SQT-210
ACTIVE SERIES

DSP
FIR FILTERING

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, high-power active speaker cabinet for a wide range of different applications:
  - **CLUBS, DISCOTHEQUES, ... :** Incredible „hifi" sound, even at high SPL.
  - **RENTAL:** sturdy all-round cabinets with versatile audio inputs.
  - **STAGE:** perfect solution for music bands who want a compact but powerful audio system.
- **Bi-Amping "Pascal Audio" technology** for maximum impact: LF 810W + MID/HF 810W RMS-power
- **DSP-controlled** amplifier with different presets:
  - Parametric EQs
  - Limiter / compressors
  - Active 2-way crossover with **FIR filtering**
  - Factory presets for different applications
  - Sophisticated amplifier temperature management
  - Software and presets are upgradeable.
  - Fully tuned 4-Band parametric EQ for perfect sound
- Max. SPL: 136dB @ 1m
- Perfect for both permanent installations and portable use (Rental, Bands, DJ, ...)
- Equipped with high power woofers & compression driver:
  - LF: 2x 10" long excursion woofers
  - MID/HF: 1.4" B&C compression driver (3" voice coil)
- Rotatable 70°x 40° constant directivity horn.
- Two mixable input channels:
  - CH1: Balanced LINE input (XLR / Jack 6.3mm) & unbalanced (RCA / cinch)
  - CH2: Balanced LINE input (XLR / Jack 6.3mm)
- 2 audio outputs:
  - LINK OUTPUT: links the CH1-input
  - MIXED OUTPUT: link to other speakers
- PowerCON in/out with separate power switch.
- Different rigging option for horizontal / vertical suspension.
- Special quick-mount U-bracket (optional):
  - Easy TRUSS mounting with PAN/TILT possibility
  - Pole mount with PAN/TILT possibility
  - Handles on top/bottom with internal 38mm speaker stand adapter
- 1st choice Baltic birch plywood with scratch free black textured Polyurea finishing
- Combines perfectly with:
  - 1 or 2 SA-B15 active subwoofers
  - SQ-215 and SQ-218 passive subwoofers (extra amplifier / filter needed)
- Heavy duty rubber feet

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
- SQT-210 speaker cabinet
- Power cord.

SAFETY INSTRUCTIONS:

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: To reduce the risk of electric shock, do not open. 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 speaker can easily reproduce sound pressure levels (SPL) sufficient enough to cause severe and permanent hearing damage. Always protect your ears when you are exposed for a longer period to SPL in excess of 85dB!

- Even if the speaker cabinet is made of water-resistant material, the woofer and tweeter are not protected against humidity and rain. Therefore, this speaker is intended for indoor use only, use of this product outdoors, in humid conditions, voids all warranties.
- Always mount this speaker in safe and stable matter.
- Take special care when the cabinets are suspended. This is potentially dangerous and should only be carried out by technicians who have knowledge of the techniques and regulations of rigging speakers!
- 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. Condensation sometimes prevents the unit from working at full performance or may even cause damages.
- 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 safe ambient temperature is 45°C. Don't use this unit at higher ambient temperatures.
- 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. It must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- 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 appliance must be earthed to in order comply with safety regulations.
- In order to prevent electric shock, do not open. 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.

