

SE-1800

2CH 1,8KW POWER AMPLIFIER

SE-3000

2CH 3KW POWER AMPLIFIER



ENGLISH

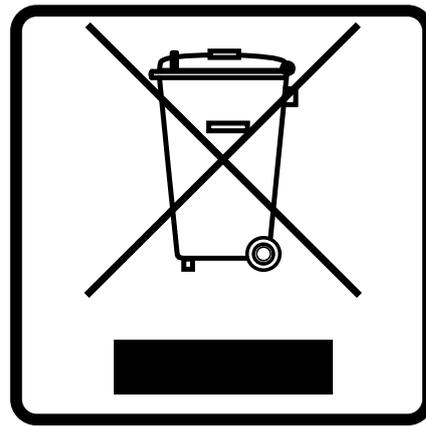
Operation Manual

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 país.

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

- The SE-1800 and SE-3000 power amplifiers are unprecedented in terms of price / performance.
- The sophisticated design of these lightweight CLASS-TD amplifiers ensures excellent and powerful low-frequency reproduction combined with crystal clear and delicately balanced high frequencies.
- Thanks to the big power reserve, excellent limiters and protections both can be used in all kinds of different applications such as discotheques, clubs, mobile audio, PA, rental, theater, ...
- The extremely high efficiency, reduced power waste and very low heat dissipation are the main advantages of these compact amplifiers!
- Both amplifiers are perfect for mobile applications: their 2U enclosure weighs barely 10 kg!
- The LCD-display shows: audio input level, mains voltage, working temperature and fan speed.
- Power output, stereo:
 - **SE-1800:** 2x 600Wrms @ 8 Ω 2x 900Wrms @ 4 Ω 2x 1200Wrms @ 2 Ω
 - **SE-3000:** 2x 1000Wrms @ 8 Ω 2x 1500Wrms @ 4 Ω 2x 2000Wrms @ 2 Ω
- Power output, bridge:
 - **SE-1800:** 1x 1800Wrms @ 8 Ω 1x 2400Wrms @ 4 Ω
 - **SE-3000:** 1x 3000Wrms @ 8 Ω 1x 4000Wrms @ 4 Ω
- All the protections you can think of for professional use:
 - Inaudible signal + current limiter
 - Overload protection
 - Short circuit current protection
 - DC protection
 - Thermal protection
 - AC, VHF protection
 - Soft start
 - ...
- Two FAN modes:
 - Silent mode: minimum fan noise for use in recording studio, theatre, ...
 - Power mode: maximum cooling for use in rough conditions like discotheques, summer festivals, ...
- 3 different working modes: stereo, bridge mode, mono mode (inputs linked)
- Input sensitivity: 0,75V / 1,0V / 1,5 V
- Balanced in/outputs on XLR / COMBO
- 2 Speakon® compatible connectors (left, right & bridge 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
- SE-1800 or SE-3000 Amplifier
- Power cable

SAFETY INSTRUCTIONS:



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



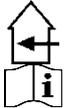
CAUTION: To reduce the risk of electric shock, do not remove the top cover. No user-serviceable parts inside. Refer servicing to qualified service personnel only.



The lightning flash with arrowhead symbol within the equilateral triangle is intended to alert the user 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 symbol means: this amplifier is capable of producing very high sound pressure levels that may permanently damage your ears. Hearing experts strongly advise against permanent exposure to high sound levels!

- 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.
- 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 safe ambient temperature is 40°C. Don't use this unit at higher ambient temperatures.
- Minimum distances around the apparatus for sufficient ventilation is 10cm.
- 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.
- The socket inlet is used as the disconnect device, the disconnect device shall remain readily operable
- This appliance must be earthed to in order comply with safety regulations.
- In order to prevent electric shock, do not open the cover. 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. Condensation sometimes prevents the unit from working at full performance.

CLEANING THE APPLIANCE:

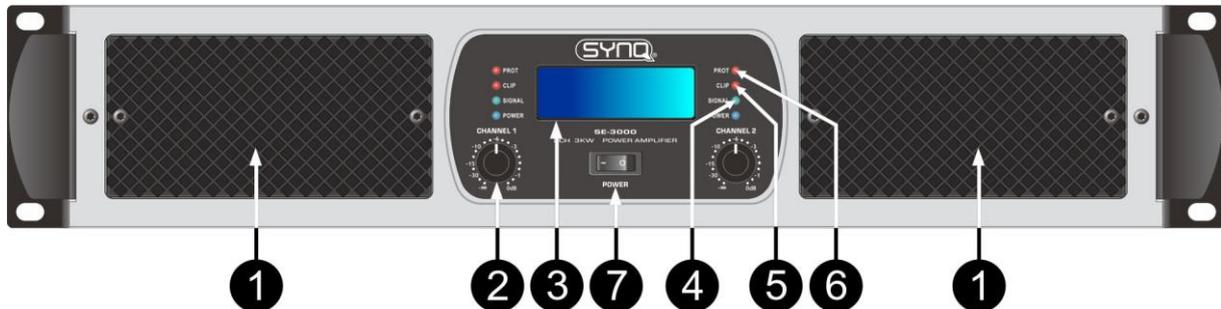
Clean by wiping with a polished cloth slightly dipped with water. Avoid getting water inside the unit. Do not use volatile liquids such as benzene or thinner which will damage the unit.

