

# EUROPOWER PMP860M/PMP880S/PMP1280S

## User manual

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Version 1.1 November 2006



[www.behringer.com](http://www.behringer.com)



# EUROPOWER PMP860M/PMP880S/PMP1280S

## IMPORTANT SAFETY INSTRUCTIONS



**CAUTION:** To reduce the risk of electric shock, do not remove the top cover (or the rear section). No user serviceable parts inside; refer servicing to qualified personnel.

**WARNING:** To reduce the risk of fire or electric shock, do not expose this appliance to rain and moisture. The apparatus shall not be exposed to dripping or splashing liquids and no objects filled with liquids, such as vases, shall be placed on the apparatus.



This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure—voltage that may be sufficient to constitute a risk of shock.



This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) The apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.

12) Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

13) Only use attachments/accessories specified by the manufacturer.

14) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



15) Unplug this apparatus during lightning storms or when unused for long periods of time.

16) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

17) CAUTION - These service instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operation instructions.



## FOREWORD



Dear Customer,

Welcome to the team of EUROPOWER users and thank you very much for expressing your confidence in BEHRINGER products by purchasing this power mixer.

It is one of my most pleasant tasks to write this letter to you, because it is the culmination of many months of hard work delivered by our engineering team to reach a very ambitious goal: to present you two outstanding power mixers that give you maximum flexibility and

performance with a unique sound character and broad range of striking functions.

The task to design the new PMP series certainly meant a great deal of responsibility, which we assumed by focusing on you, the discerning user and musician. It also meant a lot of work and night shifts to accomplish this goal. But it was fun, too. Developing a product usually brings a lot of people together, and what a great feeling it is when everybody who participated in such a project can be proud of what we've achieved.

It is our philosophy to share our joy with you, because you are the most important member of the BEHRINGER team. With your highly competent suggestions for new products you've greatly contributed to shaping our company and making it successful. In return, we guarantee you uncompromising quality as well as excellent technical and audio properties at an extremely favorable price. All of this will enable you to fully unfold your creativity without being hampered by budget constraints.

We are often asked how we can make it to produce such high-grade devices at such unbelievably low prices. The answer is quite simple: it's you, our customers! Many satisfied customers means large sales volumes enabling us to get better conditions of purchase for components, etc. Isn't it only fair to pass this benefit back to you? Because we know that your success is our success, too!

I would like to thank all people whose help on "Project PMP" has made it all possible. Everybody has made very personal contributions, starting from the designers of the unit to the many staff members in our company and finally to you, the user of BEHRINGER products.

My friends, it's been worth the trouble!

Thank you very much,


Uli Behringer

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## CAUTION!

 We would like to point out that high volume levels may damage your hearing and/or your headphones. Please turn the MAIN MASTER and MONITOR MASTER controls fully counter-clockwise before switching on the device. Always make sure that the appropriate volume is set.

## 1. INTRODUCTION

Congratulations! With the PMP mixer you have acquired a state-of-the-art power mixer that sets new standards. Right from the very start it has been our goal to design a revolutionary unit that can be used for a wide variety of applications. And indeed, this overwhelming power mixer gives you plenty of functionality and a broad range of connection and expansion options.

Your power mixer features our revolutionary **Coolaudio** amplifier technology that reduces weight and size of your device and provides extreme high output power.

Further advantages are the integrated **Voice Cancellor** that removes vocal tracks from a playback, the **FBQ** function for feedback detection and the **Speaker Processing** function for adjusting the frequency response of any loudspeaker—and everything with **24-bit/40 kHz** resolution.






The mixing consoles of the PMP series feature a state of the art, integrated switch-mode power supply (**SMPS**). One of the great advantages is that (compared to conventional circuits) due to its much greater efficiency, it consumes much less energy than a conventional power supply unit.

BEHRINGER is a company with its roots in professional recording studio technology. For many years we have been successful in developing products for studio and live use. These include microphones and 19" units of all types (compressors, enhancers, noise gates, tube processors, headphone amplifiers, digital effects, DI boxes, etc.), monitor and P.A. speakers as well as professional live and recording mixers. Our entire technical know-how has gone into your PMP power mixer.

### 1.1 Before you get started


#### 1.1.1 Shipment

Your PMP mixer was carefully packed at the factory and the packaging is designed to protect the unit from rough handling. Nevertheless, we recommend that you carefully examine the packaging and its contents for any signs of physical damage which may have occurred during transit.


-  **If the unit is damaged, please do NOT return it to BEHRINGER, but notify your dealer and the shipping company immediately. Otherwise, claims for damage or replacement may not be granted.**
-  **We recommend that you use a flight case, so as to give your power mixer optimum protection during use or transport.**
-  **Always use the original packing carton to prevent damage during storage or transport.**
-  **Make sure that children cannot play unsupervised with the device or its packaging.**
-  **Please ensure proper disposal of all packing materials.**


#### 1.1.2 Initial operation

Be sure that there is enough air space around the unit for cooling and, to avoid overheating, please do not place the EUROPOWER near radiators, etc.

 **Blown fuses must be replaced by fuses of the same type and rating! Please refer to the "SPECIFICATIONS" for details.**

The mains connection is made using the enclosed power cord and a standard IEC receptacle. It meets all of the international safety certification requirements.

 **Please make sure that all units have proper ground connection. For your own safety, never remove or disable the ground conductor from the unit or on the AC power cord.**

 **Important notes concerning installation: The sound quality may diminish within the range of powerful broadcasting stations and high-frequency sources. Increase the distance between the transmitter and the device and use shielded cables for all connections.**

#### 1.1.3 Online registration

Please do remember to register your new BEHRINGER equipment right after your purchase by visiting [www.behringer.com](http://www.behringer.com) (alternatively [www.behringer.de](http://www.behringer.de)) and kindly read the terms and conditions of our warranty carefully.