FUNCTIONS AMPLIFIER

1. **CH2 INPUT:** This input accepts both balanced and unbalanced microphones or line input. The SA-B15 only accepts line level signals. You can use both ¼" jack and male 3pin-XLR connectors.
   Attention: To prevent damage to the tweeters of your speaker cabinet, please set the gain CH2 to zero before you connect the input. Once connected you can turn the level up to the desired level.
2. **CH2 GAIN:** Used to set the input level of the microphone / line input (1).
3. **CH1 INPUT:** balanced / unbalanced line only input.
4. **CH1 GAIN:** Used to set the input level of the line input (4).
5. **LINE INPUT:** This input is the same as CH1 INPUT (3) but accepts "RCA / cinch" unbalanced line level audio signals like for example: CD-player, tuner, MP3-player, ...
   Attention: although the cinch input is stereo, the signal will be converted to mono inside the speaker.
6. **LINK OUT CH1:** This balanced output (3pin-XLR) makes it possible to connect several speaker cabinets together, the line output is NOT influenced by the settings for the master level.
7. **MIX OUT:** This balanced output (3pin-XLR) contains the mixed signal of both CH1 and CH2 inputs.
8. **ROTARY KNOB:** Used to control and set the different functions of the amplifier, see next chapter.
   - Press the rotary knob to enter the SETUP menu
   - Turn the rotary knob to select the desired menu item and press to select
   - Select menu item **[←BACK]** to return to higher level or quit the setup menu.
9. **DISPLAY:** Indicates the current working mode and helps navigation of the setup menu.
10. **STATUS LED:** indicates that the amplifier is switched on and displays the status:
    - **RED:**   not ready, overload or protect mode.
    - **GREEN:**   normal working mode, no issues.
    - **BLUE:**   in program mode, ready to receive a software update.
11. **SIG/CLIP LED:** is green when a signal is present and red when the amplifier is clipping (close to distortion). While the LED turns red you are working on the limits of the amplifier, limiters are activated.
12. **USB INPUT:** used to update the software and presets in the amplifier. The update procedure is explained in the instructions that come with the software update.
13. **MAINS INPUT:** Mains input with a blue Neutrik PowerCON® input socket, connect the supplied power cord here.
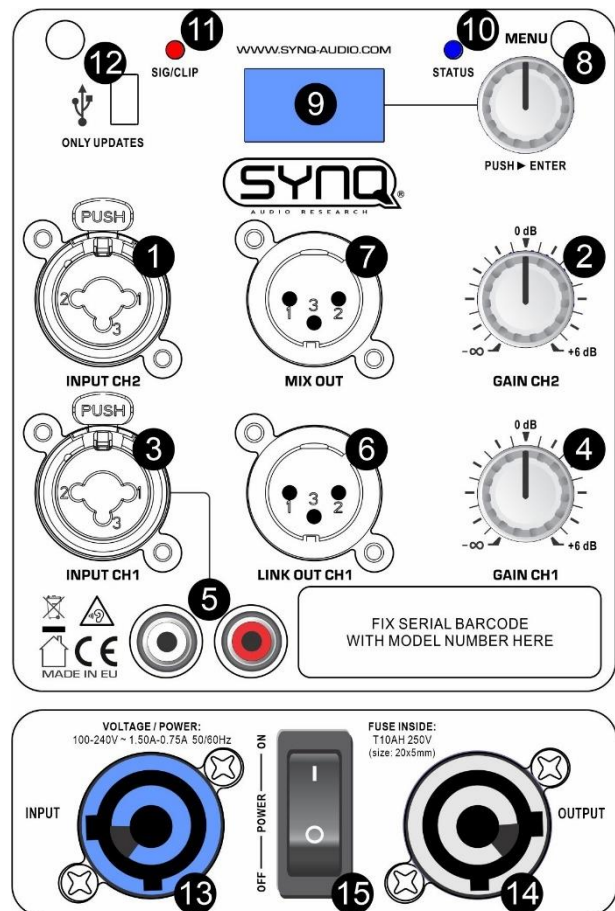
14. **MAINS OUTPUT:** Mains output with a grey Neutrik PowerCON® output socket. Used to connect / daisy chain the power of extra speaker cabinets. The output is limited to 10A @ 230Vac.
15. **POWER SWITCH:** Used to switch the internal amplifier on/off. The Status led (11) is lit while the cabinet is switched on.

SETUP MENU

Used to make al settings of the internal DSP-processor.

PRESETS

- **FOH LIVE:** most commonly used option for all-around use.
- **FOH 1SUB:** use this preset when the speaker is used with 1pc SA-B15 subwoofer.
- **FOH 2SUB:** use this preset when the speaker is used with 2pc SA-B15 subwoofers.
- **SPEECH:** optimizes the clarity and voice quality in speeches.

