updated January 7th, 2019

PS-BOOSTER Power Supply modules

For continuous high power of three or more PA-3886 and/or PS4766 amplifier modules, the total PS capacitance of the amplifier module(s) could become a bit short. Also, if some of the PA-3886ps and a PA-4766 modules are at continuous high power, they could use some help. In order to solve this issue, we also developed a PS-BOOSTER "booster" module in the size of a PA-3886ps and PS-4766ps, where only extra Power Supply capacitors are mounted in order to match the probably required extra power reserve in a multichannel setup or continuous high power levels. Using it in smaller systems will increase the power reserve, especially resulting in a more deeper and better controlled low frequency response.
The extra mounted 2,2uF MKP capacitors will increase the high frequency sound quality.

Just mount a PS-BOOSTER in the pack on top or under an amplifier module or mount it between multiple sandwiched amps. The three power supply copper rods follow the same route. You can connect them anywhere in the pack, but best is in the middle of the two most current draining modules.
The double sided (35um) FR4+ boards provides max. conductivity. The bottom layer is about ground only. The top layer is 40% V- and 40% V+. The other 20% is also ground.
Due to this double sided design we could make it in a way that several types of capacitors fit, without degrading track widths, which are obviously very wide.

PS-BOOSTER MLGO, scale 1:1, 100x100mm, 2x5 4700uF/40V Mundorf MLGO

Since these modules are meant to improve overall sound quality, we also added a pair of 2,2uF Panasonic MKP capacitors over the power lines. In some models there is even a third, which is connected between V+ and V-. With these the power lines are absolutely free of noise and high frequency impedance is drastically reduced, resulting in a clean high frequency response. If possible we also mounted 10nF WIMA's as shown above.

We even thought of the common ACin line while using multiple PA-3886 / PA-4766 modules; for this there is just a hole at the right middle, marked ACin which only has a solder ring, not connected anywhere here.
If this is used, you have to sacrifice two Ø25mm capacitors (left and right). With this option, all amp modules receive the same input signal, where only one has to be connected to the sound source.

In fact, while using it this way, the 3-pole screw terminal is not used. You could even connect two chassis mounted large capacitors there. They need to be connected with thick wires, so we used a connector with 7,5mm spacing here. While connecting a pair of these babies there will be enough power reserve in most cases. But remember, the 8A rectifier of a ps version has to rectify it, resulting in a max. total output power of around 400W with sandwiched modules.

Besides working as a “booster” capacitor bank for our PA-3886 and PA-4766 amplifiers, this board can also be used as extra capacitance in existing systems where appears to be lack of sufficient power reserve capacitance. Connect it with the 3-pole screw terminal (7,5mm pitched) with as thick wire as possible to the existing equipment. This connector can also be used to feed other electronics if it is in a sandwiched pack with the mentioned 3-rod setup. This connector is unused then by our setups.

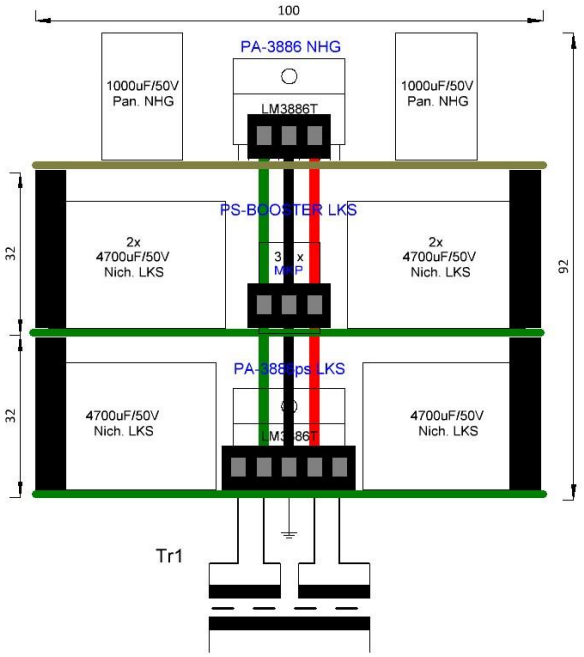
This PS-BOOSTER capacitor board fits following capacitors:

- 2x14 Ø16mm radial caps (f.e. 1000uF/50V), pitch 7,5mm + 2x 2,2uF MKP or
- 2x5 Ø25mm radial caps (pitch 10mm) + 3x 2,2uF MKP + 2x 10nF or
- 2x2 Ø35mm radial caps (pitch 10mm) + 3x 2,2uF MKP + 2x 10nF.

