



ENGLISH Operation Manual

Other languages can be downloaded from: WWW.SYNQ-AUDIO.COM





Version: 1.0



EN - DISPOSAL OF THE DEVICE

Dispose of the unit and used batteries in an environment friendly manner according to your country regulations.

FR - DÉCLASSER L'APPAREIL

Débarrassez-vous de l'appareil et des piles usagées de manière écologique Conformément aux dispositions légales de votre pays.

NL - VERWIJDEREN VAN HET APPARAAT

Verwijder het toestel en de gebruikte batterijen op een milieuvriendelijke manier conform de in uw land geldende voorschriften.

DU - ENTSORGUNG DES GERÄTS

Entsorgen Sie das Gerät und die Batterien auf umweltfreundliche Art und Weise gemäß den Vorschriften Ihres Landes.

ES - DESHACERSE DEL APARATO

Reciclar el aparato y pilas usadas de forma ecologica conforme a las disposiciones legales de su pais.

PT - COMO DESFAZER-SE DA UNIDADE

Tente reciclar a unidade e as pilhas usadas respeitando o ambiente e em conformidade com as normas vigentes no seu país.

OPERATION MANUAL

Thank you for buying this SYNQ[®] product. To take full advantage of all possibilities, please read these operating instructions very carefully.

FEATURES

- Professional digital loudspeaker management processor.
- Used to tune your loudspeakers to perfection!
- 4 inputs (Digital AES + analog) and 8 outputs with full matrix routing capability
- Direct access to 3 programmable default settings
- The 4 inputs have:
 - 8 Band equalizer (parametric, high shelf, low shelf)
 - Delay (adjustable up to 1000ms (= 346m)
 - Noise gate
 - Phase reverse
 - Gain / mute
- All 8 outputs have:
 - Flexible source selection
 - Crossover (Linkwitz/Riley, Bessel, Butterworth)
 - 6 Band equalizer (parametric, high shelf, low shelf)
 - Delay (adjustable up to 1000ms [= 346m]
 - Limiter
 - Phase reverse
 - Gain / mute
- 30 different speaker setups can be stored in the memory
- If needed, the unit can be locked via a password
- Easy parameter setup via PC:
 - Via USB: easy setup but cable length limited to 5m
 - Via LAN: long distance control for max. 250 units.
 - Via WiFi: wireless control
- · Complete Windows® software included with visually attractive and easy setup capabilities
- Clear LCD display. Balanced XLR in/outputs

BEFORE USE

- Before you start using this unit, please check if there's no transportation damage. Should there be any, do not use the device and consult your dealer first.
- **Important:** This device left our factory in perfect condition and well packaged. It is absolutely necessary for the user to strictly follow the safety instructions and warnings in this user manual. Any damage caused by mishandling is not subject to warranty. The dealer will not accept responsibility for any resulting defects or problems caused by disregarding this user manual.
- Keep this booklet in a safe place for future consultation. If you sell the fixture, be sure to add this user manual.
- To protect the environment, please try to recycle the packing material as much as possible.

Check the contents:

Check that the carton contains the following items:

- User manual
- DLP-48W unit
- Power cable

- USB cable
- UTP cable
- WiFi Antenna
- CDROM with PC software (can also be downloaded from our website)

SAFETY INSTRUCTIONS:





CAUTION: To reduce the risk of electric shock, do not remove the top cover. No user-serviceable parts inside. Refer servicing to qualified service personnel only.

The lightning flash with arrowhead symbol within the equilateral triangle is intended to alert the use or the presence of un-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within the equilateral triangle is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying this appliance.

This symbol means: indoor use only

This symbol means: Read instructions

- This appliance is intended for use in moderate climates.
- To prevent fire or shock hazard, do not expose this appliance to rain or moisture.
- To avoid condensation to be formed inside, allow the unit to adapt to the surrounding temperatures when bringing it into a warm room after transport. Condense sometimes prevents the unit from working at full performance or may even cause damages.
- This unit is for indoor use only.
- Don't place metal objects or spill liquid inside the unit. No objects filled with liquids, such as vases, shall be placed on this appliance. Electric shock or malfunction may result. If a foreign object enters the unit, immediately disconnect the mains power.
- No naked flame sources, such as lighted candles, should be placed on the appliance.
- Don't cover any ventilation openings as this may result in overheating.
- Prevent use in dusty environments and clean the unit regularly.
- Keep the unit away from children.
- Inexperienced persons should not operate this device.
- Maximum save ambient temperature is 40°C. Don't use this unit at higher ambient temperatures.
- Minimum distances around the apparatus for sufficient ventilation is 5cm.
- Always unplug the unit when it is not used for a longer time or before you start servicing.
- The electrical installation should be carried out by qualified personal only, according to the regulations for electrical and mechanical safety in your country.
- Check that the available voltage is not higher than the one stated on the rear panel of the unit.
- The socket inlet shall remain operable for disconnection from the mains.
- The power cord should always be in perfect condition. Switch the unit immediately off when the power cord is squashed or damaged.
- Never let the power-cord come into contact with other cables!
- When the power switch is in OFF position, this unit is not completely disconnected from the mains!
- This CLASS I appliance must be connected to MAINS socket outlet with a protective earth connection in order comply with safety regulations.
- In order to prevent electric shock, do not open the cover. Apart from the mains fuse there are no user serviceable parts inside.
- Never repair a fuse or bypass the fuse holder. Always replace a damaged fuse with a fuse of the same type and electrical specifications!
- In the event of serious operating problems, stop using the appliance and contact your dealer immediately.
- Please use the original packing when the device is to be transported.
- Due to safety reasons it is prohibited to make unauthorized modifications to the unit.

