DLP-48W

ENGLISH

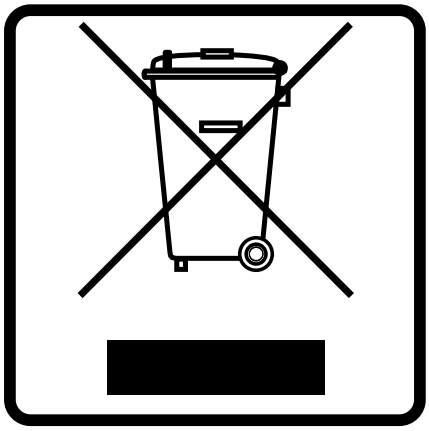
Operation Manual

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

CE

Version: 1.0

SYNQ®
AUDIO RESEARCH



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.

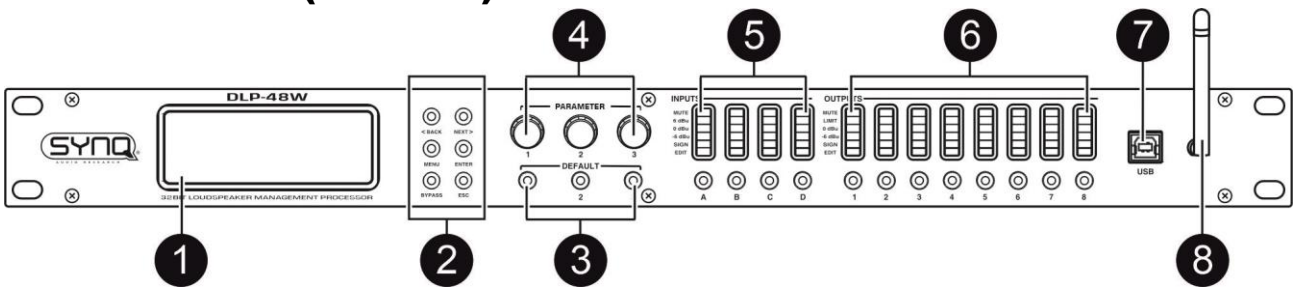
INSTALLATION GUIDELINES:

- 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:

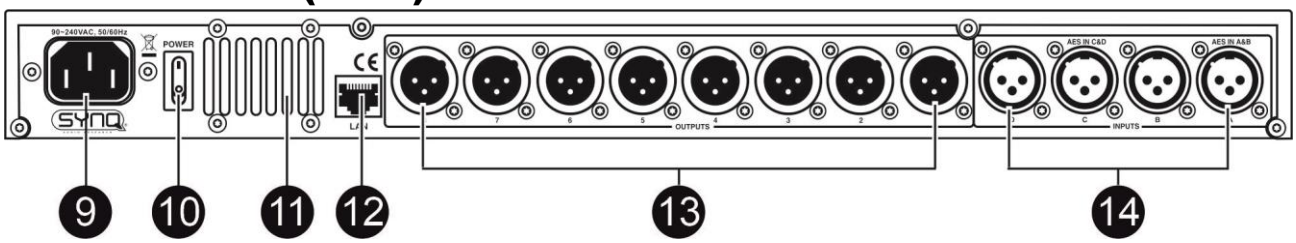
Clean by wiping with a polished cloth slightly dipped with water. Avoid getting water inside the unit. Do not use volatile liquids such as benzene or thinner which will damage the unit.

FUNCTIONS (FRONT)



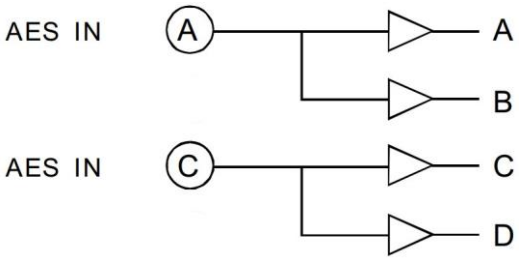
1. **LCD DISPLAY:** shows the menu and all the parameters
2. **NAVIGATION buttons:**
   - < BACK & NEXT > buttons:
   - MENU button:
   - ENTER button: used to confirm a setting
   - BYPASS button:
   - ESC button: this “escape” button can be used to leave the setting or menu
3. **DEFAULT buttons:**
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**

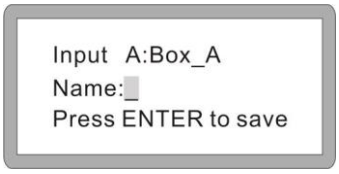


PARAMETER SETTINGS ON THE UNIT

INPUT PARAMETERS

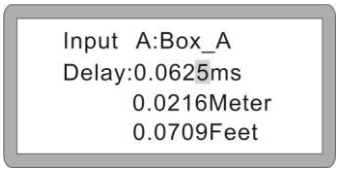
To enter the menu, long press for about 3 seconds the input channel button (5) of the channel you want to display.

INPUT CHANNEL NAME



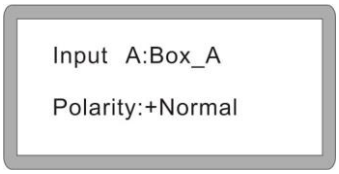
- Press the input channel (A, B, C or D) button (5) for about 3 seconds
- Turn the first parameter knob (4) to change the digit
- Turn the second parameter knob (4) to go to the next (or previous) digit
- Once you are ready, press the ENTER (2) knob to confirm and save your setting

INPUT DELAY



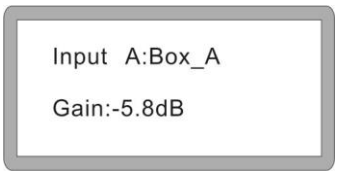
- Press the input channel (A, B, C or D) button (5) for about 3 seconds
- Use the [<Back] or [Next>] to go to [Input Delay]
- Turn the first parameter knob (4) to modify the delay setting
- Turn the second parameter knob (4) to modify the delay setting with bigger steps
- The new setting will be stored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

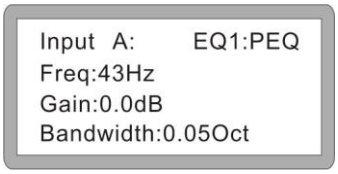


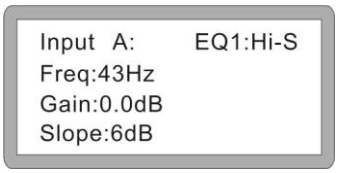
- Press the input channel (A, B, C or D) button (5) for about 3 seconds
- Use the [<Back] or [Next>] to go to [Input Gain]
- Turn the first parameter knob (4) to modify the input gain
- The new setting will be stored automatically
- Once you are ready, press the ESCAPE knob (2) to leave the setting mode

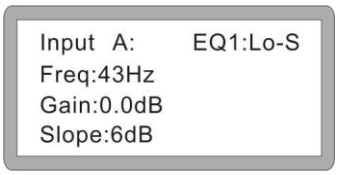
INPUT EQ

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 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 below 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)