Note: all presets can be adapted to your own taste using the parametric equalizers.

INPUT 2

This input can be used to connect different audio sources. See point 2 in the previous chapter for full understanding.

PARAM EQ

Each preset can be further optimized by using these 4 parametric equalizers. At any moment you can enable/disable the EQs. You can also reset all values to their factory defaults by selecting the RESET-option and press the rotary knob during 5 seconds.

Level 1	Level 2	Parameters	Settings	Defaults
PRESETS	FOH LIVE			
	FOH 1SUB			*100Hz, 24dB/oct*
	FOH 2SUB			*100Hz, 24dB/oct*
	SPEECH			
INPUT 2	LINE			
	MIC			
	MIC + HPF			*120Hz, 12dB/oct*
PARAM EQ	EQ 1	FREQ	100 → 500Hz	*100Hz*
		GAIN	-6,0 → +6,0	*0,0*
	EQ 2	FREQ	50 → 15000Hz	*1000Hz*
		GAIN	-6,0 → +6,0	*0,0*
		Q	0,3 → 4,0	*0,7*
	EQ 3	FREQ	50 → 15000Hz	*1000Hz*
		GAIN	-6,0 → +6,0	*0,0*
		Q	0,3 → 4,0	*0,7*
	EQ 4	FREQ	1000 → 10000Hz	*8000Hz*
		GAIN	-6,0 → +6,0	*0,0*
	ENABLE	ON /OFF		*OFF*
	RESET	*(press 5 seconds until RESET)*		
SETTINGS	LEDs DIM	FULL ON		
		DIMMED		
		OFF		
ABOUT	HARDWARE	Vx.x.x		
	SOFTWARE	Vx.x.x		
BACK ←	BACK ←	*used to return back to the previous menu*		

SETTINGS

The different LEDs can be dimmed or even turned off when needed.

ABOUT

Used to check the current hardware and software versions.

BACK ←

Used to return to a higher menu of standard display.

SOME CONNECTION EXAMPLES

These are just some examples; many more connections are possible!

FULL RANGE

- Connect the included power cord to the PowerCON input (13)
- In the setup menu (8):
  - **PRESETS:** FOH LIVE
  - **PARAM EQ:** leave unchanged or adapt the EQs as you like.
- Connect the output of the mixing desk to CH1 (3)
- Increase the volume of CH1 (4) to the desired level, leave CH2 (2) closed.

FULL RANGE + MICROPHONE

- Connect the included power cord to the PowerCON input (13)
- In the setup menu (8):
  - **PRESETS:** FOH LIVE
  - **INPUT2:** SPEECH
  - **PARAM EQ:** leave unchanged or adapt the EQs as you like.
- Connect the output of the mixing desk to CH1 (3)
- Connect the microphone to CH2 (1)
- Increase the gain of CH1 (5) to the desired level.
- Increase the gain of CH2 (3) to the desired level.
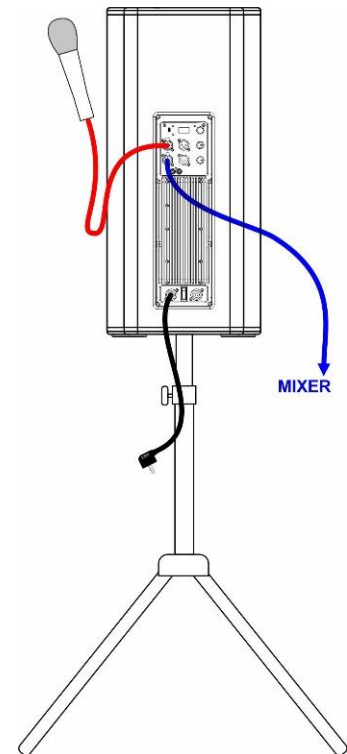
2 CABINETS LINKED IN FULL RANGE (MIC IS LINKED)