ENGLISH

INSTALLATION GUIDELINES:

- Install the unit in a well-ventilated location where it will not be exposed to high temperatures or humidity.
- Placing and using the unit for long periods near heat-generating sources such as amplifiers, spotlights, etc. will affect its performance and may even damage the unit.
- The unit can be mounted in 19-inch racks. Attach the unit using the 4 screw holes on the front panel. Be sure to use screws of the appropriate size. (screws not provided) Take care to minimize shocks and vibrations during transport.
- When installed in a booth or flight case, please make sure to have good ventilation to improve heat evacuation of the unit.
- To avoid condensation to be formed inside, allow the unit to adapt to the surrounding temperatures when bringing it into a warm room after transport. Condense sometimes prevents the unit from working at full performance.

CLEANING THE APPLIANCE:

Clean by wiping with a polished cloth slightly dipped with water. Avoid getting water inside the unit. Do not use volatile liquids such as benzene or thinner which will damage the unit.

FUNCTIONS (FRONT)



1. LCD DISPLAY: shows the menu and all the parameters

2. NAVIGATION buttons:

- < BACK & NEXT > buttons:
- MENU button:
- ENTER button: used to confirm a setting
- BYPASS button:
- ESC button: this "escape" button can be used to leave the setting or menu
- 3. DEFAULT buttons:
- 4. PARAMETER buttons: used to modify the displayed parameters or to scroll through the menu options
- 5. **INPUT section:** displays the level of the 4 input channels. The buttons below are used to switch the channel ON or OFF. When long pressed, it opens the setting options for this channel in the display.
- 6. OUTPUT section: displays the level of the 8 output channels. The buttons below are used to switch the channel ON or OFF. When long pressed, it opens the setting options for this channel in the display.
- 7. USB connector: to connect the unit to a computer via an USB cable
- 8. WIFI antenna: used to connect the unit to a computer over WIFI

FUNCTIONS (rear)



- 9. POWER INPUT: connect the supplied mains cable to this input.
- 10. POWER SWITCH: used to switch the unit ON or OFF

- **11. VENTS:** these openings allow the unit to be properly cooled. Make sure these are not covered and clean them promptly
- **12. LAN connector:** to connect the unit to a computer via a LAN network
- 13. OUTPUTS: 8 channel outputs with balanced XLR connectors
- 14. INPUTS: 4 channel inputs with balanced XLR connectors REMARK: AES digital inputs can be used on the connectors A and C



PARAMETER SETTINGS ON THE UNIT

INPUT PARAMETERS

To enter the menu, long press for about 3 seconds the input channel button (5) of the channel you want to display.

INPUT CHANNEL NAME

- Press the input channel (A, B, C or D) button (5) for about 3 seconds
- Turn the first parameter knob (4) to change the digit
- Turn the second parameter knob (4) to go to the next (or previous) digit
- Once you are ready, press the ENTER (2) knob to confirm and save your setting

INPUT DELAY

- Press the input channel (A, B, C or D) button (5) for about 3 seconds
- Use the [<Back] or [Next>] to go to [Input Delay]
- Turn the first parameter knob (4) to modify the delay setting
- Turn the second parameter knob (4) to modify the delay setting with bigger steps
- The new setting will be stored automatically
- Once you are ready, press the ESCAPE knob (2) to leave the setting mode

INPUT POLARITY

- Press the input channel (A, B, C or D) button (5) for about 3 seconds
- Use the [<Back] or [Next>] to go to [Input Polarity]
- Turn the first parameter knob (4) to select [+Normal] or [-Invert]
- The new setting will be stored automatically
- Once you are ready, press the ESCAPE knob (2) to leave the setting mode

INPUT GAIN

- Press the input channel (A, B, C or D) button (5) for about 3 seconds
- Use the [<Back] or [Next>] to go to [Input Gain]
- Turn the first parameter knob (4) to modify the input gain
- The new setting will be stored automatically
- Once you are ready, press the ESCAPE knob (2) to leave the setting mode

Input A:Box_A Delay:0.0625ms 0.0216Meter 0.0709Feet

Input A:Box A

Press ENTER to save

Name:

Input A:Box_A Polarity:+Normal



<u>INPUT EQ</u>

Each channel can use up to 8 EQ settings. For each EQ, you can choose between:

- [PEQ] Parametric equalizer with Frequency (20Hz-20KHz), Gain (-30dB-+15dB) and Bandwidth settings.
 With this type of equalizer, you can select a frequency and boost or lower this frequency. With the
 - With this type of equalizer, you can select a frequency and boost or lower this frequency. With the bandwidth you make the selection of the frequency wider or more narrow.
- [Lo-S] Low shelf EQ with Frequency (20Hz-20KHz), Gain (-30dB-+15dB) and Slope settings. With this type of equalizer, you can select a frequency and boost or lower all the frequencies <u>below</u> this frequency. With the Slope you can adapt the steepness of you cut or boost (hard or smooth)
- [Hi-S] High shelf EQ with Frequency (20Hz-20KHz), Gain (-30dB-+15dB) and Slope settings With this type of equalizer, you can select a frequency and boost or lower all the frequencies <u>above</u> this frequency. With the Slope you can adapt the steepness of you cut or boost (hard or smooth)
- Press the input channel (A, B, C or D) button (5) for about 3 seconds
- Use the [<Back] or [Next>] to go to [Input EQ]
- Turn the first parameter knob (4) to select the type of EQ (parametric, lo-shelf or hi-shelf)
- Press [ENTER] to move to the parameter setting for this equalizer
- Turn the first parameter knob (4) to modify the Frequency
- Turn the second parameter knob (4) to modify the Gain
- Turn the third parameter knob (4) to modify the Bandwidth (or Slope)
- The new setting will be stored automatically
- Use the [<Back] or [Next>] to go to the other EQ's and parameters for this channel
- Once you are ready, press the ESCAPE knob (2) to leave the setting mode

INPUT NOISEGATE

- Press the input channel (A, B, C or D) button (5) for about 3 seconds
- Use the [<Back] or [Next>] to go to [Input NoiseGate]
- Turn the first parameter knob (4) to modify the setting
- The new setting will be stored automatically
- Once you are ready, press the ESCAPE knob (2) to leave the setting mode

OUTPUT PARAMETERS

To enter the menu, long press for about 3 seconds the output channel button (6) of the channel you want to display.