Sandwich mounting

The V+, GND, V- and input signal can be fed to a sandwich mounted unit by 1,5mm² solid copper rods, located exactly in the middle of the board. So, f.e. you can mount one or more of our PA-3886 (and PA-4766) modules on top of it, fed by the same, single transformer. Then, you need at least one amplifier module with an on board power supply, marked as PA-xxxxps.

Also with this module the INac line can be fed through to the other sandwiched modules. This line is at the centre right position. Then, all the amps receive the same signal. With 25mm caps this line is blocked!



Just use three 1,5mm² copper rods to feed the Power Supply rails to all units

Example of two Amplifier modules and a “booster” module in the middle. Three copper rods just behind the screw connectors provide the power from the PA-3886ps (or PA-4766ps) module to all other modules. You just need to connect a suitable transformer to the PA-3886ps. In the same way you could interconnect all INac lines of the amp modules at centre right (not possible while using 25mm caps!).

Bottom one is f.e. a PA-3886ps for the woofer (80W/4ohms), upper a PA-4766 2-channel (50W each/8ohms) for midrange and tweeter forming an active driven 3-way speaker setup. Just connect a suitable f.e. 225VA 2x22 or 2x 25Vac transformer.
With a combination like this, there will be way enough sound in any living room. A (DSP?) active driven/ filtered speaker sounds louder than passive somehow! You would need over 250W in a passive system for similar sound level.
You can combine as many modules as you like in a random mix of PA-3886 and PA-4766 modules.

Following products are available from our webshop and dealers:

Ready built and tested "Booster" modules (100x100mm):

PS-BOOSTER FRA	with 2x15 1000uF/50V	Panasonic FR-A capacitors	Height 27mm
PS-BOOSTER UFG	with 2x15 1000uF/50V	Nichicon Fine Gold capacitors	Height 34mm
PS-BOOSTER LGU	with 2x5 4700uF/50V	Nichicon LGU capacitors	Height 37mm
PS-BOOSTER LKS	with 2x2 6800uF/50V	Nichicon LKS capacitors	Height 27mm
PS-BOOSTER MLGO	with 2x5 4700uF/**40V**	Mundorf MLGO capacitors	Height 32mm

On request, we can assemble any combination of the above as a multichannel combination.
Just mention this in the comment line of the order form. We do this free of extra charge for now!
We use "overvoltaged" types, resulting in way longer lifespan than while using 35V versions working "on toes".

Instructions and wiring diagrams can be found on our website.

Please note that pricing (margin) of DIY kits doesn't allow us to give technical help at any time!
In the case you are not able connecting a ready built module
or (assembling) a DIY kit, we can help you at € 60,-/hour charge.
Just send back and write the problem you face with it. Don't forget to mention your name and address.

We did NOT attempt to make them as cheap as possible but as good and multifunctional instead.