Should your BEHRINGER product malfunction, our goal is to have it repaired as quickly as possible. To arrange for warranty service, please contact the retailer from whom the equipment was purchased. Should your BEHRINGER dealer not be located in your vicinity, you may directly contact one of our subsidiaries. Corresponding contact information is included in the original equipment packaging (Global Contact Information/European Contact Information). Should your country not be listed, please contact the distributor nearest you. A list of distributors can be found in the support area of our website ([www.behringer.com](http://www.behringer.com)).

Registering your purchase and equipment with us helps us process your repair claims quicker and more efficiently.

Thank you for your cooperation!


### 1.2 The manual

This manual is designed to give you both an overview of all control elements and to provide detail about how to use them. To provide you with a clear structure, we have grouped the control elements according to their function. They can easily be found on the enclosed numbered illustrations. If you need more detailed information on specific topics, please visit our web site [www.behringer.com](http://www.behringer.com). The product-related information pages and the Ultraset-based glossary explain the relevant audio engineering terminology in full detail.

## 2. CONTROL ELEMENTS


A detailed description of all functions of your power mixer can be found in the following chapters. Please also refer to the enclosed sheet with the numbered illustrations to get an overview of the control layout.

### 2.1 Mono and stereo channels

- [1] The *HIGH* control in the EQ section governs the high-frequency range of the respective channel.
  - [2] Use the *MID* control to boost or cut the mid-range frequencies.
  - [3] The *LOW* control allows you to boost/cut the low-frequency range.
  - [4] With the *MON* control you can adjust the volume of each channel in the monitor mix.
  - [5] The *FX* control determines the signal level sent from each channel to the built-in effects processor; this signal is also present at the FX OUT jack (see [32]). The PMP880S/PMP1280S has two FX controls (*FX 1* and *FX 2*), so that you can use two effects simultaneously. Accordingly, it also provides two effect Aux paths (see [32]).
-  **Please note that the effects processor signal will be inaudible when the FX RETURN control ([21]) is set fully counter-clockwise.**
- [6] For the mono input channels, the PMP880S/PMP1280S has a *PAN(ORAMA)* control which determines the position of the channel signal in the stereo main mix. The PMP860M has no *PAN* on the input channels, because it is a dual-mono power mixer.
  - [7] The *BAL(ANCE)* control for the stereo channels of the PMP880S/PMP1280S corresponds to the *PAN* control for the mono channels. It determines the relative volume of the left and right input signals before they are routed to the stereo main output. The PMP860M has no stereo channels and hence no *BAL* control, because it is a dual-mono power mixer.
  - [8] The *LEVEL* control adjusts the channel signal level in the main mix.

#### 2.1.1 Input section

- [9] The *CLIP* LED is very useful to control the input gain. It should never be constantly illuminated (only with signal peaks).
- [10] The *PAD* switch reduces the input sensitivity of the channel by approx. 30 dB, to connect for example line-level signals.
- [11] The balanced *HI-Z* input (1/4" TRS) can be used for line-level signal sources, e.g. keyboards, electric guitars and basses.
- [12] Each channel has a balanced *LOW-Z* microphone input with XLR connectors, which also supply the +48 V phantom power for condenser microphones (see [27]).
- [13] Unbalanced stereo line inputs with 1/4" connectors for stereo channels 7 to 10 of the PMP880S/PMP1280S. They can be used for connecting keyboards with stereo outputs or stereo drum machines.

 **Please remember to use either the microphone or the line input of a channel at a time, but never both at the same time!**

### 2.2 Effects section

- [14] List of all multi-effects presets.
- [15] *LED* level meter of the effects processor. Since the PMP880S/PMP1280S allows you to select two effects simultaneously, it also has two level meters (*DUAL FX*). Be sure that the clip LED illuminates for signal peaks only. If it is illuminated all the time, it is a sign that the effects processor is overloading and hence producing unpleasant distortion.
- [16] The *EFFECT* display (PMP880S/PMP1280S: two displays) shows the currently selected preset.
- [17] Turn the *PROGRAM* control (PMP880S/PMP1280S: one control each for FX 1 and FX 2) to select an effects preset (preset number starts flashing). Push the control briefly to confirm your selection.
- [18] Press the *FX IN* button (PMP880S/PMP1280S: *FX 1 IN* and *FX 2 IN*) to activate the effects processor.

### 2.3 Main and monitor section

- [19] Your power mixer is equipped with two graphic 7-band equalizers. The upper one processes the monitor signal, the lower one the main signal. Use the EQs to adjust the sound to the room acoustics.
- [20] Press the *FBQ IN* switch to activate the FBQ Feedback Detection System. The frequencies causing feedback are shown by the brightly lit fader LEDs. Simply lower the level of the respective frequency range until feedback disappears and the LED goes out. Your power mixer offers this function both for the main and the monitor mix.
- [21] Turn the *FX RET* control to add the effect signal to the main mix (lower) or monitor mix (upper). The PMP880S/PMP1280S allows you to use two effects at the same time, it also has two FX controls each for the main and monitor mixes: when the *FX RET 1* and *FX RET 2* controls are fully counterclockwise, no effect signal is added.
- [22] The *2TR IN* control adjusts the volume of the 2 Track In signal (see [35]).
- [23] The *MONITOR MASTER* control adjusts the monitor output volume.
- [24] Use this 5-digit LED meter to control the output level of the monitor signal. The upper *LIM* LED illuminates when the internal amp protection circuit responds to output levels that are too high.
- [25] The *MAIN MASTER* control is used to adjust the main output volume.
- [26] Use this 5-digit LED meter to control the output level of the main signal. The PMP880S/PMP1280S has two rows of LED meters (*L/R*), because the signal is stereo. The upper *LIM* LED illuminates when the internal amp protection circuit responds to output levels that are too high.
- [27] +48V phantom power is provided for condenser microphones. The phantom power supply is activated for all channels with the *PHANTOM* switch and the PHANTOM LED above the switch illuminates.
- [28] Use the *POWER AMP* switch to determine the operating mode of your power mixer.