OUTPUT CHANNEL NAME

- Press the desired output channel button (6) for about 3 seconds
- Turn the first parameter knob (4) to change the digit
- Turn the second parameter knob (4) to go to the next (or previous) digit
- Once you are ready, press the ENTER (2) knob to confirm and save your setting

SIGNAL SOURCE

- Press the desired output channel button (6) for about 3 seconds
- Use the [<Back] or [Next>] to go to [Output Source]
- Turn the first parameter knob (4) to switch [InA] (input source A) On or Off
- Press the ENTER (2) knob to go to the setting of the next inputs
-

Freq:43Hz Gain:0.0dB Bandwidth:0.05Oct

Input A: EQ1:Hi-S Freq:43Hz Gain:0.0dB Slope:6dB

Input A: EQ1:Lo-S Freq:43Hz Gain:0.0dB Slope:6dB

Input A:Box_A

Noise Gate:-98dBu

Output 1:Box_1 Name: Press ENTER to save

Outp	ut 1:Bo	x_1	
Sour	ce:		
InA	InB	InC	InD
On	Off	Off	On

ENGLISH

- The new setting will be stored automatically
- Once you are ready, press the ESCAPE knob (2) to leave the setting mode

OUTPUT GAIN

- Press the desired output channel button (6) for about 3 seconds
- Use the [<Back] or [Next>] to go to [Output Gain]
- Turn the first parameter knob (4) to modify the output gain
- The new setting will be stored automatically
- Once you are ready, press the ESCAPE knob (2) to leave the setting mode

OUTPUT POLARITY

- Press the desired output channel button (6) for about 3 seconds
- Use the [<Back] or [Next>] to go to [Output Polarity]
- Turn the first parameter knob (4) to select [+Normal] or [-Invert]
- The new setting will be stored automatically
- Once you are ready, press the ESCAPE knob (2) to leave the setting mode

OUTPUT DELAY

- Press the desired output channel button (6) for about 3 seconds
- Use the [<Back] or [Next>] to go to [Output Delay]
- Turn the first parameter knob (4) to modify the delay setting
- Turn the second parameter knob (4) to modify the delay setting with bigger steps
- The new setting will be stored automatically
- Once you are ready, press the ESCAPE knob (2) to leave the setting mode

HIGH PASS FILTER

- Press the desired output channel button (6) for about 3 seconds
- Use the [<Back] or [Next>] to go to [Output HPF]
- Turn the first parameter knob (4) to modify the Frequency
- Turn the second parameter knob (4) to modify the Filter Type
- Turn the third parameter knob (4) to modify the Slope
- The new setting will be stored automatically
- Once you are ready, press the ESCAPE knob (2) to leave the setting mode

LOW PASS FILTER

- Press the desired output channel button (6) for about 3 seconds
- Use the [<Back] or [Next>] to go to [Output LPF]
- Turn the first parameter knob (4) to modify the Frequency
- Turn the second parameter knob (4) to modify the Filter Type
- Turn the third parameter knob (4) to modify the Slope
- The new setting will be stored automatically
- Once you are ready, press the ESCAPE knob (2) to leave the setting mode

OUTPUT EQ

Each output channel can use up to 6 EQ settings.

For each EQ, you can choose between:

• [PEQ] Parametric equalizer with Frequency (20Hz-20KHz), Gain (-30dB-+15dB) and Bandwidth settings.

With this type of equalizer, you can select a frequency and boost or lower this frequency. With the bandwidth you make the selection of the frequency wider or more narrow.

• [Lo-S] Low shelf EQ with Frequency (20Hz-20KHz), Gain (-30dB-+15dB) and Slope settings.

Output1:Box_1

Gain:-5.8dB

Output1:Box_1

Polarity:+Normal

Input A:Box_A Delay:0.0625ms 0.0216Meter 0.0709Feet

Output1:Box_1 HPF Freq:20Hz Filter:Bessel Slope:48dB/Oct

Output1:Box_1 LPF Freq:20Hz Filter:Bessel Slope:48dB/Oct With this type of equalizer, you can select a frequency and boost or lower all the frequencies <u>below</u> this frequency. With the Slope you can adapt the steepness of you cut or boost (hard or smooth)

- [Hi-S] High shelf EQ with Frequency (20Hz-20KHz), Gain (-30dB-+15dB) and Slope settings With this type of equalizer, you can select a frequency and boost or lower all the frequencies <u>above</u> this frequency. With the Slope you can adapt the steepness of you cut or boost (hard or smooth)
- Press the desired output channel button (6) for about 3 seconds
- Use the [<Back] or [Next>] to go to [Output EQ]
- Turn the first parameter knob (4) to select the type of EQ (parametric, lo-shelf or hi-shelf)
- Press [ENTER] to move to the parameter setting for this equalizer
- Turn the first parameter knob (4) to modify the Frequency
- Turn the second parameter knob (4) to modify the Gain
- Turn the third parameter knob (4) to modify the Bandwidth (or Slope)
- The new setting will be stored automatically
- Use the [<Back] or [Next>] to go to the other EQ's and parameters for this channel
- Once you are ready, press the ESCAPE knob (2) to leave the setting mode

OUTPUT CHANNEL LIMITER / COMPRESSOR

- Press the desired output channel button (6) for about 3 seconds
- Use the [<Back] or [Next>] to go to [Output Limit]
- Turn the first parameter knob (4) to select the limiter mode or the compressor mode

