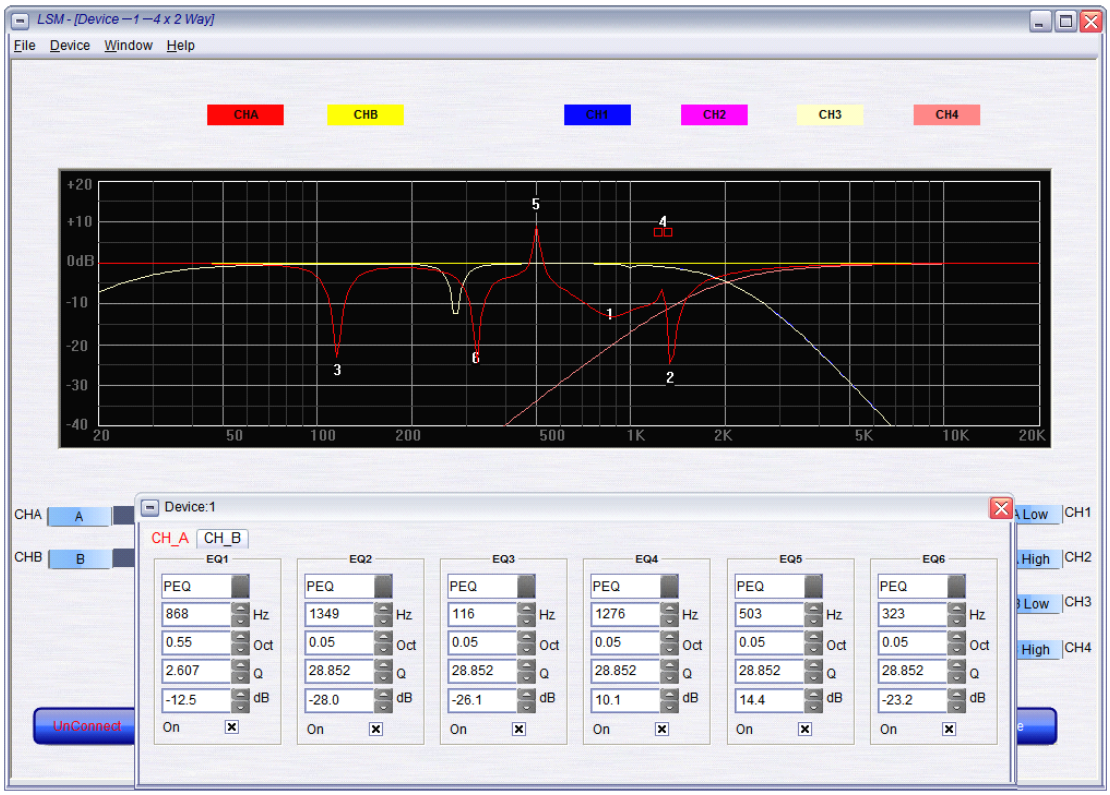


5. 

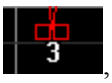
- Input Equalizer



Beside you can manually set up the EQ parameters, you can drag the EQ's curve to make direct changes to your desire setting.