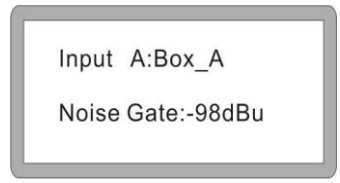






- Press the input channel (A, B, C or D) button (5) for about 3 seconds
- Use the [<Back] or [Next>] to go to [Input EQ]
- Turn the first parameter knob (4) to select the type of EQ (parametric, lo-shelf or hi-shelf)
- Press [ENTER] to move to the parameter setting for this equalizer
- Turn the first 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

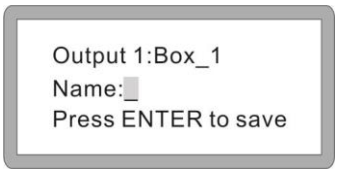


- Press the input channel (A, B, C or D) button (5) for about 3 seconds
- Use the [<Back] or [Next>] to go to [Input NoiseGate]
- Turn the first parameter knob (4) to modify the setting
- The new setting will be stored automatically
- Once you are ready, press the ESCAPE knob (2) to leave the setting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

OUTPUT PARAMETERS

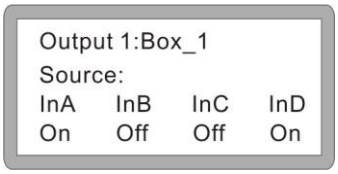
To enter the menu, long press for about 3 seconds the output channel button (6) of the channel you want to display.

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



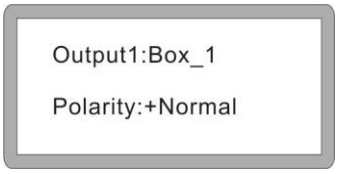
- Press the desired output channel button (6) for about 3 seconds
- Use the [<Back] or [Next>] to go to [Output Source]
- Turn the first parameter knob (4) to switch [InA] (input source A) On or Off
- Press the ENTER (2) knob to go to the setting of the next inputs
- ……

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

OUTPUT GAIN

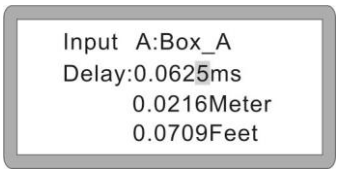
- Press the desired output channel button (6) for about 3 seconds
- Use the [<Back] or [Next>] to go to [Output Gain]
- Turn the first parameter knob (4) to modify the output gain
- The new setting will be stored automatically
- Once you are ready, press the ESCAPE knob (2) to leave the setting mode

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

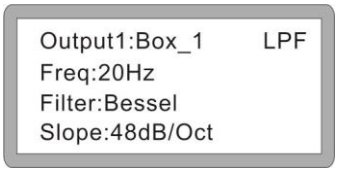


- Press the desired output channel button (6) for about 3 seconds
- Use the [<Back] or [Next>] to go to [Output Delay]
- Turn the first parameter knob (4) to modify the delay setting
- Turn the second parameter knob (4) to modify the delay setting with bigger steps
- The new setting will be stored automatically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

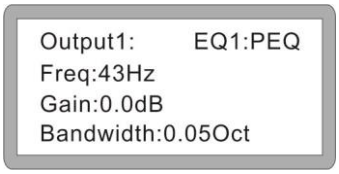
OUTPUT EQ

Each output channel can use up to 6 EQ settings.
For each EQ, you can choose between:

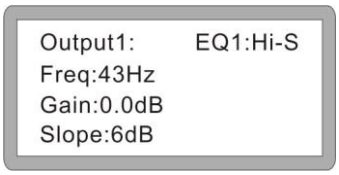
- *[PEQ] Parametric equalizer with Frequency (20Hz-20KHz), Gain (-30dB-+15dB) and Bandwidth settings.*
  With this type of equalizer, you can select a frequency and boost or lower this frequency. With the bandwidth you make the selection of the frequency wider or more narrow.
- *[Lo-S] Low shelf EQ with Frequency (20Hz-20KHz), Gain (-30dB-+15dB) and Slope settings.*

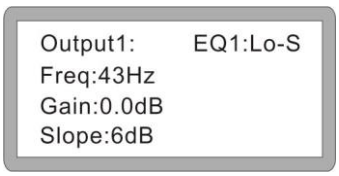
With this type of equalizer, you can select a frequency and boost or lower all the frequencies <u>below</u> this frequency. With the Slope you can adapt the steepness of you cut or boost (hard or smooth)

- *[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





<u>OUTPUT CHANNEL LIMITER / COMPRESSOR</u>

- 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

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 😊

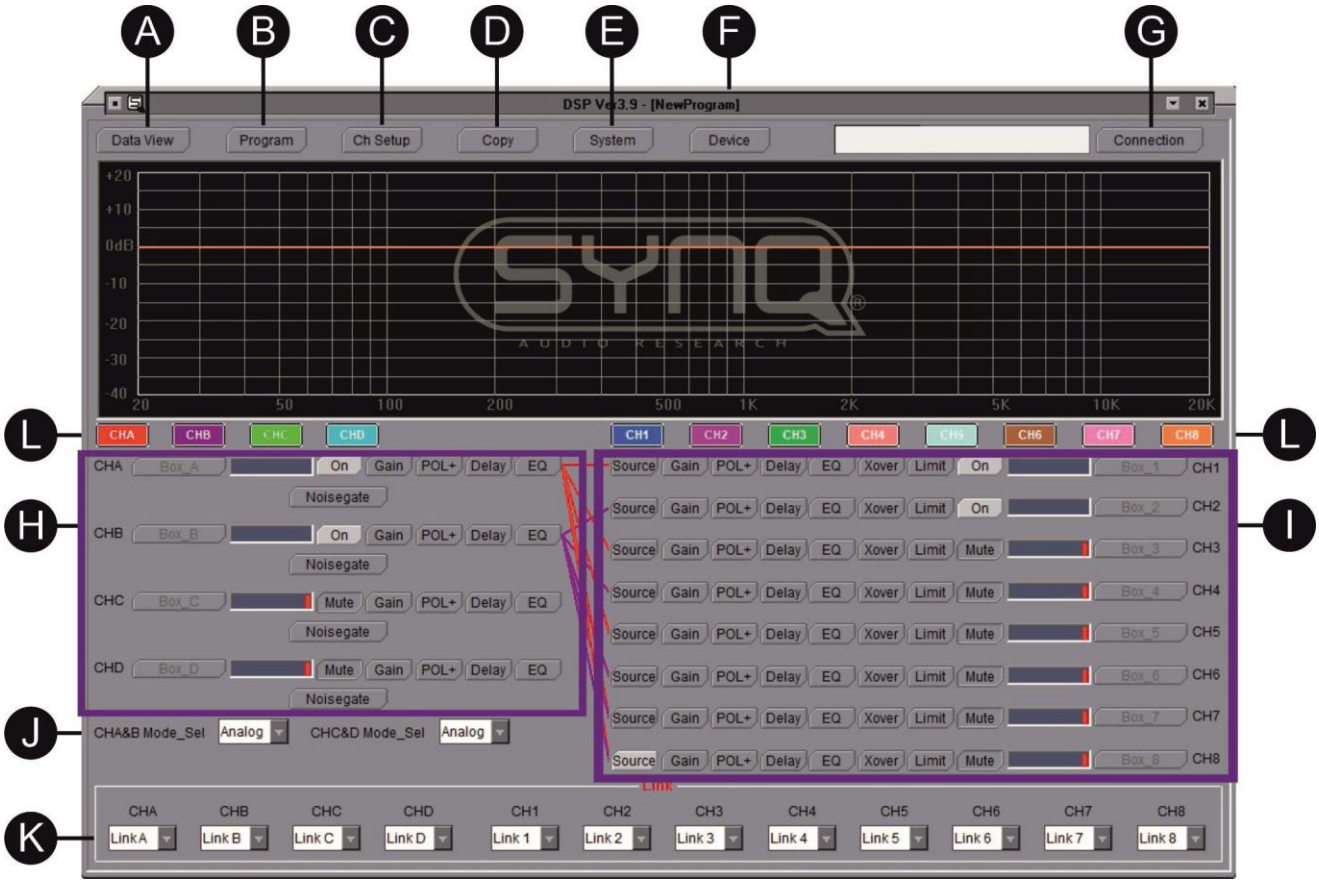
- Use the first parameter knob (4) to change the digit
- Use the second parameter knob (4) to go to the next (or previous) digit
- Once you are ready, press the ENTER (2) knob to confirm and save your password