The PMP880S/PMP1280S has three different operating modes: In *MAIN L/MAIN R* mode it functions as a stereo amplifier, i.e. the left and right main stereo signals are sent to OUTPUT A (L) and OUTPUT B (R). In *MON/MONO* mode it functions as a dual mono amplifier. I. e. OUTPUT A sends the monitor signal, and OUTPUT B the main signal (mono). In *BRIDGE AMP MODE* the output power of outputs A and B are added and provided at OUTPUT B.




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The PMP860M also has three operating modes, since it can be operated in two modes with the switch in its upper position (*MAIN/MAIN (BRIDGE)* mode), depending on the pin connections of the speaker cables. In *MAIN/MAIN (BRIDGE)* mode power of both outputs is added and provided at OUTPUT B (Speakon cable, pins 1+/2+). With the normal pin connections (Speakon cable, pins 1+/1-) a main signal is provided in this mode at OUTPUT A and B (not bridged). In *MON/MAIN* mode, the mixer can also be used as a dual mono amplifier, i.e. OUTPUT A provides the monitor signal, while the main signal is present at OUTPUT B.

Please refer to [44] and [45] as well as chapter 4.4 "Loudspeaker connectors".

 In **BRIDGE** mode, always connect only one loudspeaker with an impedance of at least **8 Ω** to OUTPUT B (pins 1+/2+)! Please note that OUTPUT A must **NEVER** be used in BRIDGE mode (with pin connections 1+/2+)!

 In all other operating modes, the minimum impedance of the speaker connected must not fall below **4 Ω**.


[29] Use the *SPEAKER PROCESSING* switch to activate a filter that adapts the mixer to the specifications of your loudspeakers. If the speakers have a limited frequency response in the bass range, it allows you to adapt it optimally to the frequency response of the speakers.

[30] If *STANDBY* is pressed, all input channels are muted. During breaks you can thus prevent the microphones from picking up noise or interference, which would then be reproduced by the P.A. system. The advantage is that all faders can be left untouched while you play a CD via the CD/TAPE inputs (see [35]). There is also no need to move down the faders of muted channels and lose your mix.

## 2.3.1 Connectors

[31] The *FOOTSWITCH* connector is for a standard footswitch. You can activate an "effect bypass" that mutes the effects processor. Please use a dual footswitch for the PMP880S/PMP1280S, so that you can enable/disable FX1 and FX2 independently of each other. In this case, the tip of the 1/4" plug controls FX1, and the ring FX2.

[32] The *FX OUT* connector is used to route the FX SEND signal from the input channels, for example, to the input of an external effects processor. The PMP880S/PMP1280S has two FX controls per input signal (see [5]) and also two FX OUT connectors (*FX OUT 1* and *FX OUT 2*).

 **Please note: When you connect a mono plug to one of the FX OUT jacks, the signal path from the respective FX send to the built-in effects processor is interrupted. For each FX send you can either use the built-in effect or the corresponding FX OUT jack (for an external effect), but never both at the same time. When you use a stereo plug (tip and ring interconnected) you can use the built-in effects processor and the FX OUT jacks in parallel.**


[33] Use the *AUX IN* 1/4" inputs to route an external stereo signal to the main mix. This can be the signal generated by an external effects processor. Use the left input for mono signals, which are then reproduced on both stereo sides. The PMP860M has only one mono AUX IN connector.

[34] The *AUX IN* control adjusts the volume of the external signal in the main mix.

[35] The *2TR IN* RCA input allows you to feed in external stereo signals, e.g. from a CD player, tape deck or other line-level source.

[36] The *VOICE CANCELLER* filters vocal-specific frequencies from the 2TR IN signal. This function can be used for karaoke, i.e. you can remove the vocals from a song and then sing along with the music yourself.


[37] The *REC OUT* (RCA) provides line-level signals from the power mixer to a DAT recorder, for example. On the PMP880S/PMP1280S the REC OUT signal is stereo and on the PMP860M two identical mono signals are provided.

 **If the REC OUT signal is connected to a recorder whose output signal is returned to the 2TR IN, feedback can occur when you activate the record function. So, disconnect the 2TR IN from the recorder, before you start recording!**

[38] The MAIN 1/4" connectors allow you to send the main signal to an external amplifier, when you only wish to use the mixer and effects section. The signal is taken pre-power stage of the mixer. It is also possible to use only the left jack of the output. The PMP860M has only one mono output connector.

[39] Connect your monitor power amps or active monitor speakers to the mono *MONITOR* output to monitor the signal mix created with the MON controls or to route it to the musicians on stage.

[40] Use the *POWER* switch to put the unit into operation. The POWER switch should always be in the "Off" position when you are about to connect the unit to the mains.

 **Please note: The POWER switch does not fully disconnect the unit from the mains. Unplug the power cord completely when the unit is not used for prolonged periods of time.**

## 2.4 Rear panel

[41] The mains connection is on a standard IEC receptacle. An appropriate power cord is supplied with the unit.


[42] *FUSE HOLDER*. Before connecting the unit to the mains, ensure that the voltage setting matches your local voltage. Blown fuses should only be replaced by fuses of the same type and rating. Please also read the information given in chapter 6 "SPECIFICATIONS".

[43] Loudspeaker *OUTPUT A*.

PMP880S/PMP1280S: Depending on the operating mode selected (see [28]) either the left main signal or the monitor signal is provided at OUTPUT A. **NEVER** use this output in bridged mono mode.

PMP860M: In *MON/MAIN* mode, the monitor signal is provided at OUTPUT A (see [28]). **NEVER** use this output in bridged mono mode, except when you use a cable with the normal pin connections (pins 1+/1-). In this case you can take the mono main signal from this output in *MAIN/MAIN (BRIDGE)* mode (not bridged). Please also refer to chapter 4.3 "Loudspeaker connection".

