

# POWER STATION 75



The ultimate solution to supply your front end equipment with clean voltage

Finally, after thousands of hours of research and development, the **POWER STATION** is available! What it all started, was our wish to improve the performance of our reference; **POWER SOURCE**. Of all three problems, the **POWER SOURCE** can solve two of them perfectly, it can filter DC-voltages as well as high frequency distortion from your mains. However, the third problem, distortion of the sine wave itself, cannot be solved using a passive circuit. No line conditioner or isolation transformer can do that. The mains is loaded at its peaks only,

causing heavy distortion of the sine wave. This load on the mains causes the peaks of the sine wave to flatten, causing the sine wave to be permanently distorted.

## Independent of distortions on the mains

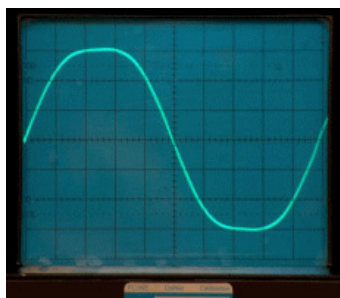
The only solution to this problem is, to create a new sine wave from the scratch, with a so called regenerator.

The **POWER STATION** is such a regenerator. This means, it rectifies the mains, and uses the DC-voltages obtained to create a new AC-voltage. The benefit of this method is, the new AC-voltage is a perfect sine wave which is highly independent of distortions on the mains!

## Our philosophy

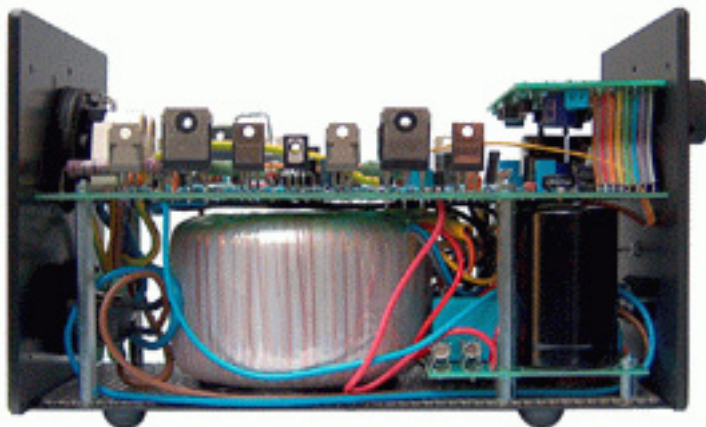
In contrast to other regenerators available, our POWER STATION is very small. Front end sources (all equipment that is prior to your power amplifier) are the most sensitive to distortions on the mains. Our philosophy is, that every single front end source should have its own regenerator, in this way, a mutual influence of the sources is excluded. This also explains the relatively modest maximum power of 75 Watts. Under nearly all circumstances, this is sufficient. The power stated, is the output power instead of input power, like all competitors do. This way, a digital source can't distort a sensitive analog one, by cutting off the (common) line to feed the disturbances to all other sources. This common line would still be there, if more than one source would be connected to one (more powerful) regenerator.

The sizes of the POWER STATION are kept to an absolute minimum, so you can put three of them next to each other, creating the standard audio-size of about 16" to 17". Due to the fact, that no fan is used to keep the POWER STATION cool, you won't suffer noise, and dust won't be collected.

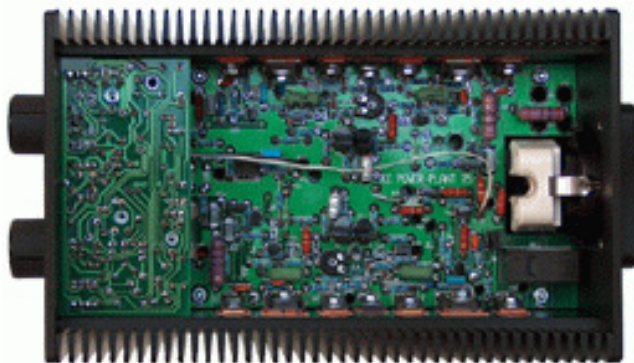


After extensive experiments and listening sessions, we finally came up with a user-friendly unit. For example, it features adjustable frequency and Crest Factor. The higher the frequency, the more

details are hearable, and an overall improvement of all audiophile properties will be noticed. This is due to the fact, that the transformer as well as the other parts of the power supply are working more efficiently. The Crest Factor determines the increase in energy in the output by adding the third harmonics. By doing so, the area of the sine wave becomes larger. At maximum position of the Crest Factor control, you will be feeding the power supply of the source fed by the POWER STATION with a plus of 13 % in energy!