The microphone is audible on ALL cabinets

FIRST CABINET
- Connect the included power cord to the PowerCON input (13)
- In the setup menu (8):
  - **PRESETS:** FOH LIVE
  - **INPUT2:** SPEECH
  - **PARAM EQ:** leave unchanged or adapt the EQs as you like.
- Connect the output of the mixing desk to CH1 (3)
- Connect the microphone to CH2 (1)
- Connect the MIX OUT (7) to CH1 (3) of the next cabinet.
- Increase the gain of CH1 (4) to the desired level.
- Increase the gain of CH2 (2) to the desired level.

LINKED CABINET(S)
- Connect the included power cord to the PowerCON input (13)
- In the setup menu (8):
  - **PRESETS:** FOH LIVE
  - **INPUT2:** LINE
  - **PARAM EQ:** leave unchanged or adapt the EQs as you like.
- Connect the MIX OUT (7) of the first cabinet to CH1 (3)
  (for the next cabinets: Connect the LINK OUT (6) of the previous to CH1 (3))
- Increase the gain of CH1 (4) to the desired level.
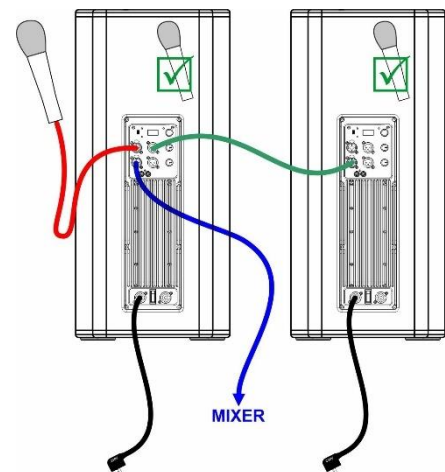
REMARK: if you don't want the mic only to be audible on the 1st cabinet: use LINK OUT (6) instead of MIX OUT (7) to link the next cabinet(s)
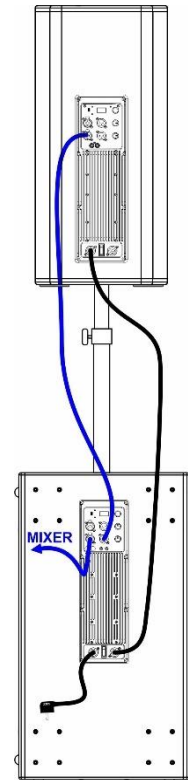
COMBINATION WITH 1SUBWOOFER

SQT-210
- Connect the included power cord to the PowerCON input (13) or connect the Power output of the subwoofer to the power input (13) of the SQT-210.
- In the setup menu (8):
  - **PRESETS:** FOH **1**SUB
  - **PARAM EQ:** leave unchanged or adapt the EQs as you like.
- Connect the LINK OUT of the subwoofer to CH1 (3)
- Increase the volume of CH1 (4) to the desired level, leave CH2 (2) closed.

SUBWOOFER (SA-B15)
- Connect the included power cord to the PowerCON input.
- In the setup menu:
  - **PRESETS:** STANDARD or DEEP
- Connect the LINK OUT to CH1 (3) of the top cabinet.
- Increase the volume of CH1 to the desired level, leave CH2 (3) closed.

PS: to get good results, please make sure to make the right balance between the CH1 gains of both TOP and SUB cabinets.

## COMBINATION WITH 2SUBWOOFERS

SQT-210
- Connect the included power cord to the PowerCON input (13) Or connect the Power output of the subwoofer to the power input (13) of the SQT-210.
- In the setup menu (8):
  - **PRESETS:** FOH **2**SUB
  - **PARAM EQ:** leave unchanged or adapt the EQs as you like.
- Connect the LINK OUT of the subwoofer to CH1 (3)
- Increase the volume of CH1 (4) to the desired level, leave CH2 (2) closed.