Clean the ventilation holes regularly with a vacuum cleaner. This increases the cooling capacity of the amplifier fans and helps preventing temperature overheating.

CONNECTIONS

Be sure to turn off the unit before you make changes to the wiring. For the signal inputs we recommend using the XLR-connections. Use good quality signal cables to ensure excellent audio quality. For the speakers you must use the Speakon® compatible outputs. In the description of the unit you will find more information on how to connect the amplifier.

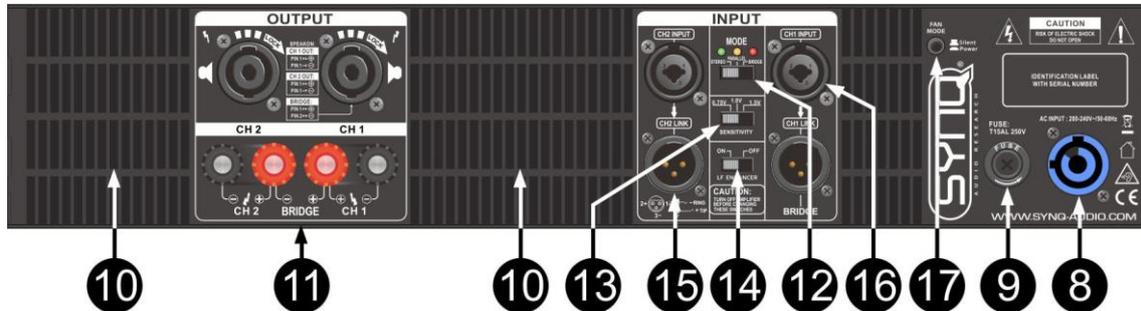
FUNCTIONS (FRONT)



- VENTILLATION HOLES:** during its operation the amplifier produces heat that needs to be dissipated. The fans inside the amplifier must be able to evacuate the heat in the most effective way. Therefore, it is very important not to cover any of the ventilation openings as this may result in overheating. Clean the ventilation holes regularly with a vacuum cleaner. This increases the cooling capacity of the amplifier fans and helps preventing temperature overheating.
- GAIN CONTROLS:** These potentiometers are used to control the input sensitivity of the amplifier. Each channel has its own control.
You can use these controls to set the maximum sound level of your setup:
 - Turn both controls on the amplifier to the left.
 - Put on some music on and make sure the VU meters on your mixer are at 0dB. (from time to time the red zone is lit)
 - Set the Master output from your mixer to maximum.
 - Open the Gain controls from the amplifier until the maximum desired sound level is reached.
 - Make sure nobody can reach the Gain controls of the amplifier.
 You have just set the maximum level the DJ is able to produce. Your neighbors will be glad...☺ (in some cases the DJ is not ☺)
Note: In Mono and Bridge mode, only the gain control of the left channel is used to adjust the input sensitivity.
- LCD DISPLAY:** shows all kinds of real-time information like audio input level, mains voltage, working temperature and fan speed.
- SIGNAL LEDs:** these LEDs indicate that a music signal is present at the inputs.
- CLIP LEDs:** The LEDs will light up in the following situations:
 - When the output signal has reached a high level which can result in distortion (clipping). Meanwhile the current limiters come in action to reduce the dynamic range (current) of the output and bring the amplifier back to its safe working range. In this case you are urged lower the input!
- PROTECT LEDs:** The protection LED is on in the following situations:
 - During the first second after switching on the amplifier.

- When the temperature of the power stage becomes too high.
 - In case of a technical defect: DC protection!
 - While switching the amplifier off, the “protect led” turns on for a short time.
7. **MAINS SWITCH:** Used to turn the amplifier on and off. A few seconds after switching on the amplifier it is ready for operation.