Limiter mode

- Turn the first parameter knob (4) to select Limiter mode (L of limiter is blinking on the display)
- Press [ENTER] to move to the parameter settings for the limiter
- Turn the first parameter knob (4) to set the Threshold
- Turn the second parameter knob (4) to set the Attack time (only used when [manual] is selected)
- Turn the third parameter knob (4) to set the Release time (only used when [manual] is selected)
- The new setting will be stored automatically
- Once you are ready, press the ESCAPE knob (2) to leave the setting mode

Compressor mode

- Turn the first parameter knob (4) to select Compressor mode (C of compressor is blinking on the display)
- Press [ENTER] to move to the parameter settings for the limiter
- Turn the first parameter knob (4) to set the Threshold
- Turn the second parameter knob (4) to set the Attack Time (only used when [manual] is selected)
- Turn the third parameter knob (4) to set the Release Time (only used when [manual] is selected)
- Presse the [Next>] button to move to the parameter settings for the Compressor
- Turn the first parameter knob (4) to set the Manual or Auto mode
- Turn the second parameter knob (4) to set the Clip limit
- Turn the third parameter knob (4) to set the Ratio
- The new setting will be stored automatically
- Once you are ready, press the ESCAPE knob (2) to leave the setting mode

Output1: EQ1:PEQ Freq:43Hz Gain:0.0dB Bandwidth:0.05Oct

Output1: EQ1:Hi-S Freq:43Hz Gain:0.0dB Slope:6dB

Output1: EQ1:Lo-S Freq:43Hz Gain:0.0dB Slope:6dB

Output1:Box_1 Mode:Limit Threshold:-30.0dBu Att:45ms Rel: 8x

Output1:Box_1 Mode:Compressor Threshold:-20.0dBu Att:45ms Rel: 8x

Output1:Box_1 Compressor:Manual Cliplim:2.0dB Above Ratio:1:8

MAIN MENU

- Press the [MENU] button (2) to enter the main menu •
- Use the [<Back] or [Next>] buttons or the first parameter knob (4) to scroll the menu or submenu's
- Press [ENTER] to access the function
- Use the parameter knobs (4) to change the desired settings
- Always press [ENTER] to confirm and store your setting
- Use the ESCAPE knob (2) to leave the menu or submenu

Xover Submenu

- LOAD PROGRAM: used to load an existing (or empty) program
- STORE PROGRAM: used to store the program in the memory
- ERASE PROGRAM: used to delete the program from the memory

Program Copy

- Use the first parameter knob (4) to select the source you want to copy
- Use the second parameter knob (4) to select the target you want to copy to
- Once you are ready, press the ENTER (2) knob to confirm and save your setting

Channel Copy

- Use the first parameter knob (4) to select the source you want to copy
- Use the second parameter knob (4) to select the target you want to copy to
- Once you are ready, press the ENTER (2) knob to confirm and save your setting

Input Submenu (Analog/Digital)

- Use the first parameter knob (4) to select digital or analog for inputs A&B
- Use the second parameter knob (4) to select digital or analog for inputs C&D
- Use the ESCAPE knob (2) to leave the menu or submenu

Security Submenu

It is possible to lock the access to the menu via a password. Nice option when you don't want others to change the settings on the unit. Just don't forget the password for when you need to unlock the access 😳

- Use the first parameter knob (4) to change the digit •
- Use the second parameter knob (4) to go to the next (or previous) digit
- Once you are ready, press the ENTER (2) knob to confirm and save your password

System Menu

- Backlight Setup: Use the parameter knob (4) to choose [25s] if you wish the screen to turn off after 25 seconds. If the screen should stay on, select [Keep On]. Press the ENTER (2) button to confirm and save your setting
- System Info: Press the ENTER (2) button to check the system info
- **Temperature:** Use the parameter knob (4) to set the ambient temperature. This is important if you are going to use delays for the speakers. This is because the speed at which sound propagates depends of the ambient temperature,

Example: a delay of 1000ms @ 0° C = 331m, the same delay of 1000ms @ 50° C = 361m.

By setting the temperature, the unit will adjust the delay / distance ratio.

- Filter Display: Use the parameter knob (4) to choose if [BW] (bandwidth) or [Q] should be displayed • in you EQ settings.
- Scene Change: Use the parameter knob (4) to enable or disable the use of the default buttons (3)
- Scene Key Setup: Use the parameter knobs (4) to select the desired program to be stored in each default button (3). Use the first parameter knob for Default 1, the second knob for Default 2, the third knob for Default 3.

Press the ENTER (2) button to confirm and save your setting

Wifi Factory Reset: Use the parameter knobs (4) to select [YES] or [NO] and press the ENTER (2) button to confirm

PARAMETER SETTINGS VIA PC SOFTWARE

The easiest way to make the settings is to connect the unit to a computer and use the dedicated software. The latest version of the software can be downloaded from our website <u>www.syng-audio.com</u> on the product page of the DLP-48W.



A. DATA VIEW: gives you a full view over all the parameter settings for all channels. This information can also be printed.

B. PROGRAM: used to save, load or delete user programs in the unit or computer.

** a & b have effect on the programs in the unit

** c, d, e & f are related to the program data that are stored in the computer. They can be recalled, modified, and stored in the pc, even when there is no unit connected to the computer.