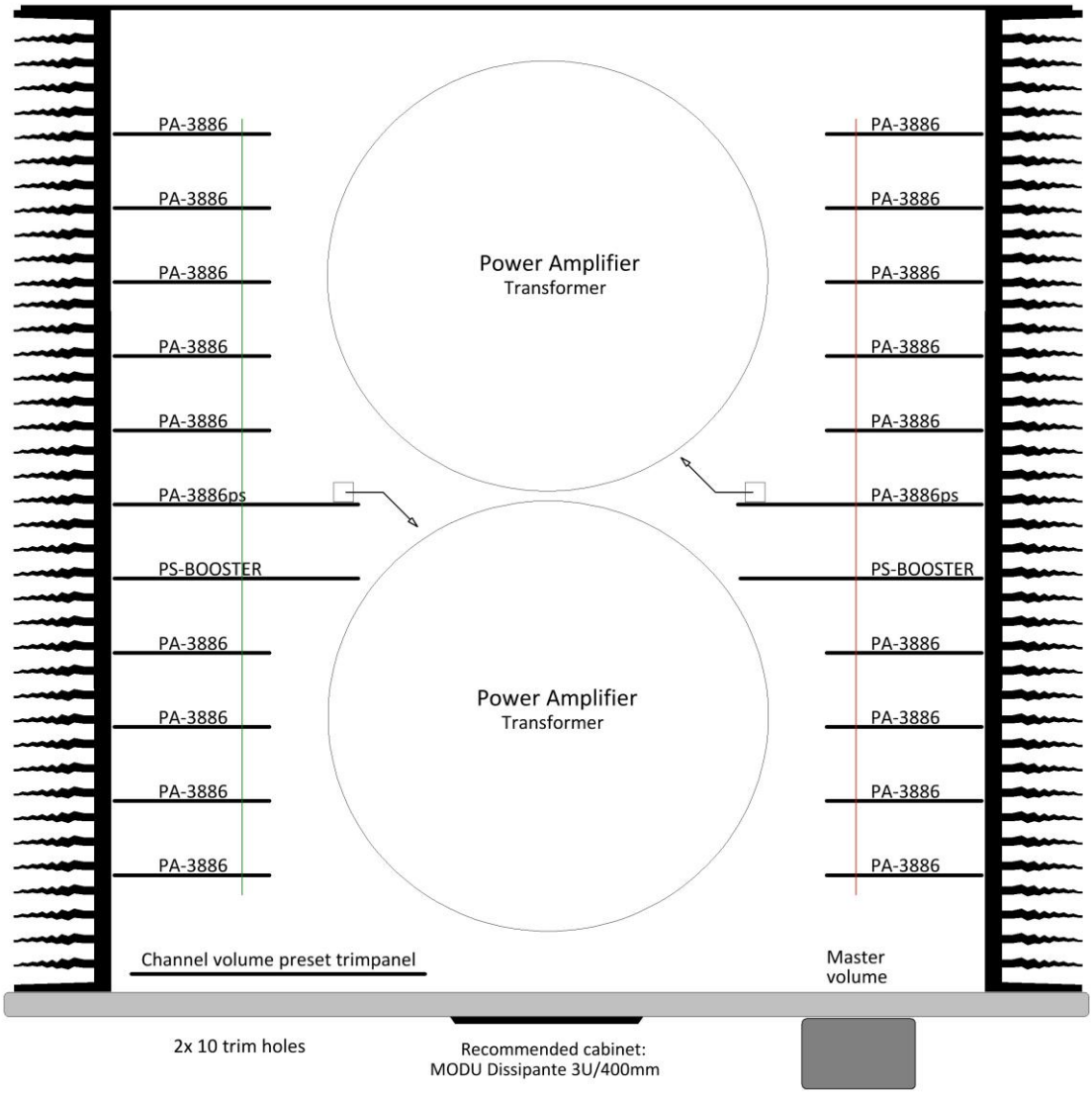
We have an increasing number of audio related modules, also available for dealers. Inquire here.

Other electronic parts

Besides our amplifier- and Power Supply modules/kits we also have a numerous number of quality parts in our webshop, all together around 12000 items. Drive units, Gramophone cartridges and styli, capacitors, coils, resistors, power transistors, nice electronics cabinets, connectors, cable, damping material, etc.

Multichannel setup example:

As a sound quality improving alternative of 100V PA systems in f.e. exhibition halls, shopping malls, fun parks, etc., multichannel setups can be made with our PA-3886 modules.
Connect every speaker separately to an output and adjust the levels. Max. 20x 80W = 1600W……



Here about the max. number of channels possible : 20x in a MODU Dissipante 400mm deep, 120mm high cabinet.
This one provides way enough cooling for constant (professional) use in f.e. exhibition halls, shopping malls, fun parks, etc.
With 20x 80W/4ohms = 1600W there will be enough sound…..
In the middle a PA-3886ps with integrated power supply (400W max.). Just beneath it a PS-BOOSTER module with extra supply capacitors. All the others are PA-3886 models. For all, select the quality you want.
For >400W of power per side, use a separate Power Supply!
In order to "feed" them right, use our line or balanced buffer input modules.

You could random mix PA-3668 and PA-4766 amplifier modules at random.

You could build it yourself, but we can do this for you as we can with all our modules.
For this we have a separate website with some examples: www.eltimaudio.com
Just contact us and explain wat you require. We'll respond with an offer.

www.eltim.eu