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

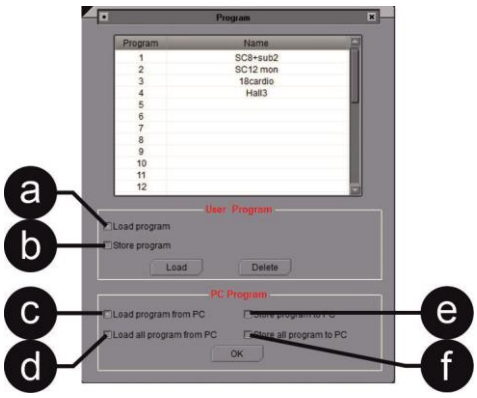
PARAMETER SETTINGS VIA PC SOFTWARE

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 www.synq-audio.com 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:

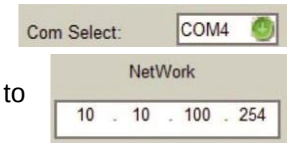
a. **Backlight:** choose [25s] if you wish the screen to turn off after 25 seconds. If the screen should stay on, select [Keep On].
b. **Temperature:** This setting is very important if you

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°C = 331m, the same delay of 1000ms @ 50°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)

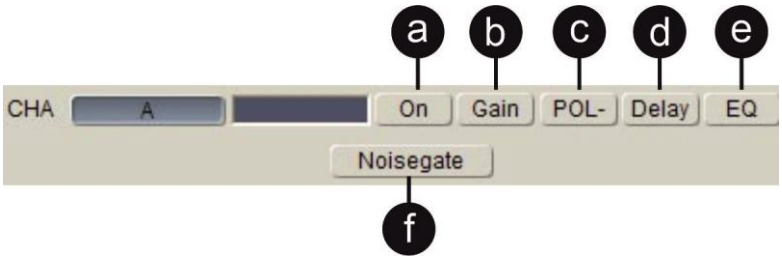
G. CONNECTION: used to connect your device to the computer.



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.

More details can be found in the CONNECTION section.

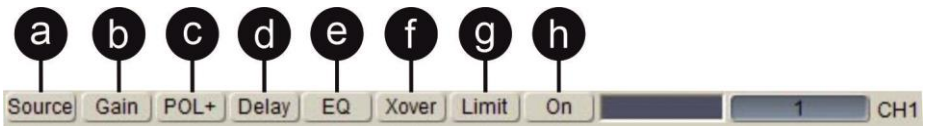
H. INPUT:



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 below 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.

e. **EQ:** each output channel has 6 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 below 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. **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

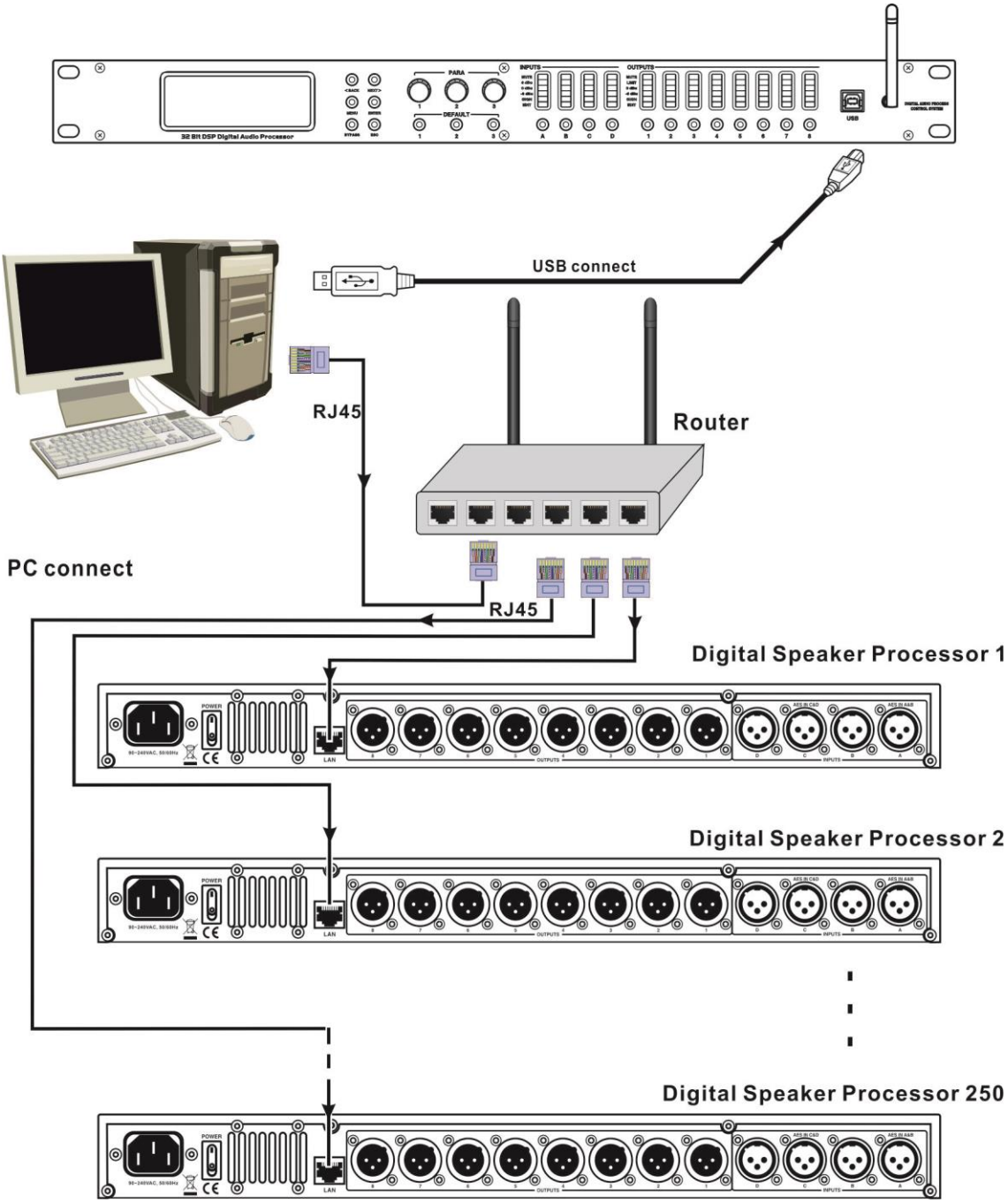
J. INPUT MODE: to select digital or analog for inputs A&B and for C&D

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.