 **The impedance of the loudspeaker connected must not fall below 4 Ω.**

 **Please note that the power delivered to the speaker in bridged mono mode is considerably higher than in other operating modes. Please read the information given on the rear panel of the power mixer.**

[44] Loudspeaker *OUTPUT B*.

PMP880S/PMP1280S: Depending on the operating mode selected (see [28]) either the right main signal, the mono main signal or the bridged mono signal is provided at OUTPUT B.

PMP860M: Either the main or the bridged main mono signal is provided at OUTPUT B (see [28]). When you use a cable with the normal pin connections (pins 1+/1-), it is possible

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in MAIN/MAIN (BRIDGE) mode to take the mono main signal from this output (not bridged). Please also refer to chapter 4.3 "Loudspeaker connection".

- 👉 In BRIDGE mode, always connect only one loudspeaker with an impedance of at least  $8\ \Omega$  to OUTPUT B (pins 1+/2+)! Please note that OUTPUT A must NEVER be used in BRIDGE mode (with pin connections 1+/2+)!
- 👉 In all other operating modes, the minimum impedance of the speaker connected must not fall below  $4\ \Omega$ .
- 👉 Information on how to properly connect your speaker with regard to polarity can be found on the rear of the mixer (PINOUTS).

45 SERIAL NUMBER.

## 3. DIGITAL EFFECTS PROCESSOR

### 24-BIT MULTI-EFFECTS PROCESSOR

This built-in effects module produces high-grade standard effects such as reverb, chorus, flanger, delay and various combination effects. The integrated effects module has the advantage of requiring no wiring. This way, the danger of creating ground loops or uneven signal levels is eliminated at the outset, completely simplifying the handling.

These effect presets are designed to be added to dry signals. If you move the FX RET control, you mix the channel signal (dry) and the effect signal.

- 👉 Turn down the FX controls in those channel strips whose signals you don't wish to process.

## 4. INSTALLATION

### 4.1 Mains connection

Blown fuses must be replaced by fuses of the same type and rating.

The mains connection is made using the enclosed power cord and a standard IEC receptacle. It meets all of the international safety certification requirements.

- 👉 Please make sure that all units have a proper ground connection. For your own safety, never remove or disable the ground conductor from the unit or of the AC power cord.

### 4.2 Audio connections

The inputs and outputs of the BEHRINGER EUROPOWER are unbalanced 1/4" TS connectors—except for the balanced mono line inputs. Of course, all inputs and outputs work with both balanced and unbalanced connectors. The Tape Ins and Outs are on stereo RCA connectors.

- 👉 Please ensure that only qualified personnel install and operate the power mixer. During installation and operation, the user must have sufficient electrical contact to earth. Electrostatic charges might affect the operation of the unit.

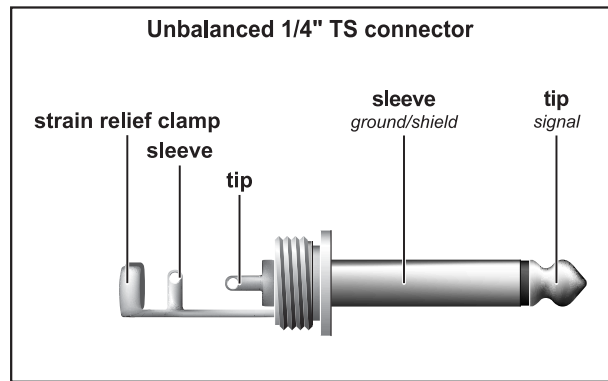
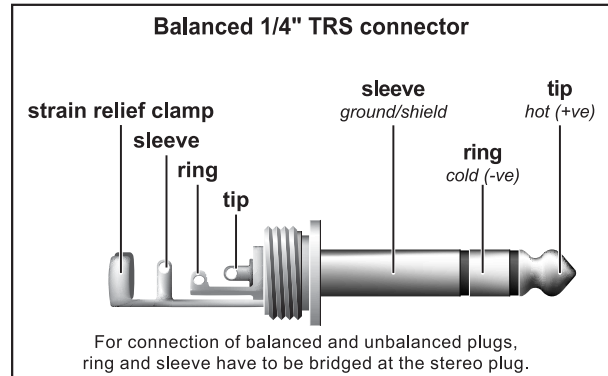


Fig. 4.1: 1/4" TS connector



For connection of balanced and unbalanced plugs, ring and sleeve have to be bridged at the stereo plug.

Fig. 4.2: 1/4" TRS connector

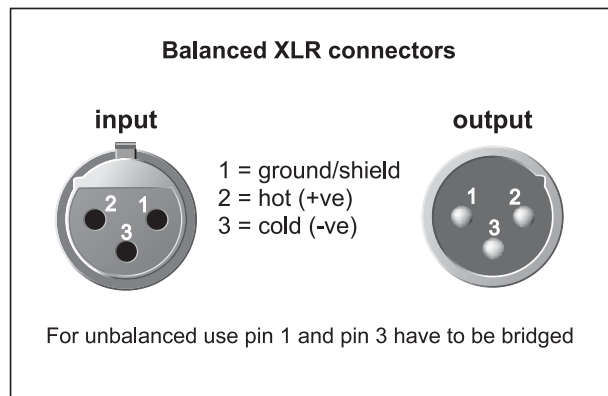
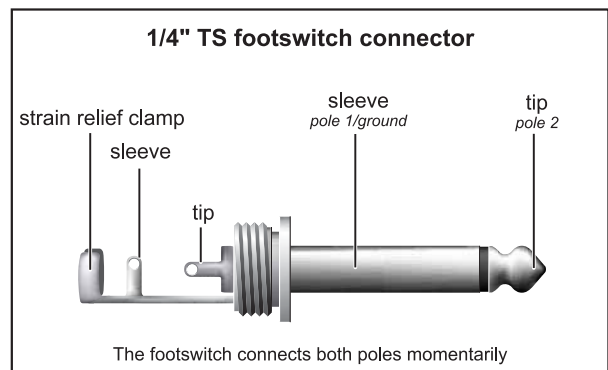


Fig. 4.3: XLR connectors



The footswitch connects both poles momentarily

Fig. 4.4: 1/4" TS connector for footswitch

- 👉 Please use a dual footswitch for the PMP880S/PMP1280S, so that you can enable/disable FX1 and FX2 independently of each other. In this case, the tip of the 1/4" plug controls FX1, and the ring FX2.