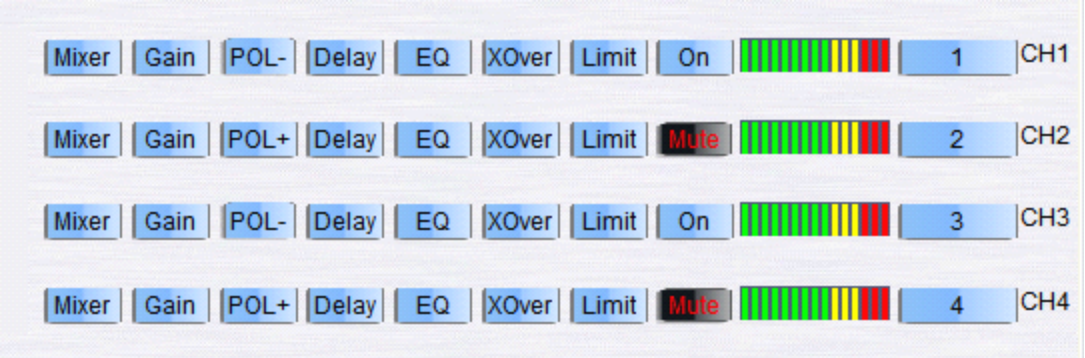


Pointing the mouse above the graphical display curve of EQ1, 2, 3, 4, 5, 6 like

or 

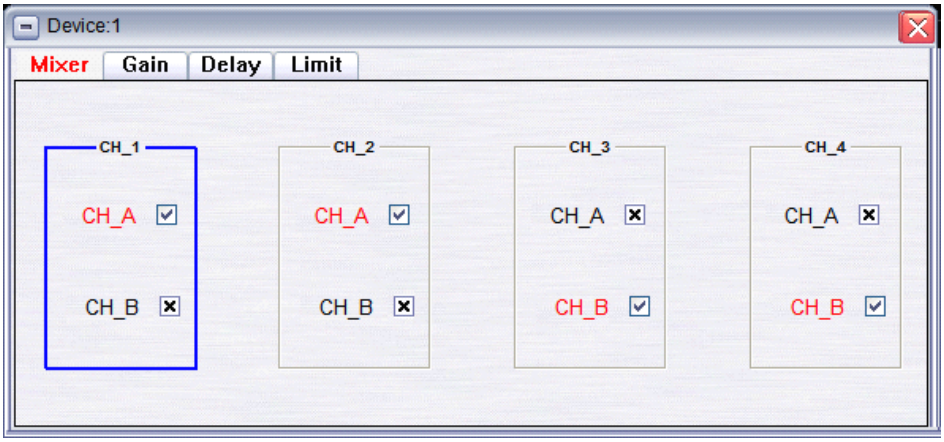
, you can drag your mouse to make changes. The changes will effect instantly to the controller or Input Equalizer menu.

OUTPUT CHANNEL



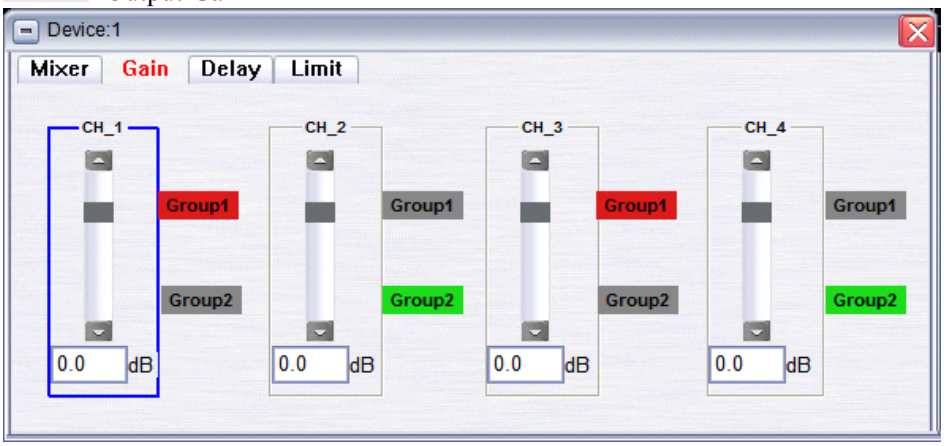
1.

- Mixer



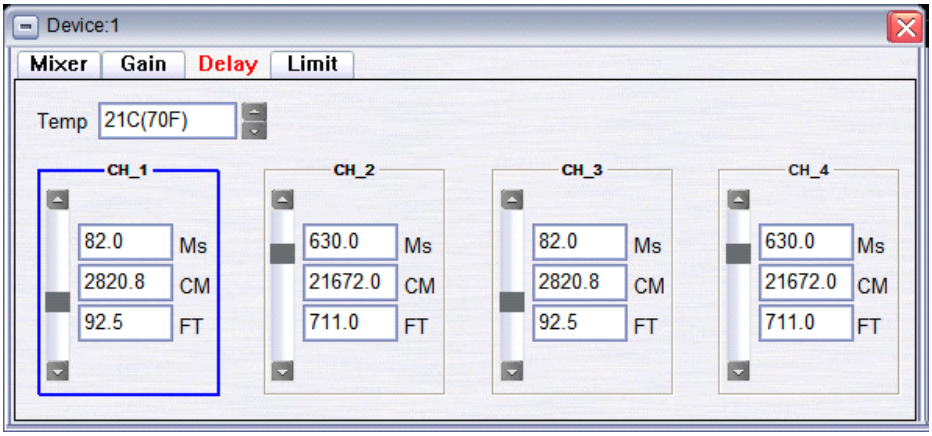
2.