- a. Load or Delete the selected data from the connected device
- b. Store the selected data in the connected device or delete it
- c. Load the selected program data from the pc into the computer software
- d. Load all the program data from the pc into the computer software
- e. Store the selected program data from the computer software into the pc
- f. Store all the program data from the computer software into the pc
- C. CHANNEL SETUP: can be used to rename your inputs and outputs
- **D. COPY**: can be used to copy all the settings of a channel into another channel.
- E. SYSTEM:
 - a. Backlight: choose [25s] if you wish the screen to turn off after 25 seconds. If the screen should stay on, select [Keep On].
 - b. Temperature: This setting is very important if you





are going to use delays for the speakers. This is because the speed at which sound propagates depends of the ambient temperature,

Example: a delay of 1000ms $@0^{\circ}C = 331m$, the same delay of 1000ms $@ 50^{\circ}C = 361m$. By setting the ambient temperature, the unit will adjust the delay / distance ratio

- c. Interface Information: the Interface information that is shown on the display of the unit can be modified if needed. You can use it to customize it for example with your company name
- F. DEVICE: used to select what type of device you are using (number of inputs & outputs)
- G. CONNECTION: used to connect your device to the computer.
 - a. Connection via **USB**: select the correct communication Port and click OK to make the connection.
 - b. Connection via LAN or WIFI: select the ip address and click OK to confirm.
- Com Select: COM4 (5) NetWork 10 . 10 . 100 . 254
 - More details can be found in the CONNECTION section.
- H. INPUT:



- a. ON/MUTE: used to activate or to mute the channel
- b. GAIN: used to set the gain for each input channel
- c. **POL+/POL-**: used to reverse the polarity if needed. POL+ = normal, POL- = reversed
- d. **DELAY**: if a delay is needed, you can set one of the 3 parameters: delay in milliseconds, distance in meters, distance in feet; the other parameters will be adjusted automatically. IMPORTANT: as the speed of sound is influenced by the temperature, don't forget to set the ambient temperature of the location in the [SYSTEM] menu.
- e. EQ: each input channel has 8 equalizers. For each EQ, you can choose between:
 - [PEQ] Parametric equalizer with Frequency (20Hz-20KHz), Gain (-30dB-+15dB) and Bandwidth settings.

With this type of equalizer, you can select a frequency and boost or lower this frequency. With the bandwidth [Q] you make the frequency range wider or narrower.

[Lo-S] Low shelf EQ with Frequency (20Hz-20KHz), Gain (-30dB-+15dB) and Slope settings.

With this type of equalizer, you can select a frequency and boost or lower all the frequencies <u>below</u> this frequency. With the Slope you can adapt the steepness of you cut or boost (hard or smooth)

• [Hi-S] High shelf EQ with Frequency (20Hz-20KHz), Gain (-30dB-+15dB) and Slope settings.

With this type of equalizer, you can select a frequency and boost or lower all the frequencies above this frequency. With the Slope you can adapt the steepness of you cut or boost (hard or smooth)

- f. **NOISEGATE**: use to set the threshold level of the noise gate for each channel. As long as the input level stays at a level below this setting, the sound will be muted. Only when the audio level goes over this threshold level, the audio signal will be allowed to pass through.
- I. OUTPUT:



- a. **SOUCE**: used to set the input source for each output channel. Several inputs can be routed to each output if needed.
- b. **GAIN**: used to set the gain for each output channel
- c. **POL+/POL-**: used to reverse the polarity if needed. POL+ = normal, POL- = reversed

- d. **DELAY**: if a delay is needed, you can set one of the 3 parameters: delay in milliseconds, distance in meters, distance in feet; the other parameters will be adjusted automatically. IMPORTANT: as the speed of sound is influenced by the temperature, don't forget to set the ambient temperature of the location in the [SYSTEM] menu.
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f. XOVER: for each output channel you can set a high pass filter [Hpf] or a low pass filter.

The low pass filter will block the frequencies above the chosen frequency. It will only let the low frequencies through (low pass)

The high pass filter will block the frequencies below the chosen frequency. It will only let the high frequencies through (high pass)

- For each filter you can set:
 - The frequency
 - The type of filter: [L_R] = Linkwitz-Riley, [Bessel] or [BTWorth] = Butterworth
 - The slope of the filter
- g. LIMIT: for each output channel you can set a limiter or a compressor, depending on your needs.

Limiter mode: set the following parameters:

- Select auto or manual mode
- Set the Threshold
- Set the Attack time (only available when [manual] is selected)
- Set the Release time (only available when [manual] is selected)

Compressor mode

- Select auto or manual mode
- Set the Clip limit
- Set the Ratio
- Set the Threshold
- Set the Attack time (only available when [manual] is selected)
- Set the Release time (only available when [manual] is selected)
- h. ON/MUTE: used to activate or to mute the channel
- J. INPUT MODE: to select digital or analog for inputs A&B and for C&D
- **K.** LINK: when you have to make identical settings for 2 channels you can link these channels via this option. Like this, you only need to perform the settings in 1 channel. The settings will automatically be copied to the other channel.
- L. CHANNEL SELECTION: each channel button has a different color. This color corresponds to the color of the curve that is shown in the software. To have a clear view, you can switch off the curves that should not be shown. Remark: this button will not mute or unmute the channels, it only has an influence on what is shown on your screen.

PROCESSOR $\leftarrow \rightarrow$ **COMPUTER CONNECTION**

For short distance, the unit can be connected via a USB cable. Only one unit can be controlled via this option.

For longer distances or to control multiple processors (up to 250 units) you can use a LAN connection.



CONNECT 1 UNIT VIA USB



Press OK

•

• You will see the progression in the status bar (next to the [Connection] button)

CONNECT 1 UNIT VIA LAN

Before a first installation, restore the wifi module to the Factory Setting via the processor's front panel.