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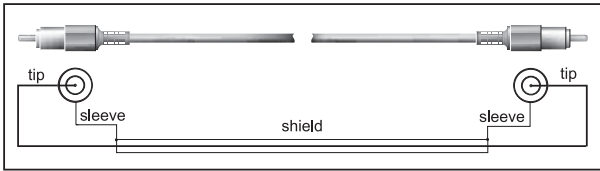


Fig. 4.5: RCA cable

## 4.3 Loudspeaker connection

Your EUROPOWER is equipped with high-quality Neutrik Speakon-compatible loudspeaker connectors, which ensure safe and trouble-free operation. This connector was especially developed for high-power loudspeakers. Once it is plugged in, it safely locks into position and cannot be accidentally disengaged. It prevents the occurrence of electrical shock and ensures the correct polarity. Each of the connectors carries only the assigned single signal (see tab. 4.1/fig. 4.7 and the information on the rear panel of the power mixer).

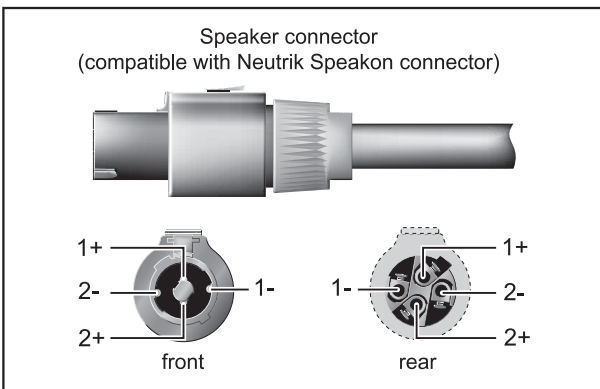


Fig. 4.6: Loudspeaker connector

Please be sure to only use commercial Speakon cables (type NL4FC) for connecting your loudspeakers to the mixer. Please check the pin connections of your loudspeakers and cables depending on the EUROPOWER speaker output you choose.

EUROPOWER PMP880S/PMP1280S				
OUTPUT A	1+	1-	2+	2-
MAIN L	POS	NEG	-	-
MON	POS	NEG	-	-
OUTPUT B	-	-	POS	NEG
OUTPUT B	1+	1-	2+	2-
MAIN R	POS	NEG	-	-
MONO	POS	NEG	-	-
BRIDGE	POS	-	NEG	-

EUROPOWER PMP860M				
OUTPUT A	1+	1-	2+	2-
MAIN MONO	POS	NEG	-	-
MON	POS	NEG	-	-
BRIDGE	-	-	-	-
OUTPUT B	1+	1-	2+	2-
MAIN MONO	POS	NEG	-	-
MAIN	POS	NEG	-	-
BRIDGE	POS	-	NEG	-

Tab. 4.1: Pin connections of loudspeaker connectors

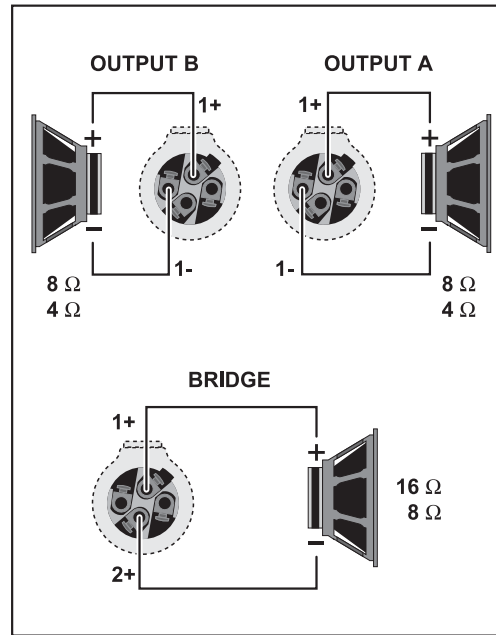


Fig. 4.7: Speakon connector assignment

## 5. WIRING EXAMPLES

For stereo operation the POWER AMP switch [28] of the PMP880S/PMP1280S must be set to its upper position (MAIN L/ MAIN R). Outputs A and B deliver the stereo main signal to the P.A. speakers. Two active speakers, wired in parallel, are connected to the PREAMP MONITOR output. They are used as on-stage monitor speakers. The effects processors can be switched on and off with a dual footswitch. This set-up is not possible with the PMP860M (no stereo operation possible).