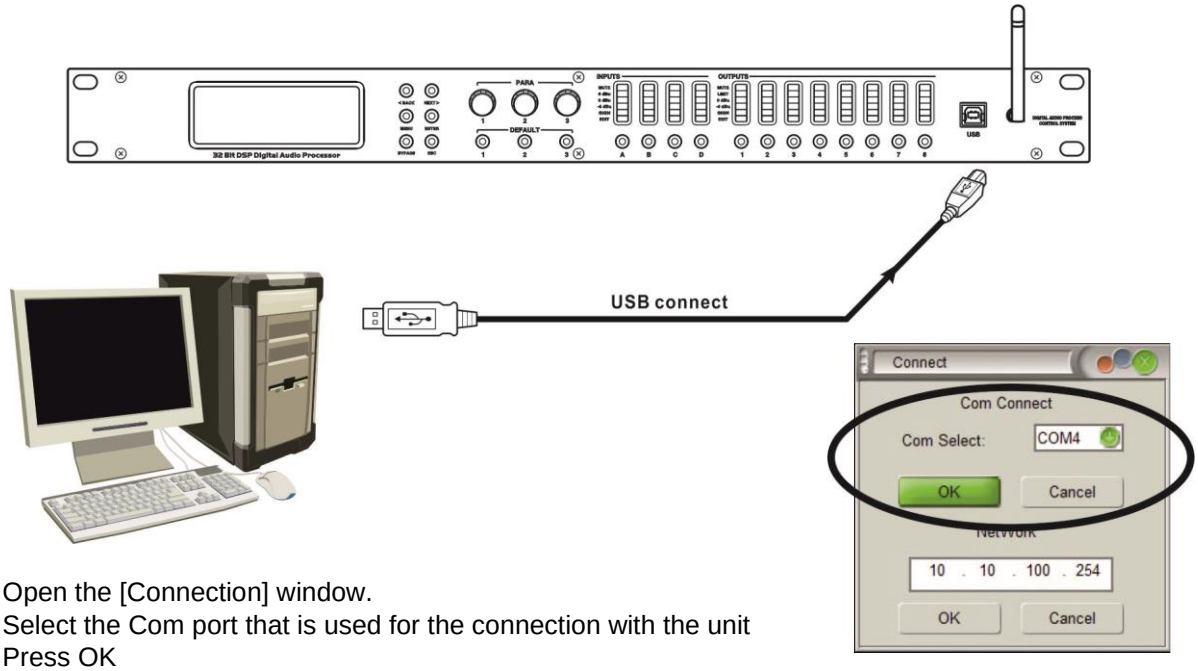
L. CHANNEL SELECTION: each channel button has a different color. This color corresponds to the color of the curve that is shown in the software. To have a clear view, you can switch off the curves that should not be shown. Remark: this button will not mute or unmute the channels, it only has an influence on what is shown on your screen.

PROCESSOR ←→ 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



- Open the [Connection] window.
- Select the Com port that is used for the connection with the unit
- Press OK
- You will see the progression in the status bar (next to the [Connection] button)

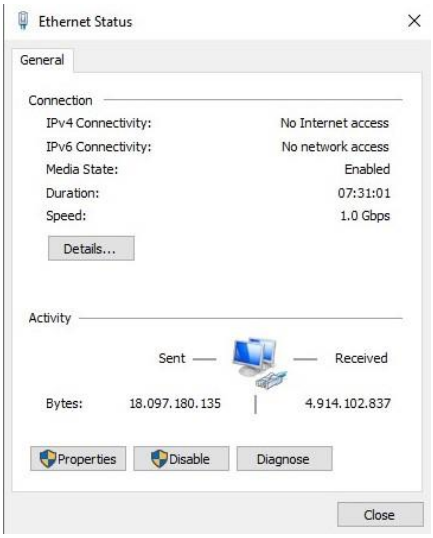
CONNECT 1 UNIT VIA LAN

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.

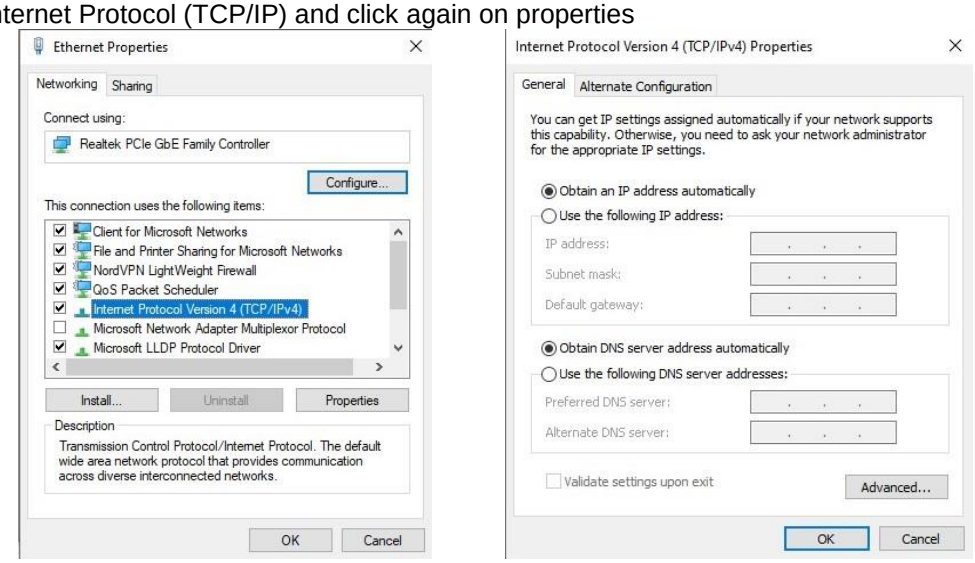
Check if your computer is set to get IP addresses automatically