FUNCTIONS (REAR)



8. **MAINS INPUT** with PowerCON® compatible socket, connect the supplied mains cable here.
9. **MAINS FUSE:** protects the unit in case of electrical problems, always use the prescribed 30x6 mm ceramic fuse!
10. **FAN & VENTILLATION HOLES:** during its operation the amplifier produces heat that must be dissipated. The fans inside the amplifier must be able to evacuate the heat in the most effective way. Therefore, it is very important not to cover any of the ventilation openings as this may result in overheating.
11. **L+R OUTPUTS:** use the Speakon® compatible connectors (preferred) or the red/black wire terminals to connect your speaker cabinets. Wiring is as follows:

• **STEREO / MONO MODE:**

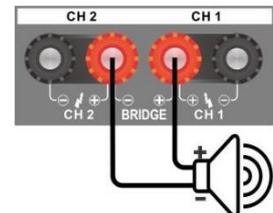
- **CH1:** POS(+) = PIN1+ NEG(-) = PIN1- (left channel)
 POS(+) = PIN2+ NEG(-) = PIN2- (right channel)
- **CH2:** POS(+) = PIN1+ NEG(-) = PIN1- (right channel)

Remark: this means that CH1 could be used as output for both left and right channel ...

• **BRIDGE MODE:**

- **CH1:** POS(+) = PIN1+ NEG(-) = PIN2+ (mono bridge, use left input)
- **CH2:** output not used

*Remark: when the wire terminals are used in bridge mode, the speaker is connected to the 2 RED colored terminals: POS(+) = RED terminal CH1 * NEG(-) = RED-terminal CH2*



12. **OPERATION MODE:** to choose the most adapted operation mode for your application:
- **STEREO MODE:** This is the most common mode, both channels are working separately.
 - **MONO MODE:** Basically, this is identical to stereo mode but the inputs of both channels are linked so the output will be mono. This means that you only need to use the CH1 input to drive both output channels.
 - **BRIDGE MODE:** Both channels are linked in “bridge mode” to obtain a mono output with much higher power.
13. **INPUT SENSITIVITY SWITCH:** you can choose 3 different input levels: 0,75V / 1V / 1,5V
14. **LF ENHANCER:** adds low frequency compensation to enhance the low frequency balance. The final result of this compensation varies according to the connected speaker cabinet type.
15. **BALANCED XLR OUTPUTS:** Can be used to send the signal to the next amplifier. Pin1: signal ground, Pin2: signal+, Pin3: signal -
16. **BALANCED COMBO INPUTS:** these connectors accept both JACK 6,3mm and XLR 3pin.
- **XLR-connector:** Pin1: signal ground Pin2: signal+ Pin3: signal -
 - **JACK-connector:** SLEEVE: signal ground TIP: signal+ RING: signal -
17. **FAN MODE SWITCH:**
- **Silent mode:** minimum fan noise for use in recording studio, theatre, ...
 - **Power mode:** maximum cooling for use in rough conditions like discotheques, summer festivals, ...

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.

SPECIFICATIONS	SE-1800	SE-3000
Power stereo 8 Ω (1kHz, THD+N<1%)	2x 600Wrms	2x 1000Wrms
Power stereo 4 Ω (1kHz, THD+N<1%)	2x 900Wrms	2x 1500Wrms
Power stereo 2 Ω (EIA 1kHz 40ms burst sine wave, THD+N<1%)	2x 1200Wrms	2x 2000Wrms
Power bridge 8 Ω (1kHz, THD+N<1%)	1x 1800Wrms	1x 3000Wrms
Power bridge 4 Ω (EIA 1kHz 40ms burst sine wave, THD+N<1%)	1x 2400Wrms	1x 4000Wrms
Power mono 8 Ω (1kHz, THD+N<1%)	2x 600Wrms	2x 1000Wrms
Power mono 4 Ω (1kHz, THD+N<1%)	2x 900Wrms	2x 1500Wrms
Power mono 2Ω (EIA 1kHz 40ms burst sine wave, THD+N<1%)	2x 1200Wrms	2x 2000Wrms
Power efficiency	>90%	>90%
Freq. Resp. (+/-1dB)	20 – 20.000Hz	20 – 20.000Hz
Input Sensitivity	0,75V / 1,0V / 1,5 V	0,75V / 1,0V / 1,5 V
Input impedance unbalanced	10 k Ω	10 k Ω
Input impedance balanced	20 k Ω	20 k Ω
S/R ratio (A-Weighted)	>100dB	>100dB
Damping factor (5Hz-1kHz)	>800	>800
Slew Rate	40V/uS	40V/uS
Cooling	variable speed fan	variable speed fan
Signal inputs	Balanced XLR/JACK	Balanced XLR/JACK
Signal outputs	Balanced XLR	Balanced XLR
Power supply	200 → 240Vac / 50Hz	200 → 240Vac / 50Hz
Dimensions (WxHxD mm)	482x88x365 (19"/2U)	482x88x365 (19"/2U)
Weight (kg)	9,34kg	10,06kg

Every 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



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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