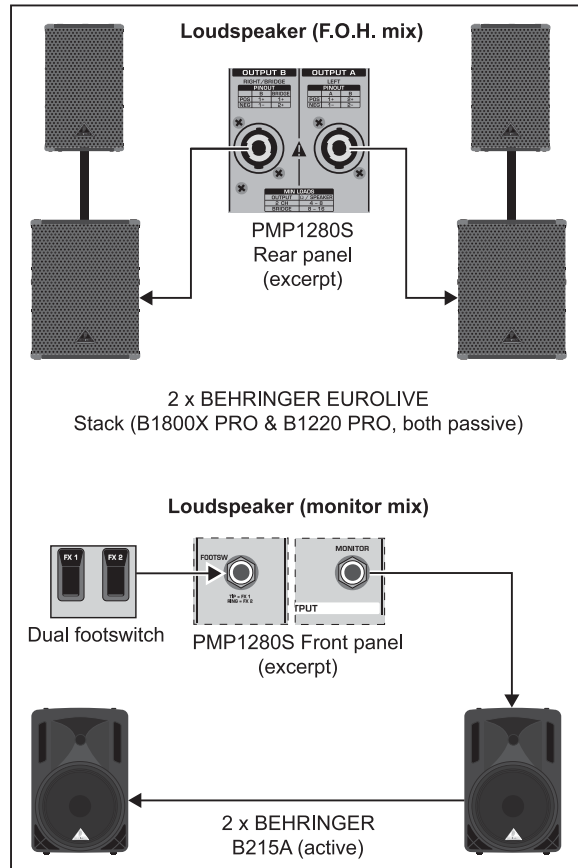


Fig. 5.1: EUROPOWER mixer as a stereo amplifier (example)



# EUROPOWER PMP860M/PMP880S/PMP1280S

Both the PMP880S/PMP1280S and the PMP860M can be set-up for dual mono operations. The POWER AMP switch [28] must be set to its lower (PMP860M) or center position (PMP880S/PMP1280S). The two loudspeaker outputs provide the main and monitor signals independently of each other and to two loudspeakers each, which are wired in parallel.

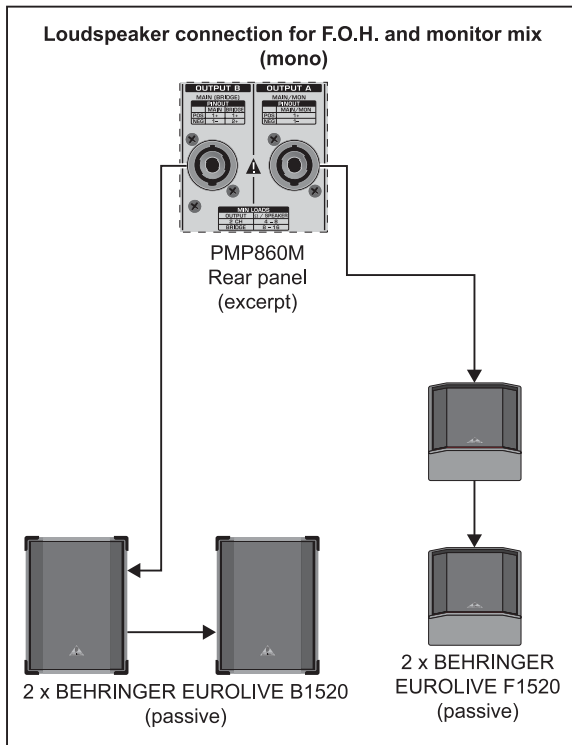


Fig. 5.2: EUROPOWER as a dual mono amplifier (example)

This illustration shows just one example of how the channels of your power mixer can be used, including the connection of mono and stereo sources, and the tape ins and outs recording the mix signal or playing back external signals.

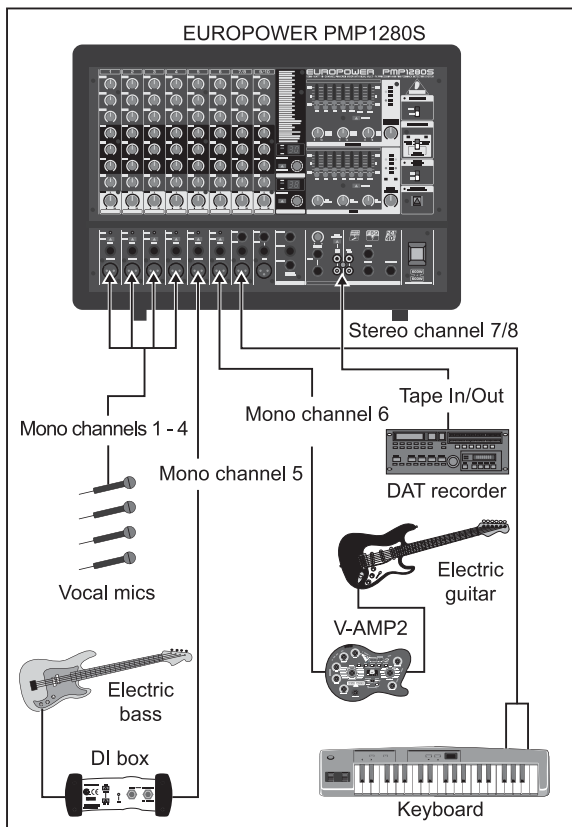


Fig. 5.3: Standard set-up (example)

One example of how to use your power mixer with a subwoofer in bridged mono mode. The illustration shows the PMP1280S with a subwoofer connected to OUTPUT B that will receive the full (bridged) output power. A separate stereo power amp (BEHRINGER EUROPOWER EP1500) for the stereo main P.A. signal is connected to the PRE AMP MAIN outputs. The PRE AMP MONITOR output is wired to active speakers on the stage. This application can also be realized with the PMP860M, except for the main P.A. signal, which would be mono.