- 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

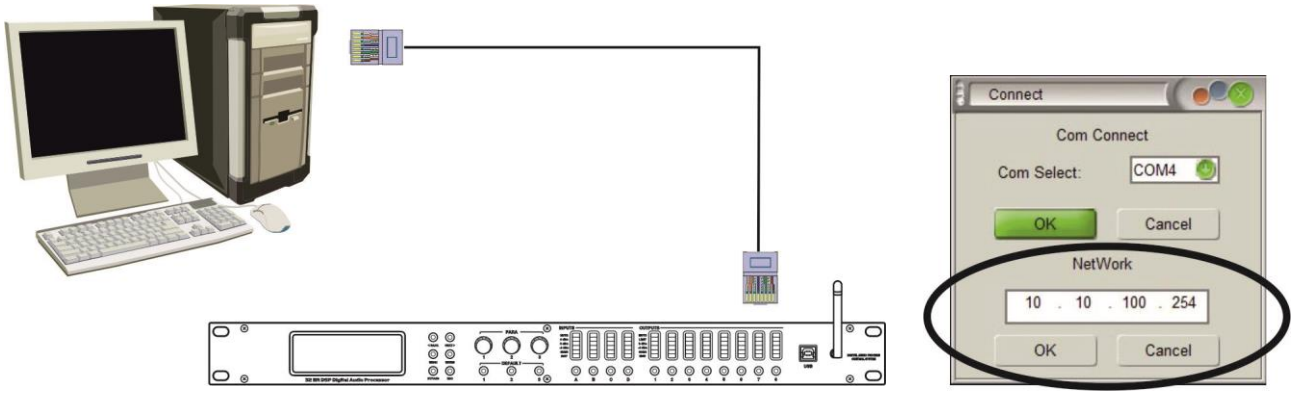


- Click on "Properties"

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

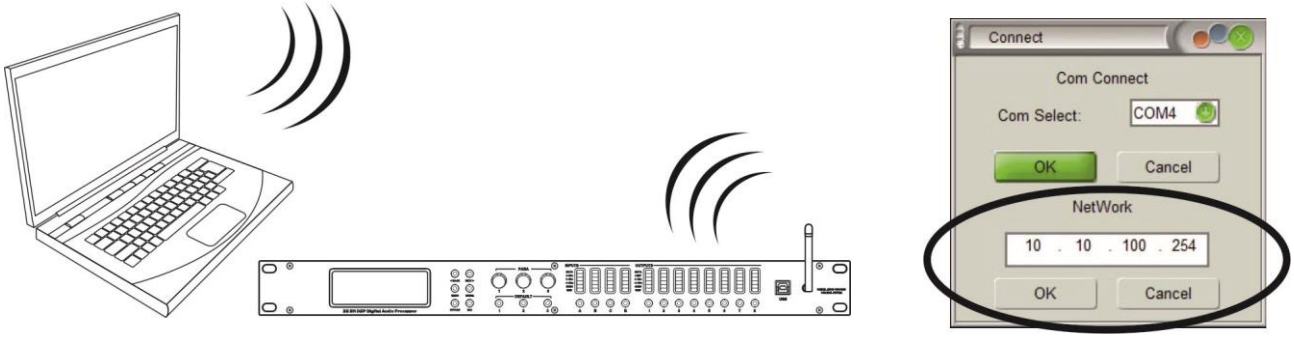


- Use the option “Obtain an IP address automatically”
- Connect the computer with the processor. The obtained IP address should be 10.10.100.100
- Open the software interface and click on the top right corner on “Connection”
- Set the IP address to 10.10.100.254 and click on the OK tab below



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

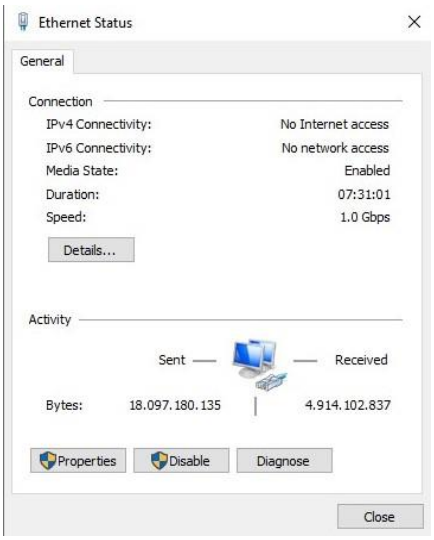
Before a first installation, **restore the wifi module** to the Factory Setting via the processor’s front panel.

- 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]

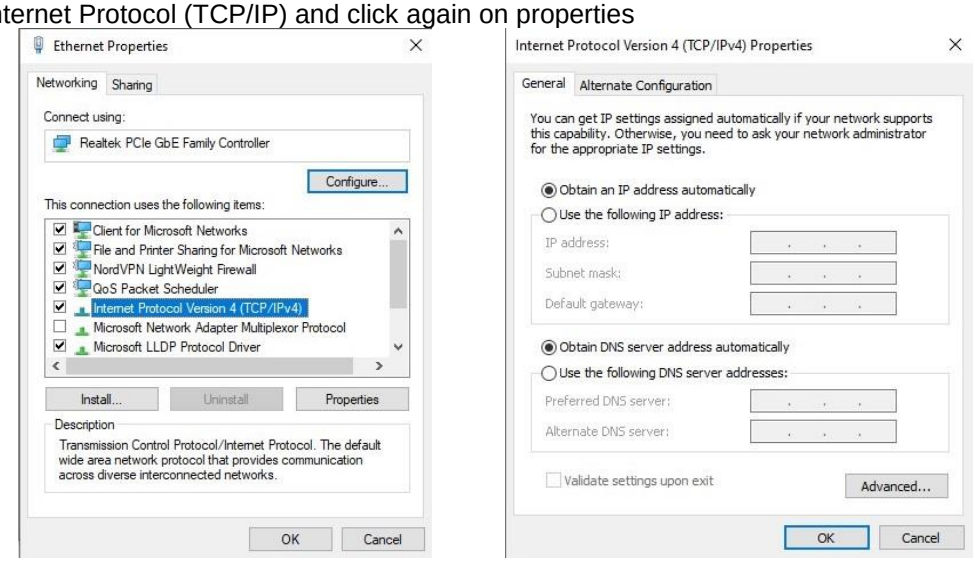
- Press [ENTER] to access the submenu
- Use the first parameter knob (4) to scroll the menu and go to the option [Wifi Factory Reset]
- Press [ENTER] to access the option
- Use the parameter knobs (4) to select [YES] and press the ENTER (2) button to confirm.

Check if your computer is set to get IP addresses automatically

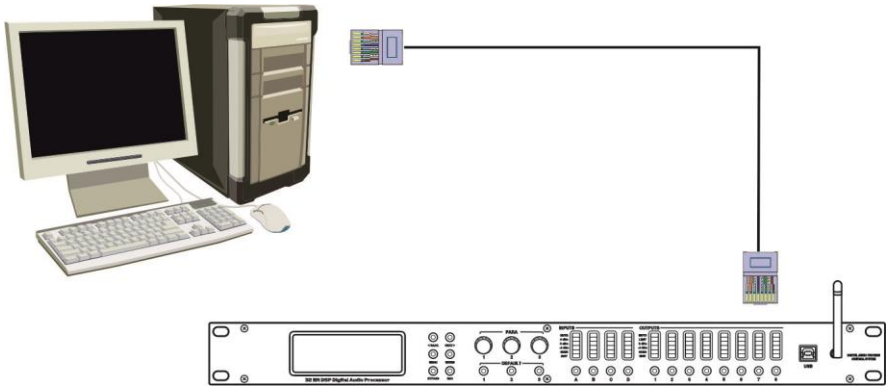
- Go to Settings > Network & Internet (or right click on the network icon in the lower right corner of your screen and select “open network & internet settings”)
- Open the “Network & sharing center” and click on the “Ethernet” option
- A new window will pop up