- Start up the processor
- Press the [MENU] button (2) to enter the main menu
- Use the [<Back] or [Next>] buttons or the first parameter knob (4) to scroll the menu and go to [System SubMenu]
- Press [ENTER] to access the submenu
- Use the first parameter knob (4) to scroll the menu and go to the option [Wifi Factory Reset]
- Press [ENTER] to access the option
- Use the parameter knobs (4) to select [YES] and press the ENTER (2) button to confirm.
- Check if your computer is set to get IP addresses automatically
 - Go to Settings > Network & Internet (or right click on the network icon in the lower right corner of your screen and select "open network & internet settings")
 - Open the "Network & sharing center" and click on the "Ethernet" option
 - A new window will pop up

Connection		
IPv4 Connecti	ivity:	No Internet access
IPv6 Connecti	ivity:	No network access
Media State:		Enabled
Duration:		07:31:01
Speed:		1.0 Gbps
Details	1	
Details	Sent —	Received
Details Activity Bytes:	Sent —	

Click on "Properties"

- A new window will pop up
- Go to "Internet Protocol (TCP/IP) and click again on properties

Connect using:		You can get IP settings assigned this can ability. Otherwise	gned automatically if your network supports
Realtek PCIe GbE Family Controller		for the appropriate IP settin	igs.
	Configure	Obtain an IP address a	utomatically
This connection uses the following items:		Use the following IP ad	dress:
Client for Microsoft Networks	Networke	IP address:	
RordVPN LightWeight Firewall		Subnet mask:	a. a. a
QoS Packet Scheduler		Default gateway:	
Internet Protocol Version 4 (TCP/IPV Internet Protocol Version 4 (TCP	r Protocol		
Microsoft LLDP Protocol Driver	~	Obtain DNS server add	lress automatically
<	>	O Use the following DNS	server addresses:
Install Uninstall	Properties	Preferred DNS server:	1. 1. 1
Description	- I The data in	Alternate DNS server:	4
wide area network protocol that provides co across diverse interconnected networks.	ommunication	Validate settings upon	exit

- Use the option "Obtain an IP address automatically"
- Connect the computer with the processor. The obtained IP address should be 10.10.100.100
- Open the software interface and click on the top right corner on "Connection"
- Set the IP address to 10.10.100.254 and click on the OK tab below



CONNECT 1 UNIT VIA WIFI

- Connect the computer via WIFI with the wireless network called HF-A11x_AP
- Once this is done, open the software interface and click on the top right corner on "Connection"
- Set the IP address to 10.10.100.254 and click on the OK tab below



CONNECT SEVERAL UNITS VIA LAN

Before a first installation, restore the wifi module to the Factory Setting via the processor's front panel.

- Start up the processor
 - Press the [MENU] button (2) to enter the main menu
 - Use the [<Back] or [Next>] buttons or the first parameter knob (4) to scroll the menu and go to [System SubMenu]

- Press [ENTER] to access the submenu
- Use the first parameter knob (4) to scroll the menu and go to the option [Wifi Factory Reset]
- Press [ENTER] to access the option
- Use the parameter knobs (4) to select [YES] and press the ENTER (2) button to confirm.
- Check if your computer is set to get IP addresses automatically
 - Go to Settings > Network & Internet (or right click on the network icon in the lower right corner of your screen and select "open network & internet settings")
 - Open the "Network & sharing center" and click on the "Ethernet" option
 - A new window will pop up

ancrai		
Connection —		
IPv4 Connec	tivity:	No Internet access
IPv6 Connec	tivity:	No network access
Media State:		Enabled
Duration:		07:31:01
Speed:		1.0 Gbps
Details		
Details		
Details	Sent —	— Received
Details Activity —— Bytes:	Sent —	

- Click on "Properties"
- A new window will pop up
- Go to "Internet Protocol (TCP/IP) and click again on properties

letworking Sharing		General Alternate Configurat	tion
Connect using:		You can get IP settings assig	ned automatically if your network supports
Realtek PCIe GbE Family Controller		this capability. Otherwise, yo for the appropriate IP setting	ou need to ask your network administrator gs.
	Configure	Obtain an IP address au	utomatically
his connection uses the following items:		O Use the following IP add	dress:
Image: Client for Microsoft Networks Image: Starting for Microsoft Networks	etworks	IP address:	
V PN LightWeight Firewall		Subnet mask:	
QoS Packet Scheduler		Default gateway:	
Internet Hotocol Version 4 (16)	Protocol		1 <u>21</u> 121
Microsoft LLDP Protocol Driver	~	Obtain DNS server addr	ess automatically
<	>	O Use the following DNS se	erver addresses:
Install Uninstall	Properties	Preferred DNS server:	
Description	170.14	Alternate DNS server:	• • •
iransmission Control Protocol/internet Protoco wide area network protocol that provides com across diverse interconnected networks.	oi. The derault munication	Validate settings upon	exit Advanced

- Use the option "Obtain an IP address automatically"
- Connect the computer with the processor. The obtained IP address should be 10.10.100.100

			Connect to 10.10.100.254 Connect to 10.10.100.254 at HF-A11 requires a username and password. Warning: This server is requesting that your username and password beset in an insecure manner (basic authentication without a secure connection). User name: Dessword:
 Open your internet browser Once you are on the modul (admin) and click OK Now start the [Working Mod MXM Web Server - Windows Internet Explorer 	and type 10.10.100.254 e, add user name (admin), p de Configuration]	assword	Remember my password OK Cancel
File Edit View Favorites Tools Help		1.12	
🚖 🕸 🍘 M2M Web Server			
 Click on [AP Interface Setti 	Mode Selection AP Interface Setting STA Interface Setting Application Setting Device Management Device Management Mod Sta Ma Sta Data Tran	king Mode Configuration configure the Uart-WIFI module wif de: eass Point ode: sfor Mode Transparent Mode Apply add the Network	中文 English On Imode and data transfor mode. Cancel Name (SSID): AB-Link
Mode Selection	AP Interface Setting		
 AP Interface Setting STA Interface Setting 	AP Interface Setting, such as : SSID, Se	curity	
Application Setting			
Prophesion Setting	Wireless Network		
Device Management	Network Mode	11b/g/n mixed mode	~
	Network Name(SSID)	AB-Link	
	BSSID	AC:CF:23:00:B0:58	
	Frequency (Channel)	AutoSelect	×
	Wireless Distribution System(WDS	WDS Configuration	
	Apply	Cancel]