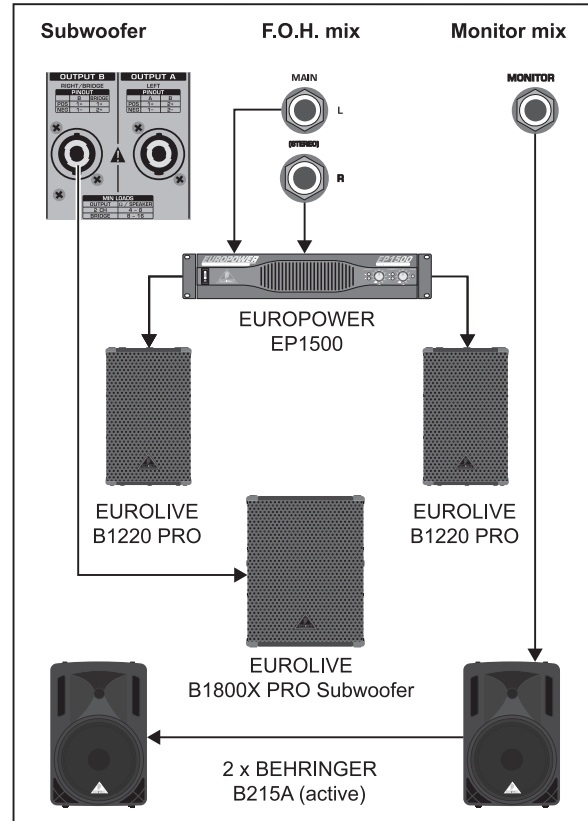


Fig. 5.4: EUROPOWER in bridged mono mode

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## 6. SPECIFICATIONS

	PMP860M	PMP880S	PMP1280S
<b>MICROPHONE INPUTS</b>			
Type	XLR, electronically balanced input circuit		
Mic E.I.N. (20 Hz - 20 kHz)			
@ 0 Ohm source resistance	-112 dB / 114 dB A-weighted		
@ 50 Ohm source resistance	-112 dB / 114 dB A-weighted		
@ 150 Ohm source resistance	-112 dB / 114 dB A-weighted		
Frequency response	< 10 Hz - 200 kHz (-1 dB)		
	< 10 Hz - > 200 kHz (-3 dB)		
Gain	+30 dB, +10 dB with pad		
Max. input level	+12 dBu @ +10 dB gain		
Impedance	approx. 2.2 kOhm balanced / 1.1 kOhm unbalanced		
Signal-to-noise ratio	110 dB / 114 dB A-weighted (0 dBu In @ +10 dB gain)		
Noise (THD + N)	0.001% / 0.0007% A-weighted		
<b>MONO LINE INPUTS</b>			
Type	1/4" TS connectors, balanced		
Impedance	approx. 20 kOhm, balanced		
Max. input level	+21 dBu		
<b>STEREO LINE INPUTS</b>			
Type	-	1/4" TRS connectors, unbalanced	
Impedance	-	approx. 100 kOhm, unbalanced	
Max. input level	-	+21 dBu	
<b>EQUALIZER</b>			
Low	80 Hz / +/-15 dB		
Mid	2.5 kHz / +/-15 dB		
High	12 kHz / +/-15 dB		
<b>2 TRACK INPUT</b>			
Type	RCA		
Impedance	approx. 10 kOhm		
<b>PREAMP OUTPUTS</b>			
<b>MAIN</b>			
Type	1/4" TS connectors, unbalanced		
Impedance	approx. 150 Ohm, unbalanced		
Max. output level	+21 dBu		
<b>MONITOR</b>			
Type	1/4" TS connectors, unbalanced		
Impedance	approx. 150 Ohm, unbalanced		
Max. output level	+21 dBu		
<b>STEREO OUTPUTS</b>			
Type	-	1/4" TRS connectors, unbalanced	
Impedance	-	approx. 150 Ohm, unbalanced	
Max. input level	-	+21 dBu	
Type	RCA, mono output	RCA	
Impedance	approx. 1 kOhm	approx. 1 kOhm	
Max. input level	+21 dBu	+21 dBu	
<b>MAIN MIX SYSTEM DATA</b>			
Noise:			
MAIN MIX @ -∞	-102 dB/-106 dB A-weighted		
Channel fader -∞			
MAIN MIX @ 0 dB	-88 dB/-91 dB A-weighted		
Channel fader -∞			
MAIN MIX @ 0 dB	-84 dB/-86 dB A-weighted		
Channel fader @ 0 dB			

# EUROPOWER PMP860M/PMP880S/PMP1280S

	PMP860M	PMP880S	PMP1280S
<b>LOUDSPEAKER OUTPUTS</b>			
Type	Neutrik Speakon-compatible connector		
Load impedance:			
MAIN L/R	-	4 - 8 Ohm	4 - 8 Ohm
MONITOR/MAIN MONO	4 - 8 Ohm		
MAIN MONO/MAIN MONO	4 - 8 Ohm		
BRIDGE	8 - 16 Ohm		
<b>DSP</b>			
Converter	24-bit Delta-Sigma, 64/128-times oversampling		
Dynamics D/A	90 dB		
Sampling rate	40 kHz		
Delay Time	max. 5 secs		
Signal run time (Line In > Line Out)	approx. 1.5 ms		
<b>DISPLAY</b>			
Type	2-digit, 7-segment LED	2 x 2-digit, 7-segment LED	
<b>OUTPUT POWER</b>			
RMS @ 1% THD (sine wave), both channels driven:			
8 Ohm per channel	165 W	165 W	215 W
4 Ohm per channel	250 W	250 W	450 W
RMS @ 1% THD (sine wave), bridged mode:			
8 Ohm	500 W	500 W	900 W
Peak Power, both channels driven:			
8 Ohm per channel	225 W	225 W	300 W
4 Ohm per channel	350 W	350 W	600 W
Peak Power, bridged mode:			
8 Ohm	800 W	800 W	1200 W
<b>POWER SUPPLY (Europe, Australia)</b>			
Mains voltage	230 V~, 50 Hz		
Fuse			T 6.3 A H 250 V
<b>POWER SUPPLY (China/Korea)</b>			
Mains voltage	220 V~, 50 Hz		
Fuse			T 6.3 A H 250 V
<b>POWER SUPPLY (USA, Canada)</b>			
Mains voltage	120 V~, 60 Hz		
Fuse			T 10 A H 250 V
<b>POWER SUPPLY (Japan)</b>			
Mains voltage	100 V~, 50/60 Hz		
Fuse			T 10 A H 250 V
<b>POWER CONSUMPTION</b>			
Power consumption			1000 W
Mains connector	IEC standard receptacle		
<b>DIMENSIONS/WEIGHT</b>			
Dimensions (H x W x D)	approx. 12 2/5" x 18 1/10" x 8 3/5"		
	approx. 315 mm x 460 mm x 220 mm		
Weight	8.5 kg	9.4 kg	10.6 kg
	18 3/4 lbs.	20 3/4 lbs.	23 1/3 lbs.