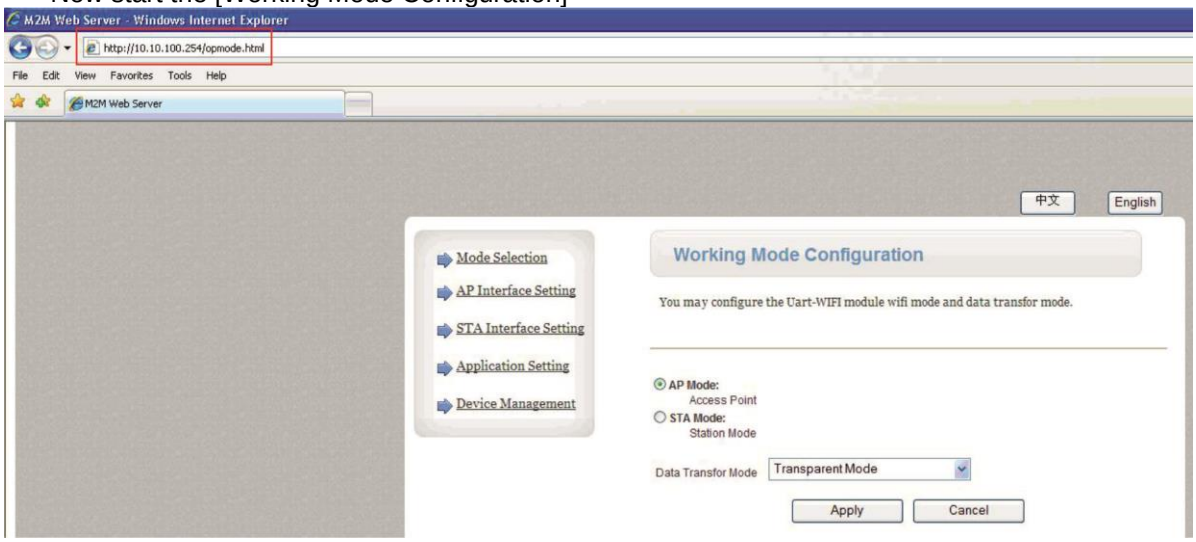
- Click on “Properties”
- A new window will pop up
- Go to “Internet Protocol (TCP/IP) and click again on properties



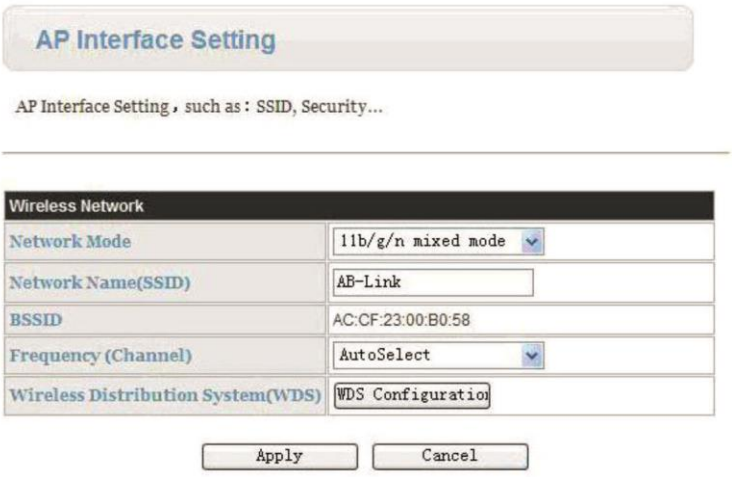
- Use the option “Obtain an IP address automatically”
- Connect the computer with the processor. The obtained IP address should be 10.10.100.100



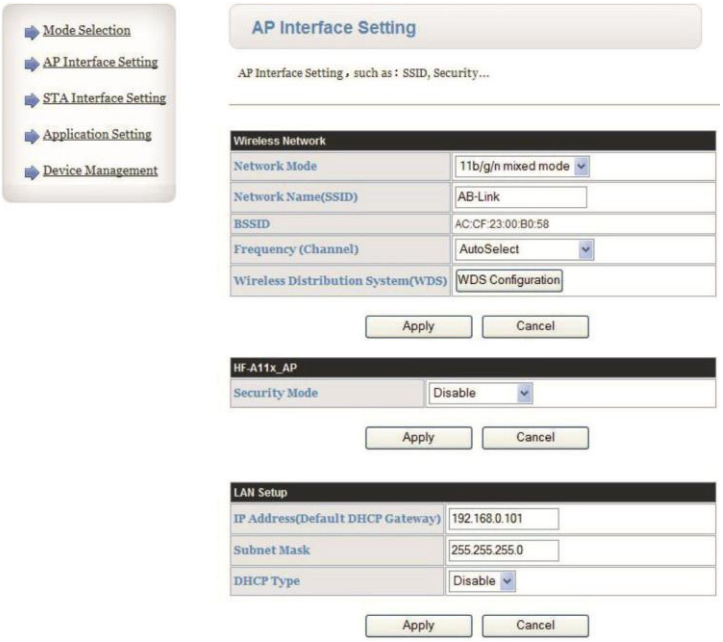
- Open your internet browser and type 10.10.100.254
- Once you are on the module, add user name (admin), password (admin) and click OK
- Now start the [Working Mode Configuration]



- Click on [AP Interface Setting] in the top left corner and add the Network Name (SSID): AB-Link