SUBWOOFER2 (SA-B15)
- Connect the included power cord to the PowerCON input or connect the Power output of SUBWOOFER1 to the power input.
- In the setup menu:
  - **PRESETS:** STANDARD or DEEP
- Connect the LINK OUT to CH1 (3) of the top cabinet.
- Increase the volume of CH1 to the desired level, leave CH2 (3) closed.

SUBWOOFER1 (SA-B15)
- Connect the included power cord to the PowerCON input.
- In the setup menu:
  - **PRESETS:** STANDARD or DEEP
- Connect the LINK OUT to CH1 of SUBWOOFER2.
- Increase the volume of CH1 to the desired level, leave CH2 (3) closed.
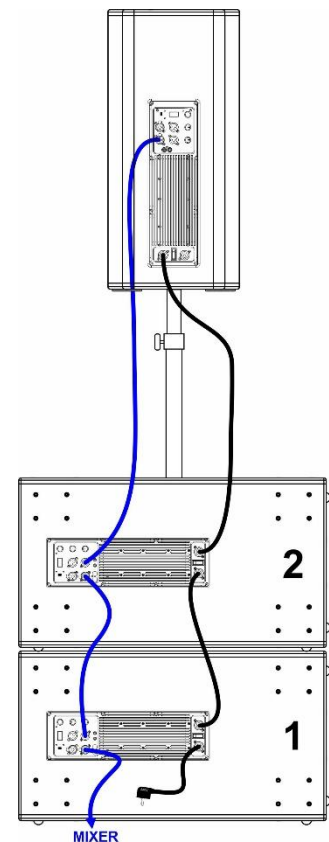
PS: to get good results, please make sure to make the right balance between the CH1 gains of both TOP and SUB cabinets. Also make sure that both subwoofers use the same preset.

RIGGING

- **<u>Important:</u> The installation must be carried out by qualified service personal only. Improper installation can result in serious injuries and/or damage to property. Overhead rigging requires extensive experience! Working load limits should be respected, certified installation materials should be used, the installed device should be inspected regularly for safety.**
- Make sure the area below the installation place is free from unwanted persons during rigging, de-rigging.
- The cabinet should be installed out of reach of people and outside areas where persons may walk by or be seated.
- Make sure that the installation area can hold a minimum point load of 10times the cabinet's weight.
- Always use certified cable or chains that can hold 12 times the weight of the cabinet.
- The cabinet should be well fixed; a free-swinging mounting is dangerous and may not be considered!
- The operator has to make sure that the safety-relating and machine-technical installations are approved by an expert before using them for the first time. The installations should be inspected every year by a skilled person to be sure that safety is still optimal.
- Always take special care when the cabinets are suspended. This is potentially dangerous and should only be carried out by technicians who have perfect knowledge of the techniques and regulations of rigging speakers!

SQT-210 BRACKET

The SQT-210 cabinet has special adapters on both sides to easily and quickly install the optional, specially developed "SQT-210 BRACKET" (order code: B08616). This allows the loudspeaker cabinet to be easily attached in different situations.

SUSPENSION CABINET IN VERTICAL POSITION (with variable tilt position)

- Remove the 38mm stand adapter from the U-bracket, you do not need it.
- Now install the fast clamp(s) on the base of the U-bracket:
    - Install 1 fast clamp in the center hole if you want to be able to align the speaker horizontally.
    - Install 2 fast clamps if you want to install the loudspeaker straight ahead.
- Carefully open the "U" of the SQT-210 bracket and make sure that the base of the U bracket with the clamp(s) is pointing upward.
- Slide the bracket over the two adapters on each side of the speaker.
- Always make sure the 2 wing latches face the front of the speaker.
- Now secure the U-bracket on both sides by turning the 4 wing latches a quarter turn clockwise. (You will feel/hear a click when the lock is tightened).
- Now the assembly can be suspended on the truss.
- The desired inclination can be set and fixed with the rotary knob.