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BEHRINGER is constantly striving to maintain the highest professional standards. As a result of these efforts, modifications may be made from time to time to existing products without prior notice. Specifications and appearance may differ from those listed or illustrated.

## 7. WARRANTY

### § 1 OTHER WARRANTY RIGHTS AND NATIONAL LAW

1. This warranty does not exclude or limit the buyer's statutory rights provided by national law, in particular, any such rights against the seller that arise from a legally effective purchase contract.
2. The warranty regulations mentioned herein are applicable unless they constitute an infringement of national warranty law.

### § 2 ONLINE REGISTRATION

Please do remember to register your new BEHRINGER equipment right after your purchase by visiting [www.behringer.com](http://www.behringer.com) (alternatively [www.behringer.de](http://www.behringer.de)) and kindly read the terms and conditions of our warranty carefully.

Registering your purchase and equipment with us helps us process your repair claims quicker and more efficiently.

Thank you for your cooperation!

### § 3 WARRANTY

1. BEHRINGER (BEHRINGER International GmbH including all BEHRINGER subsidiaries listed on the enclosed page, except BEHRINGER Japan) warrants the mechanical and electronic components of this product to be free of defects in material and workmanship for a period of one (1) year\* from the original date of purchase, in accordance with the warranty regulations described below. If the product shows any defects within the specified warranty period that are not excluded from this warranty as described under § 5, BEHRINGER shall, at its discretion, either replace or repair the product using suitable new or reconditioned parts. In the case that other parts are used which constitute an improvement, BEHRINGER may, at its discretion, charge the customer for the additional cost of these parts.
2. If the warranty claim proves to be justified, the product will be returned to the user freight prepaid.
3. Warranty claims other than those indicated above are expressly excluded.

### § 4 RETURN AUTHORIZATION NUMBER

1. To obtain warranty service, the buyer (or his authorized dealer) must call BEHRINGER (see enclosed list) during normal business hours **BEFORE** returning the product. All inquiries must be accompanied by a description of the problem. BEHRINGER will then issue a return authorization number.
2. Subsequently, the product must be returned in its original shipping carton, together with the return authorization number to the address indicated by BEHRINGER.
3. Shipments without freight prepaid will not be accepted.

### § 5 WARRANTY REGULATIONS

1. Warranty services will be furnished only if the product is accompanied by a copy of the original retail dealer's invoice. Any product deemed eligible for repair or replacement under the terms of this warranty will be repaired or replaced.

2. If the product needs to be modified or adapted in order to comply with applicable technical or safety standards on a national or local level, in any country which is not the country for which the product was originally developed and manufactured, this modification/adaptation shall not be considered a defect in materials or workmanship. The warranty does not cover any such modification/adaptation, irrespective of whether it was carried out properly or not. Under the terms of this warranty, BEHRINGER shall not be held responsible for any cost resulting from such a modification/adaptation.

3. Free inspections and maintenance/repair work are expressly excluded from this warranty, in particular, if caused by improper handling of the product by the user. This also applies to defects caused by normal wear and tear, in particular, of faders, crossfaders, potentiometers, keys/buttons, tubes, guitar strings, illuminants and similar parts.

4. Damages/defects caused by the following conditions are not covered by this warranty:

- ▲ improper handling, neglect or failure to operate the unit in compliance with the instructions given in BEHRINGER user or service manuals.
- ▲ connection or operation of the unit in any way that does not comply with the technical or safety regulations applicable in the country where the product is used.
- ▲ damages/defects caused by force majeure or any other condition that is beyond the control of BEHRINGER.

5. Any repair or opening of the unit carried out by unauthorized personnel (user included) will void the warranty.

6. If an inspection of the product by BEHRINGER shows that the defect in question is not covered by the warranty, the inspection costs are payable by the customer.

7. Products which do not meet the terms of this warranty will be repaired exclusively at the buyer's expense. BEHRINGER will inform the buyer of any such circumstance. If the buyer fails to submit a written repair order within 6 weeks after notification, BEHRINGER will return the unit C.O.D. with a separate invoice for freight and packing. Such costs will also be invoiced separately when the buyer has sent in a written repair order.

### § 6 WARRANTY TRANSFERABILITY

This warranty is extended exclusively to the original buyer (customer of retail dealer) and is not transferable to anyone who may subsequently purchase this product. No other person (retail dealer, etc.) shall be entitled to give any warranty promise on behalf of BEHRINGER.

### § 7 CLAIM FOR DAMAGES

Failure of BEHRINGER to provide proper warranty service shall not entitle the buyer to claim (consequential) damages. In no event shall the liability of BEHRINGER exceed the invoiced value of the product.

\* Customers in the European Union please contact BEHRINGER Germany Support for further details.

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# EUROPOWER PMP860M/PMP880S/PMP1280S

## FEDERAL COMMUNICATIONS COMMISSION

### COMPLIANCE INFORMATION



Responsible party name: BEHRINGER USA, Inc.  
Address: 18912 North Creek Parkway, Suite 200  
Bothell, WA 98011, USA  
Phone/Fax No.: Phone: +1 425 672 0816,  
Fax: +1 425 673 7647

hereby declares that the product

### **EUROPOWER PMP860M/880S/1280S**

complies with the FCC rules as mentioned in the following paragraph:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ▲ Reorient or relocate the receiving antenna.
- ▲ Increase the separation between the equipment and receiver.
- ▲ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ▲ Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

#### **Important information:**

Changes or modifications to the equipment not expressly approved by BEHRINGER USA can void the user's authority to use the equipment.

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