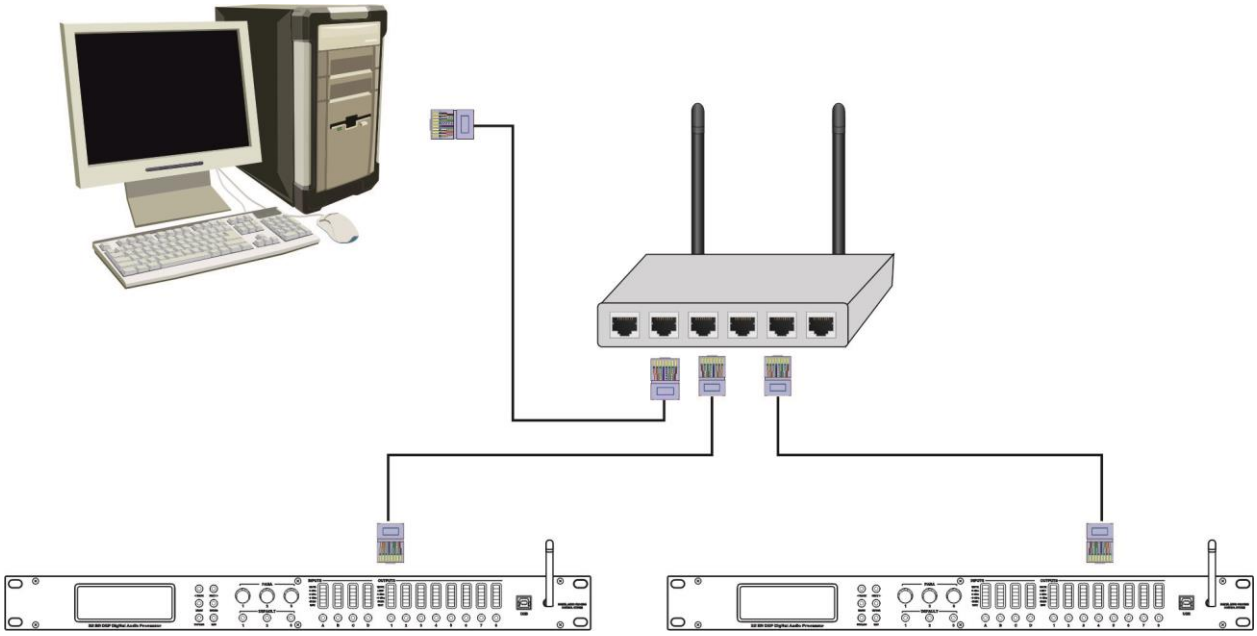


- Adjust the settings in the [LAN Setup]
  - DHCP Type = Disable
  - IP address of wifi module = same as router : “192.168.0.101” (“192.168.0.102”, “192.168.0.103”, etc.)
  - Click apply

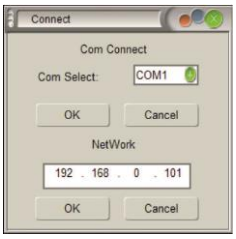


- Click on [Mode Selection] in the top left corner
- Select Station Mode (STA Mode) and click apply

- Restart the Processors



- 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



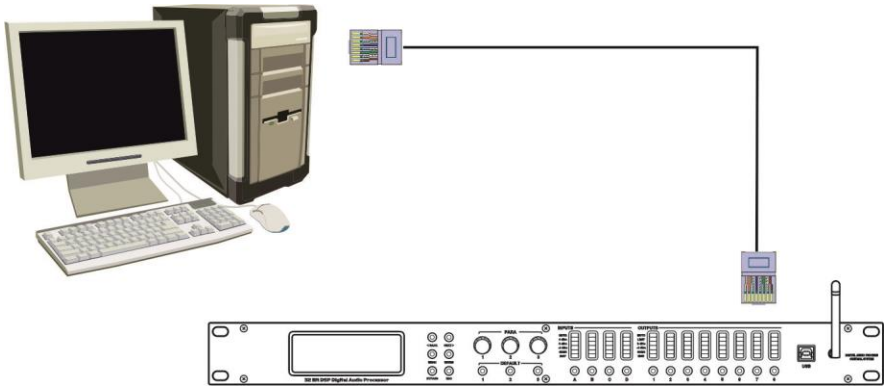
CONNECT SEVERAL UNITS VIA WIFI

- 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

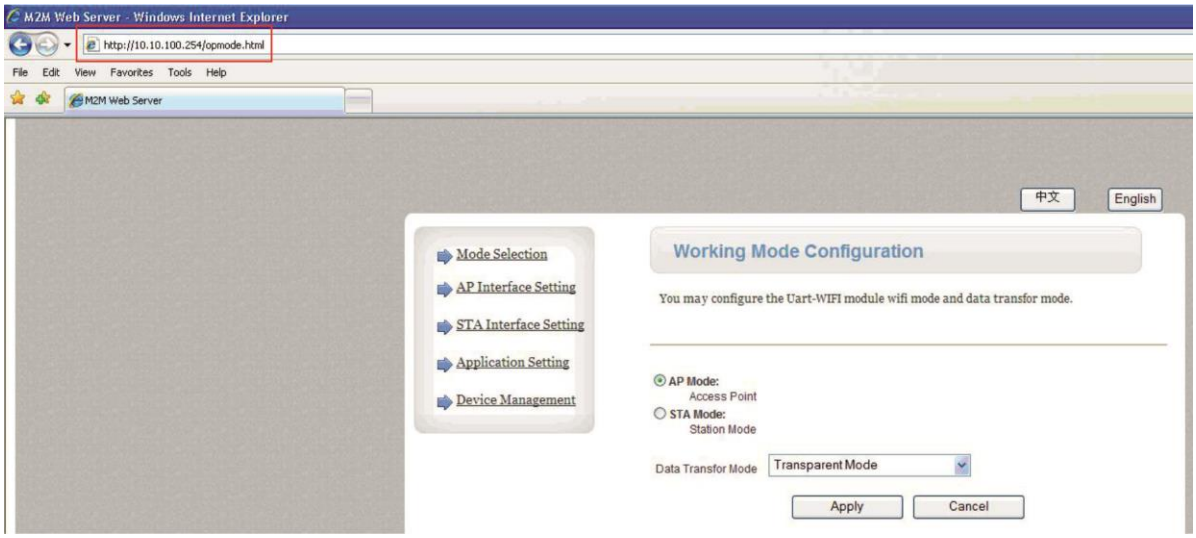
- When all this is done, you have to restore the Wifi module to the Factory Setting via the processor's front panel.
- Start up the processor
- Press the [MENU] button (2) to enter the main menu
- Use the [<Back] or [Next>] buttons or the first parameter knob (4) to scroll the menu and go to [System 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)

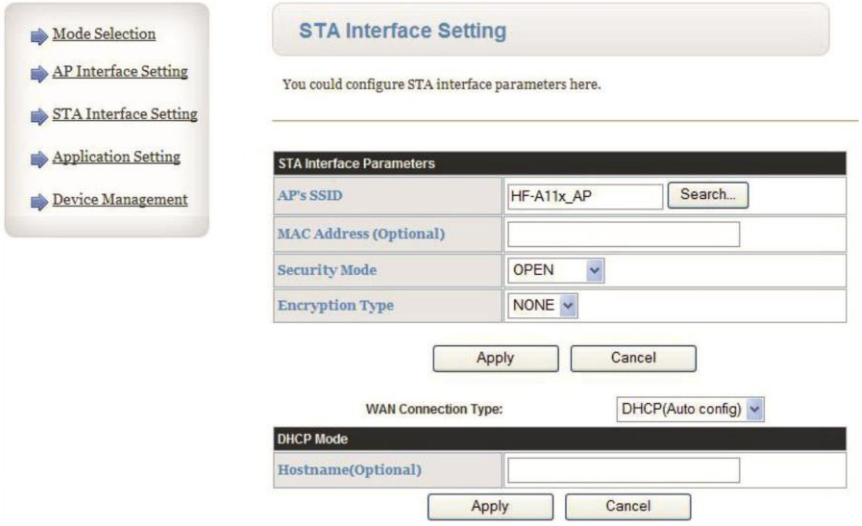
- Connect the computer and the router via LAN
- The obtained P address should be 10.10.100.100