- Output Gain

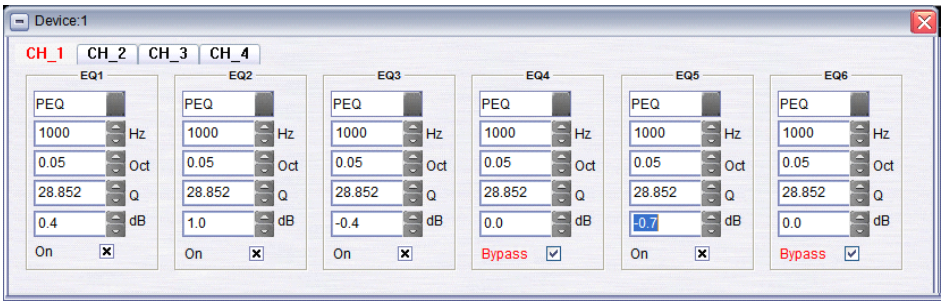


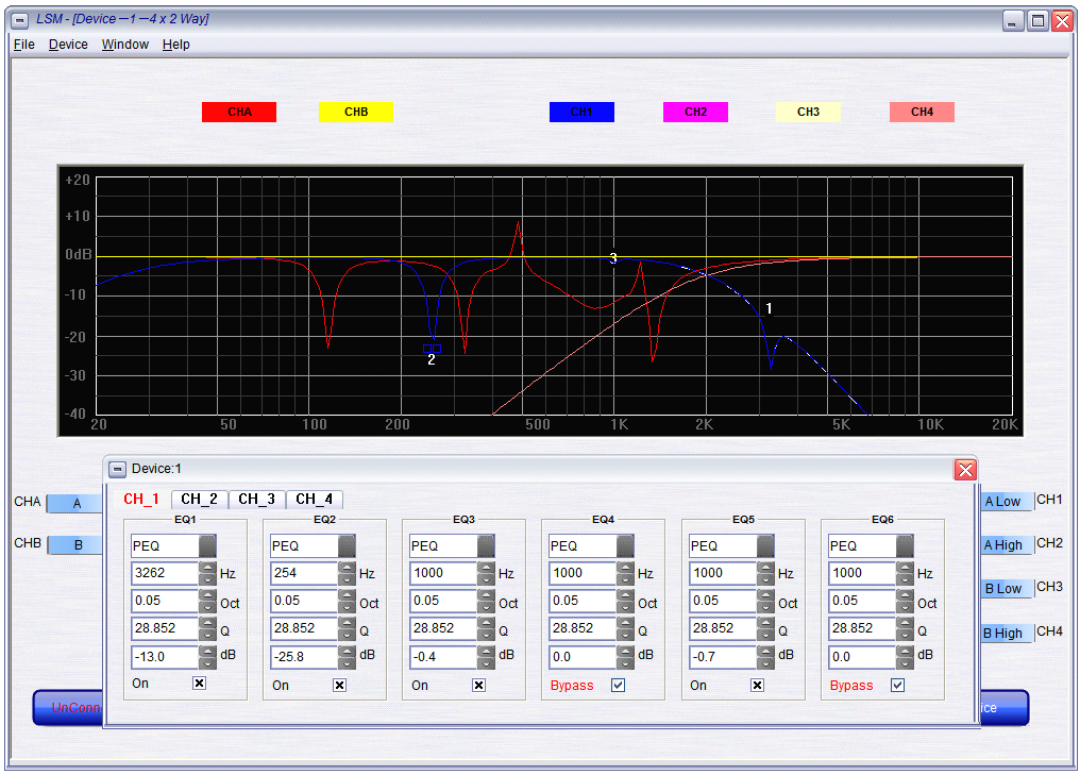
Setup the linkage for different Output channels for synchronize level adjusting.