MOUNTING ON A SPEAKER STAND (with variable tilt position)

- Do not remove the 38mm stand adapter from the U-bracket: it is used to place the speaker on the speaker stand.
- Carefully open the "U" of the SQT-210 bracket, making sure the base of the U-bracket with the 38mm adapter is pointing down.
- Slide the bracket over the two adapters on each side of the speaker.
- Always make sure that the 2 wing latches face the front of the speaker.
- Now secure the U-bracket on both sides by turning the 4 wing latches a quarter turn clockwise. (You will feel/hear a click when the lock is tightened).
- Now the speaker can be placed on the speaker stand.
- The desired inclination can be set and fixed with the rotary knob.

Remark 1: if you don't need the variable tilt positioning, you can also use the standard 38mm speaker adapter inside the handle.
*Remark 2: you can also use a speaker pole while installed on top of the subwoofer(s):*
- *1 SUB (1sub placed vertically): use "**TUB-LINK**" pole (code: H9105) or "**VP-130**" pole (code: B00655)*
- *2 SUBS (2subs stacked horizontally): use "**SPEAKER POLE (M20 threat)**" (code: B00659)*

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.

MODEL	SQT-210
Amplifier MID/HF-unit	810Wrms
Amplifier LF-units	810Wrms
Tweeter	1.4" B&C (3" voice coil)
Woofer	2x 10"
Dispersion (HxV)	70° x 40°
Max SPL @ 1m	136 dB
Freq. Resp. (+/-3dB)	60 – 20.000Hz
Freq. Resp. (+/-6dB)	40 – 20.000Hz
Phase linearity (+/-15°)	200 – 20.000Hz
THD (1kHz / 1W)	0,10%
Input Sensitivity line	1V
Input Sensitivity micro	15mV
Input impedance	20 kohm
EQ	4 parametric EQ's
Input CH1	Bal/unbal XLR/Jack
Input CH2	Bal/unbal XLR 3pin
Link output CH1	Bal/unbal XLR 3pin
Power input	100-240Vac 50/60Hz
Power consumption	5,5A @ 100Vac 2,3A @ 240Vac
Internal FUSE (20x5mm)	T 10A 250V ("H"-type: high breaking capacity)
Flying points	2x special wing locks
Dimensions HxWxD (mm)	700x330x400
Weight (kg)	28
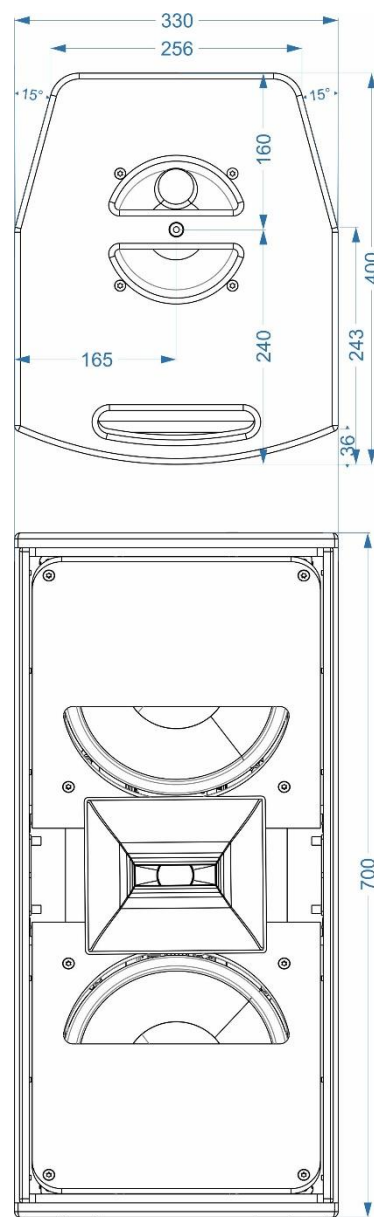
All information is subject to change without prior notice.
You can download the latest version of this user manual on our website: www.synq-audio.com

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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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