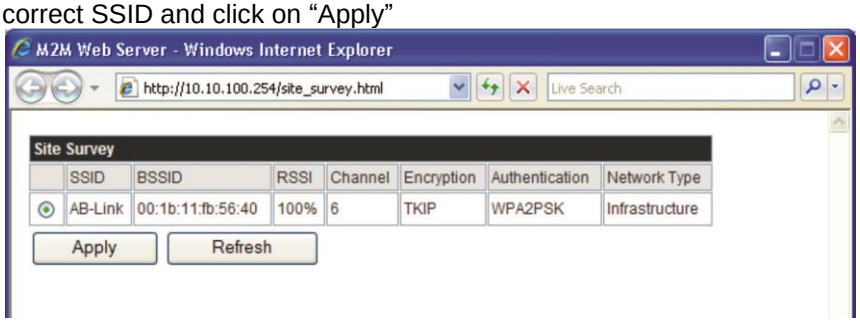
- Once connected to the network, type 10.10.100.254 in your internet browser
- Set user name = admin, password = admin, and press OK
- Now start the [Working Mode Configuration]



- Click on [STA Interface Setting]

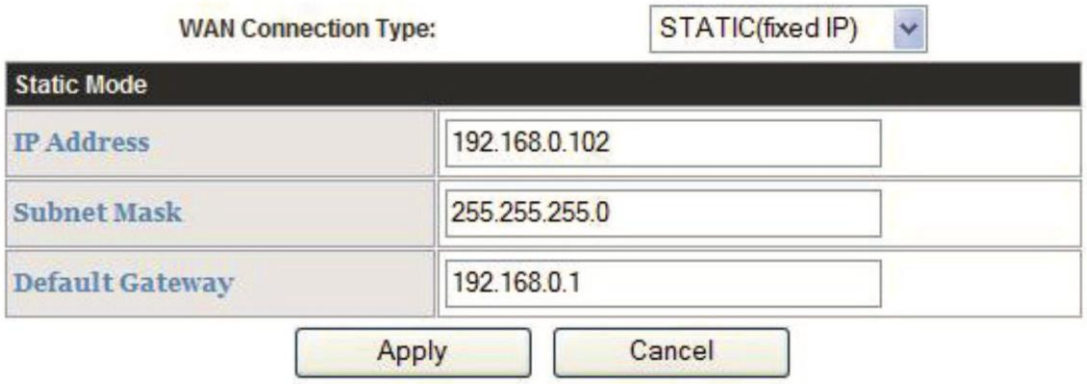


- Click on [Search] for the [STA Interface Parameters]
- Choose the correct SSID and click on “Apply”



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

- Go again to the [STA Interface Setting]
- Set the [WAN Connection Type] to [STATIC(Fixed IP)] and enter the following data for the IP address:
    - 192.168.0.102 (or 192.168.0.103, 192.168.0.104, …)
    - 255.255.255.0
    - 192.168.0.1

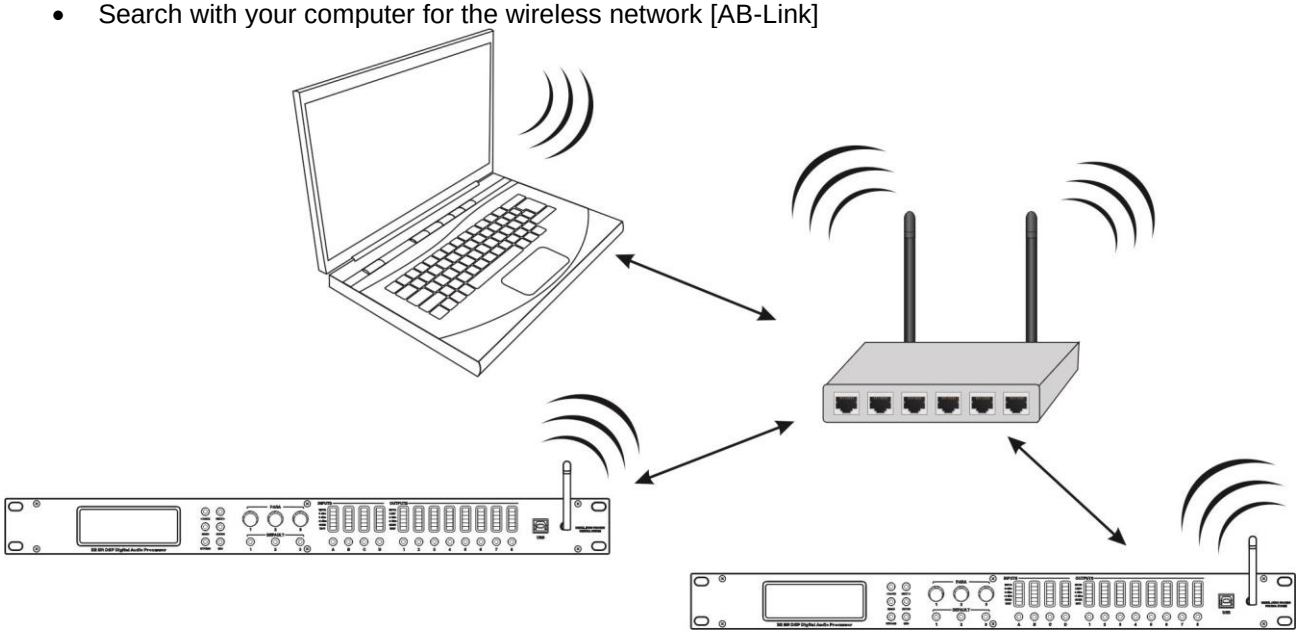


- Once this is done, click on [Mode Selection] in the upper left corner

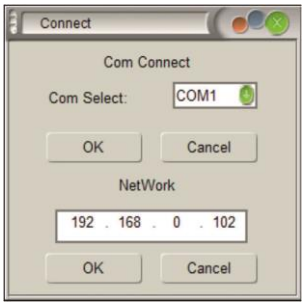
- The next information will show up. Click on [Device Management]

- Click on [Restart]

- 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



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:	90Vac ~ 240Vac, 50/60Hz
Frequency response:	20-20.000Hz (+/-0,5dB)
Dynamic range:	>110 dB
THD + noise:	<0.02% @ 1kHz, +18dBm
Input Impedance:	>10kΩ balanced
Output Impedance:	<60Ω balanced
Output level (max):	+20dBm (600 ohm load)
AD/DA:	32bit Floating Point
Sample rate:	96kHz
Crossover types:	Butterworth, Bessel or Linkwitz/Riley
Max Delay inputs:	1000ms
Max Delay output:	1000ms
EQ # input:	6 per input
EQ # output:	8 per output
EQ types:	Parametric, L-Shelf, H-Shelf
EQ gain:	-30dB ~ +15dB / 0,1dB steps
EQ Bandwidth:	Q value = 0,4 to 28.8 / 3 to 0.05
EQ frequencies:	20Hz ~20kHz (1/36 octave ISO spacing)
Limiters – threshold:	-10dBu to +20dBu
Limiters – attack time:	0,3 ~ 90ms
Limiters – release time:	4, 8, 16 or 32 x start-up time
Dimensions:	482(W) x 44(H) x 200(D) mm
Weight:	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: www.synq-audio.com

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!

WWW.SYNQ-AUDIO.COM