3. Delay - Output Delay

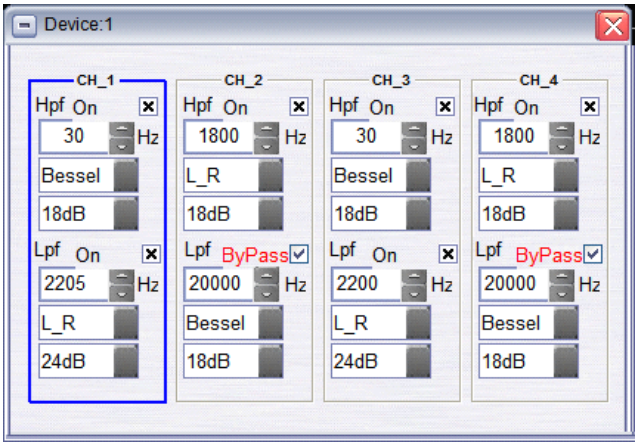


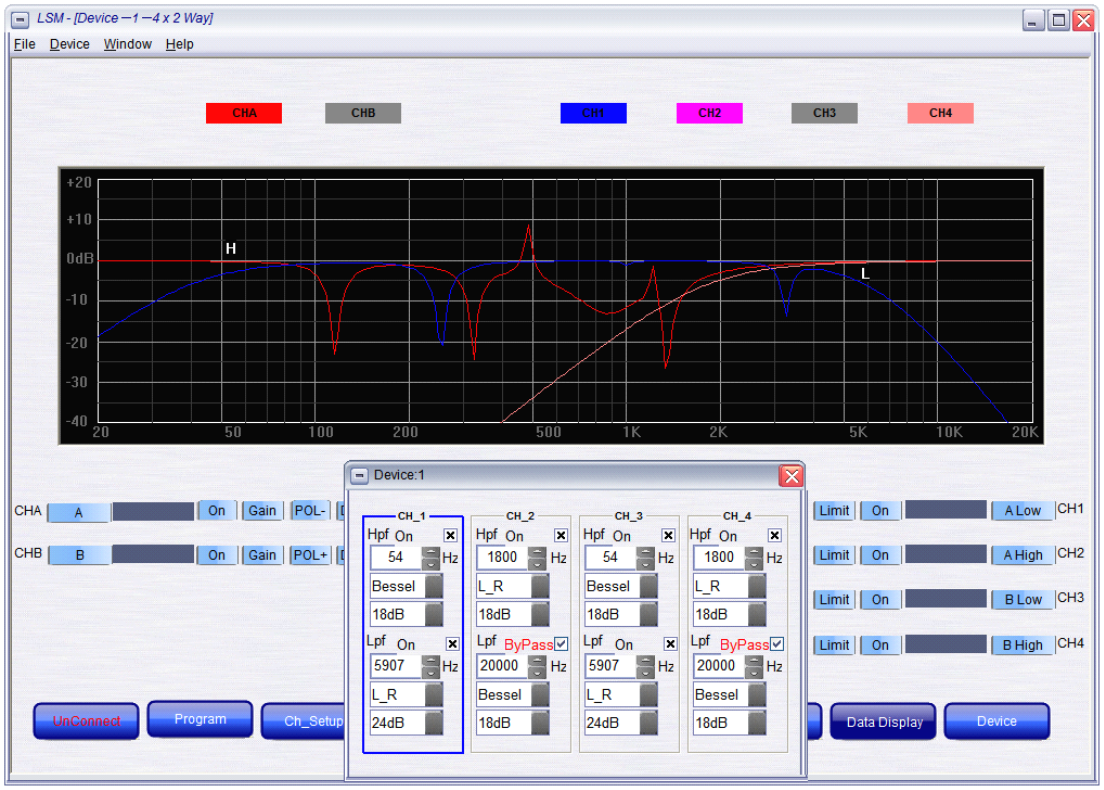
4. EQ -Output Equalizer





5. XOver - Crossover setup for Output channels. You can adjust the crossover point by dragging the mouse on the main graphical display

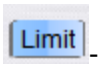




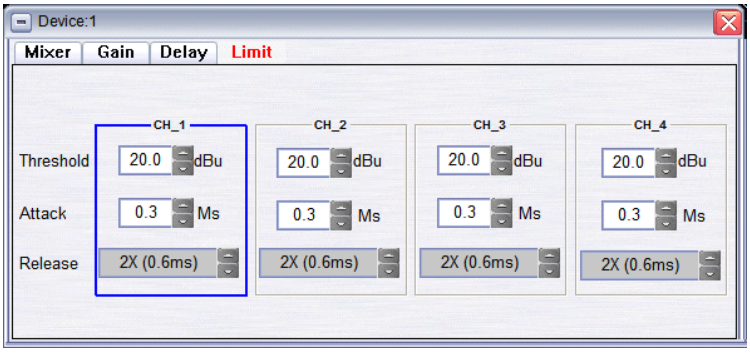
Dragging the mouse on

or

to adjust the desire crossover point

6. 