- Adjust the settings in the [LAN Setup]
 - DHCP Type = Disable
 - IP address of wifi module = same as router : "192.168.0.101" ("192.168.0.102", "192.168.0.103", etc.)
 - o Click apply

Mode Selection	AP Interface Setting	
AP Interface Setting	AP Interface Setting, such as : SSID, Sec	curity
STA Interface Setting		
Application Setting	Wireless Network	
Device Management	Network Mode	11b/g/n mixed mode 👻
	Network Name(SSID)	AB-Link
	BSSID	AC:CF:23:00:B0:58
	Frequency (Channel)	AutoSelect
	Wireless Distribution System(WDS)	WDS Configuration
	Apply	Cancel
	Apply	Cancel
	Apply HF-A11x_AP	Cancel
	Apply HF-Attx_AP Security Mode Dis	Cancel
	Apply HF-A11x_AP Security Mode Dis Apply	Cancel
	Apply HF-A11x_AP Security Mode Dia Apply	Cancel
	Apply HF-A11x_AP Security Mode Dia Apply	Cancel
	Apply HF-A11x_AP Security Mode Dit Apply LAN Setup IP Address(Default DHCP Gateway)	Cancel Cancel 192.168.0.101
	Apply HF-A11x_AP Security Mode Dis Apply LAN Setup IP Address(Default DHCP Gateway) Subnet Mask	Cancel 192.168.0.101 255.255.255.0

- Click on [Mode Selection] in the top left corner •
- Select Station Mode (STA Mode) and click apply •

Mode Selection	Working M	ode Configuration
AP Interface Setting	You may configure	the Uart-WIFI module wifi mode and data transfor mode.
Application Setting	O AP Mode:	
Device Management	Access Point STA Mode: Station Mode	
	Data Transfor Mode	Transparent Mode
		Apply Cancel
Restart the Processors		
	A	

- •
- Open the software interface and click on the top right corner on "Connection" Set the IP address to "192.168.0.101", "192.168.0.102", "192.168.0.103"... and click on the OK tab • below

Connect to 192.168.0.1

User name

Pass

server 192.168.0.1 at DI-624+A require

🖸 admin

Remember my password

OK Cancel

Warning: This server is requesting that your password be sent in an insecure manner (bas without a serure connection).

?×



CONNECT SEVERAL UNITS VIA WIFI

- Connect the computer and the router via LAN •
- Open your internet browser and type 192.168.0.1 to go to the router •
- Add the user name = admin (password is empty) and click OK •
- Now set the Router's SSID and password. •
- As set in the wireless Router's ID (SSID) = AB-Link •
- The password = 13141516•
- When all this is done, you have to restore the Wifi module to the • Factory Setting via the processor's front panel.
- Start up the processor •
- Press the [MENU] button (2) to enter the main menu •
- Use the [<Back] or [Next>] buttons or the first parameter knob (4) to scroll the menu and go to • [System SubMenu]
- Press [ENTER] to access the submenu •
- Use the first parameter knob (4) to scroll the menu and go to the option [Wifi Factory Reset] •
- Press [ENTER] to access the option •
- Use the parameter knobs (4) to select [YES] and press the ENTER (2) button to confirm.
- Check if your computer is set to get IP addresses automatically

(for more information on how to do this, see previous chapter CONNECT SEVERAL UNITS VIA LAN)

- Connect the computer and the router via LAN
- The obtained P address should be 10.10.100.100 •



- Once connected to the network, type 10.10.100.254 in your internet browser
- Set user name = admin, password = admin, and press OK
- Now start the [Working Mode Configuration]

E		
<u>il</u> <i>1</i>		11.7
The server 10.10	0.100.254 at HF-A11 requires	a username
Warning: This se	rver is requesting that your u	sername and
Warning: This se password be sen without a secure	rver is requesting that your u at in an insecure manner (basic connection).	sername and authentication
Warning: This se password be sen without a secure User name:	rver is requesting that your u t in an insecure manner (basis connection).	sername and : authenticatio
Warning: This se password be sen without a secure User name: Password:	rver is requesting that your u it in an insecure manner (basic connection).	sername and : authenticatio

· O

🤇 M2M Web Server - Windo	ws Internet Explorer		
G - http://10.10.1	100.254/opmode.html		
File Edit View Favorites	Tools Help		
A M2M Web Server			
Click on IS	STA Interface Setting	 Mode Selection AP Interface Setting STA Interface Setting Application Setting Device Management 	中文 English Working Mode Configuration You may configure the Uart-WIFI module wifi mode and data transfor mode. O AP Mode: Access Point O STA Mode: Station Mode Data Transfor Mode Transparent Mode 《 Apply Cancel
		a1	
	Mode Selection	STA Interface Se	etting
	AP Interface Setting	You could configure STA inte	rface parameters here.
	STA Interface Setting		
	Application Setting	OTA LA SALAR DE SALAR	
		APIs SSID	LE A11 AD Search
	Device Management	AL SOLD	
		MAC Address (Optional)	
		Security Mode	OPEN V
		Encryption Type	NONE Y
			Apply Cancel
		WAN Connection	n Type: DHCP(Auto contig)
		Hostname(Optional)	
			Apply Cancel

- Click on [Search] for the [STA Interface Parameters]
- Choose the correct SSID and click on "Apply"