After these listening sessions, it was clear to us, that a frequency of about 90 Hz was our favorite, and that the maximum of 10 % third harmonics should be added to the sine wave. By increasing the Crest Factor you will experience a more powerful, warmer, (tube-like) sound.



In contrast with competing designs, the sine is generated totally analog, so there are no remnants of digital synthesis. A Wienbridge oscillator is used as a base for the generation of a very clean sine wave. Another unique property of the POWER STATION is the complete absence of any output transformer, this to prevent degradation of the excellent properties of the regenerator. The problem with these output transformers, is their limited capability to transform the power without distortion, when operating at the limits of power. Thus, an enormous distortion is introduced, together with great

limitations in dynamics, due to the insufficient peak power capability of these transformers.



The POWER STATION is equipped with DC-off-set correction circuitry, in order to keep the DC on the output at absolutely zero. You will notice a complete absence of hum in the source fed by the POWER STATION, as far as the transformer in this source is free from mechanical defects.

Without DC on the mains, the transformer can do its job with greater efficiency, it will warm up less, and, last but not least, will supply greater and undistorted peak currents with ease!

The output of the POWER STATION is true balanced. Balanced voltage means, both legs are "hot", and carry a voltage of 115 V, out of phase. Together, these voltages combine to a single 230 V voltage. This 230 V is a regulated voltage, even if the input voltage is as low as 200 V, the output voltage will still be 230 V. Note: the UK-version has 240 V, US-version has 110 V output respectively.

The POWER STATION is equipped with a switch: listening position is "regenerate power", when the front end source connected is not in use, it can be put it in the "bypass"-position, the source will be connected to the mains directly then, and the electronics inside the POWER STATION will be shut down to prevent energy waste.

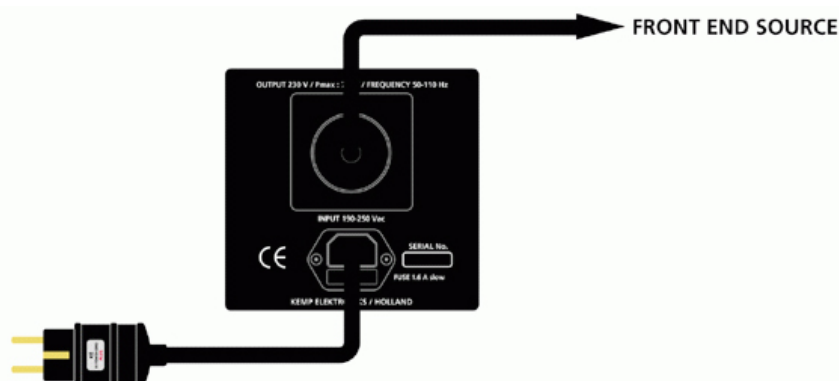
When you want to listen again, you throw the switch to put it in the "regenerate power"-position, the electronics inside the KE-POWER STATION will be switched on again, and the source connected to the POWER STATION will be fed regenerated power again.

Due to the fact, that no fan is used to keep the POWER STATION cool, you won't suffer noise, and dust won't be collected, as is the case with all fan-cooled equipment.

A status-LED is provided: if it lights blue, totally clean energy is fed to the source connected, if it lights red, the output is overloaded, and the source connected can't function properly. If the LED doesn't light at all, the switch is in the bypass-position.

You can upgrade your POWER STATION by replacing the ceramic fuse that's seated underneath the AC input connector, for an Audio Grade Ultimate<sup>2</sup> time-delay fuse of 3,15 Amps. You should replace the fuse that's deepest into the POWER STATION, as the other one is the spare fuse!

You could further upgrade your POWER STATION by replacing the power cord. You could take a POWER CORD PLUS or, even better: a POWER CORD REFERENCE.



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## **POWER STATION**

### *product specifications*

- Regenerator; absolute clean output power, regardless the input
  - Fully analog power design, giving superb sound
  - True balanced power output
  - Compact design
  - Frequency adjustable from 50 Hz to 110 Hz
  - Crest Factor adjustability, enhancing power supply capabilities
  - No output transformer, meaning far less distortion and current limiting
  - DC-offset control circuitry, giving optimum base for well-performing transformers
  - Up to 75 Watts of pure, undistorted output power
  - Supplied with 1 m (3 ft.) KE-HI POWER CORD
  - Bypass-switch, enabling equipment to be powered continuously
  - Weight 4 kgs (9 lbs.)
  - Dimensions 125 X 135 X 230 mm (5 X 5,5 X 9 inch)
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## reviews

HiFi.NL, Oktober 2006;  
"Power Station 75",  
by Jan de Jeu



AudioForum.BE, June 2006;  
"Kemp Powerstation 75, een elektronische  
wonderdoos",  
by Rhipilpe Raevens



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