- Output Limiter, to set up the Threshold, Attack and Release time for output channel



7.

or

Normal or Mute output channel

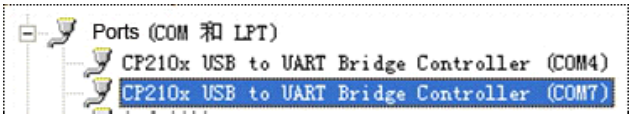
LMS480 GUI control software

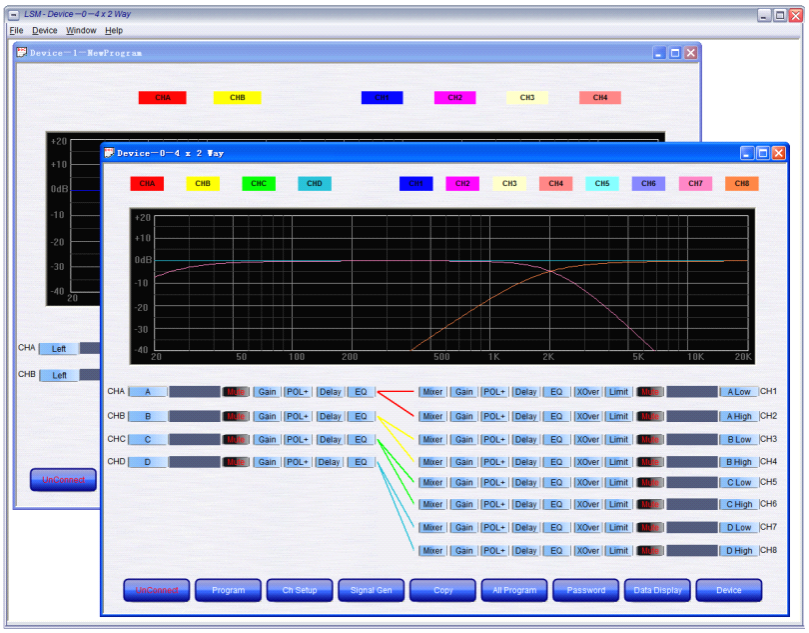
Control software GUI is basically the same as LSM240, just with more input and output channels

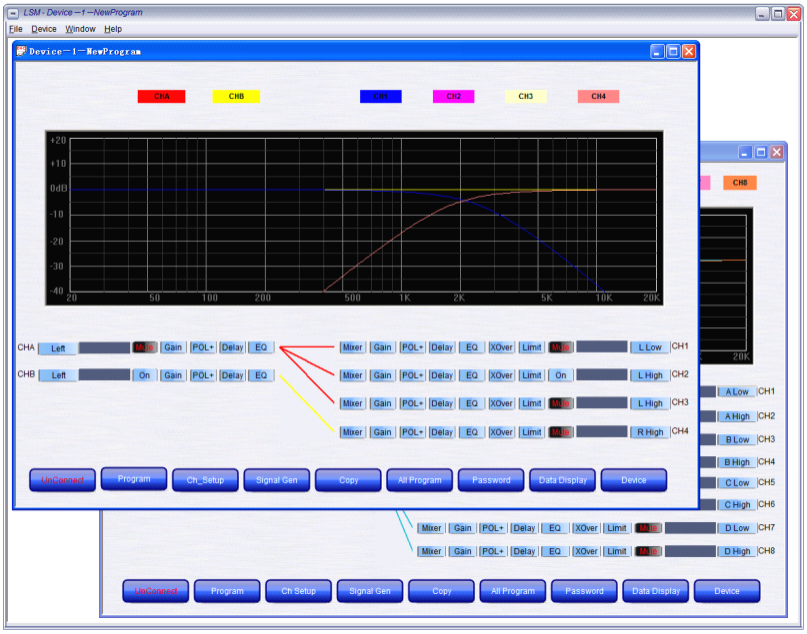
Connect to Multiple Processors

It's possible to connect and control multiple controllers by copy the whole installed LSM directory to a new folder and click on the LSM.exe to start a new control software GUI. First we need to plug in USB cable to a new USB port of your PC or hub and Windows will automatic search for the CP210x driver and assign a new COM port. Then we can open multiple GUI to control multiple controllers.

Note: do not forget to assign different Device IDs for each controller.







Specification changes without further notices