M) - [http://10.10.100.25	54/site_su	irvey.html	~	4 X Live Se	arch	
Site	Survey							
	SSID	BSSID	RSSI	Channel	Encryption	Authentication	Network Type	
۲	AB-Link	00:1b:11:fb:56:40	100%	6	TKIP	WPA2PSK	Infrastructure	
	Apply	Refres	h		л			

- Set the password = 13141516 (the password should be the same as the password of the Router)
- Click "Apply"

•

Mode Selection	STA Interface Set	ting
AP Interface Setting	You could configure STA interfa	ace parameters here.
STA Interface Setting		
Application Setting	STA Interface Parameters	
Device Management	AP's SSID	AB-Link Search
	MAC Address (Optional)	
	Security Mode	WPA2PSK
	Encryption Type	
o again to the [STA Interfa et the [WAN Connection T Idress:	Pass Phrase ace Setting] Type] to [STATIC(Fixed IP) 92 168 0 103 192 168 0 1	13141516 Apply Cancel I) and enter the following data for the 104)
o again to the [STA Interfa et the [WAN Connection T Idress: ○ 192.168.0.102 (or 1 ○ 255.255.255.0 ○ 192.168.0.1	Pass Phrase ace Setting] [ype] to [STATIC(Fixed IP) 92.168.0.103, 192.168.0.7	13141516 Apply Cancel and enter the following data for the following
o again to the [STA Interfa et the [WAN Connection T ddress: o 192.168.0.102 (or 1 o 255.255.255.0 o 192.168.0.1 WAN Connection	Pass Phrase ace Setting] Type] to [STATIC(Fixed IP) 92.168.0.103, 192.168.0.1 ction Type:	13141516 Apply Cancel I) and enter the following data for the followi
o again to the [STA Interfa et the [WAN Connection T ddress: o 192.168.0.102 (or 1 o 255.255.255.0 o 192.168.0.1 WAN Connection Static Mode	Pass Phrase ace Setting] Type] to [STATIC(Fixed IP) 92.168.0.103, 192.168.0.1 ction Type:	13141516 Apply Cancel I] and enter the following data for the 104,) STATIC(fixed IP)
o again to the [STA Interfa et the [WAN Connection T ddress:	Pass Phrase	13141516 Apply Cancel and enter the following data for the 104,) STATIC(fixed IP)
o again to the [STA Interfa et the [WAN Connection T ddress: o 192.168.0.102 (or 1 o 255.255.255.0 o 192.168.0.1 WAN Connect Static Mode IP Address Subnet Mask	Pass Phrase	13141516 Apply Cancel and enter the following data for the following data

• Once this is done, click on [Mode Selection] in the upper left corner

ADI to for Call	You may configure the Uart-WIFI module wifi mode and data transfor mode.		
AP Interface Setting			
<u>orrenteriace setting</u>			
Application Setting			
Device Management	Access Point		
	STA Mode: Station Mode		
	Data Transfor Mode Transparent Mode		

• The next information will show up. Click on [Device Management]

•

 Mode Selection AP Interface Setting STA Interface Setting Application Setting Device Management 	Set Succes Restart butto	sfully, Restart to use new setting.
 Mode Selection AP Interface Setting STA Interface Setting Application Setting 	Device Manageme 4.01.6 You may configure administrat firware.	or account and password, load default setting or update
Device Management	Adminstrator Settings Account Password Restart Module Password	admin admin Apply Cancel

- Restart the Processors
- Search with your computer for the wireless network [AB-Link]



- Open the software interface and click on the top right corner on "Connection"
- Set the IP address to "192.168.0.102", "192.168.0.103", "192.168.0.104"... (the IP address should be the same as the Static Mode IP address)
- Click on the OK tab below

Connect				
Com Co	nnect			
Com Select:	COM1 🔕			
ОК	Cancel			
NetWork				
192 . 168 .	0 . 102			
ОК	Cancel			

SPECIFICATIONS

This unit is radio-interference suppressed. This appliance meets the requirements of the current European and national guidelines. Conformity has been established and the relevant statements and documents have been deposited by the manufacturer.

Power Supply: Frequency response: **Dynamic range:** THD + noise: Input Impedance: **Output Impedance:** Output level (max): AD/DA: Sample rate: **Crossover types:** Max Delay inputs: Max Delay output: EQ # input: EQ # output: EQ types: EQ gain: EQ Bandwidth: EQ frequencies: Limiters – threshold: Limiters – attack time: Limiters – release time: **Dimensions:** Weight:

90Vac ~ 240Vac, 50/60Hz 20-20.000Hz (+/-0,5dB) >110 dB <0.02% @ 1kHz, +18dBm >10kΩ balanced <60Ω balanced +20dBm (600 ohm load) 32bit Floating Point 96kHz Butterworth, Bessel or Linkwitz/Riley 1000ms 1000ms 6 per input 8 per output Parametric, L-Shelf, H-Shelf -30dB ~ +15dB / 0,1dB steps Q value = 0,4 to 28.8 / 3 to 0.05 20Hz ~20kHz (1/36 octave ISO spacing) -10dBu to +20dBu 0,3 ~ 90ms 4, 8, 16 or 32 x start-up time 482(W) x 44(H) x 200(D) mm 2.62 kg

Every information is subject to change without prior notice You can download the latest version of this user manual from our website: <u>www.synq-audio.com</u>



MAILING LIST

EN: Subscribe today to our mailing list for the latest product news! FR: Inscrivez-vous à notre liste de distribution si vous souhaitez suivre l'actualité de nos produits! NL: Abonneer je vandaag nog op onze mailinglijst en ontvang ons laatste product nieuws! DE: Abonnieren Sie unseren Newsletter und erhalten Sie aktuelle Produktinformationen! ES: Suscríbete hoy a nuestra lista de correo para recibir las últimas noticias! PT: Inscreva-se hoje na nossa mailing list para estar a par das últimas notícias!

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