

**SOUNDSTREAM**

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*T E C H N O L O G I E S*

**PQ-7**

**Parametric Equalizer**

**Owner's Manual  
and  
Installation Guide**

## 1. CONGRATULATIONS

Congratulations for buying this Sound Stream product and thank you for your confidence!

With this Sound Stream Equalizer you have purchased an innovative and professional high-end product, which will enable you to enjoy your music on a very high quality level for many years.

We have especially focused on electronic as well as product design to give you a product that will accompany you for many years, as our products are always one step ahead and will still be modern for many years.

Sound Stream products represent the experience our engineers have made through many years assisted by car audio magazines as well as professional installers.

Please read these instructions very carefully, to avoid unnecessary trouble and defects.

In case of trouble, please contact your local dealer or check our website [www.soundstream.com](http://www.soundstream.com) for trouble shooting. There we also offer up-to-dates hints and technical support for you.

Our website [www.soundstream.com](http://www.soundstream.com) offers many ptimized adjustments for your car model. Using these adjustments, you do not need any additional measurements.

The SOUND STREAM PQ-7 is a state-of-the-art 6-channel / 7-band car audio equalizer, engineered for the correction of resonances and peaks caused by the car's geometry itself.

The PQ-7 is not meant to be used as sound control like bass and treble controls. That makes no sense and will only strain the amplifier and speakers.

Additionally, the PQ-7 is equipped with a subsonic filter and a phase shifter to reduce very low frequencies and to correct the phase of the subwoofer in relation to the other speakers.

Resonances and peaks caused by the car's own geometry cause distortions of the frequency response of the whole sound-system which lead to a dirty and boomy or aggressive, colored sound, or both.

So, even the best speaker is not able to reproduce music as it was, since the car's own sound is always added to the music. By filtering this garbage out, the sound becomes more clear, precise and more hi-fi.

## TIPS FOR MEASUREMENTS

If you want to go one step further, optimizing the whole system including Radio, amplifier, speakers and car acoustics, you have to take measurements with professional equipment, like computer RTA (Real Time Analyzers). We recommend Analyzers being capable of conducting an average curve out of many single plots in order to take measurements in several positions. The microphone should be moved slowly from the left ear towards the nose and then to the right ear while about 30 single measurements are taken. This way, you will get a real average curve ensuring not to hit a point which is not representative at all.

## SAFETY

- **Before you make any connection, the battery must be disconnected!**
- **A main fuse must be installed into the +12V wire within + the first 12 from the + terminal of the battery (insurance regulation!).**
- **The fuse in the power line only protects the device itself, not the battery and the car!**

## INSTALLATION

For safety reasons, the equalizer has to be mounted properly and fixed to the car's body. Please fix the device using the screws that come with your product. Be careful when drilling holes, there might be wires, fuel lines or the gas tank behind a wall! Never drill holes when you do not know what's behind. Never install signal wires close to power cables to avoid hum and alternator noise is being induced.

## 1. CONNECTIONS

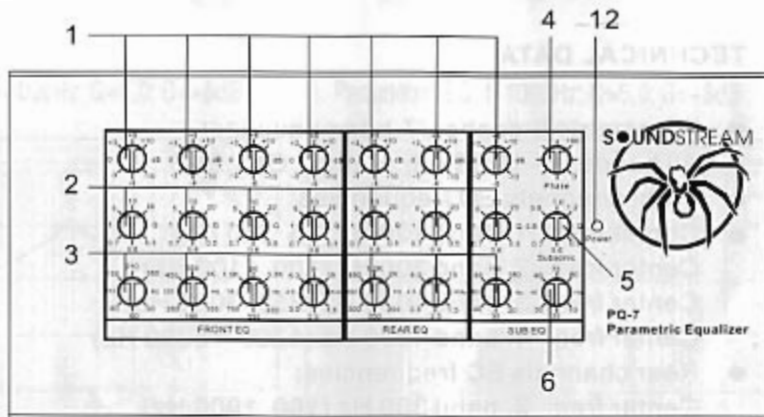
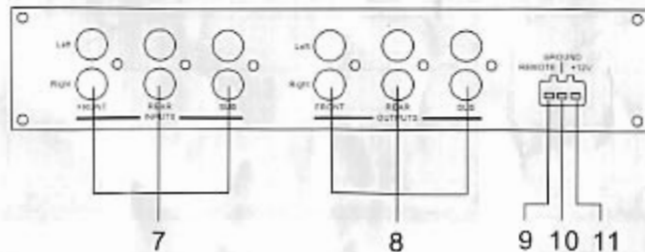
Before you make any connections, always disconnected the battery!

- 1.1 First of all, connect the RCA cables coming from the radio/ head unit to the respective inputs of your PQ-7. Always run signal cables in a distance to power cables and the vehicles's factory wires to avoid induction of noise.
- 1.2 The RCA signal cables to the amplifier are now connected to the PQ-7 respective outputs.
- 1.3 Next step is the ground connection. Check for a good grounding point using your vehicle's chassis. Make sure that this point has good electrical contact! Some parts of the chassis might only be glued and have no contact to battery (-). Run all ground cables of the system to this point to avoid alternator whine and other noise.
- 1.4 As the next connection the +12V cable has to be connected to the (+) terminal of the battery. Always be careful not to run this cable around sharp edges, the insulation might be damaged. For holes always use grommets!

**Always use an in-line fuse in the +12V power cable in max. 12 from the battery's + terminal (value must meet the current requirements of the whole sound system, minimum value is 60 A).**

- 1.5 The last connection is the remote wire. The headunit must always be turned off during this connection, as it might be damaged when remote output is shorted to ground!
- 1.6 Now you can reconnect the battery and insert the main fuse into the power cable's fuse holder.

## 2. COTROLS



- |                                  |  |
|----------------------------------|--|
| 1 Gain adjust                    | 7 Balanced line inputs (front, rear, sub)        |
| 2 Q-adjust (bandwidth)           | 8 Line outputs (front, rear, sub)                |
| 3 Frequency adjust               | 9 Remote terminal                                |
| 4 Phase adjust                   | 10 GND (ground)                                  |
| 5 Subsonic Q (subwoofer channel) | 11 +12V (always use in-line fuse in 12 V cable!) |
| 6 Subsonic frequency             | 12 Blue power ON LED                             |

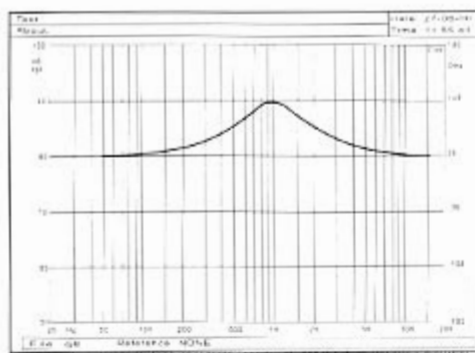
## 3. OPERATION

- 3.1 Turn on the radio at low volume.
- 3.2 Adjust all Gain controls in exact mid position, all Q controls to minimum.
- 3.3 Insert a CD with pink noise to your CD player.
- 3.4 Take the first measurement of the frequency response, and save the resulting curve.
- 3.5 Look for significant peaks and dips in the plot. Try to compensate them by turning up the respective Gain then frequency, and ,Q . Do not correct peaks and peaks with too narrow bandwidth.
- 3.6 You can also download a specific adjustment from our website [www.soundstream.com](http://www.soundstream.com). This way you do not need to take measurements, since our engineers already have done this for you. Just adjust al controls as shown in the figure and your sound system will be perfectly optimized.

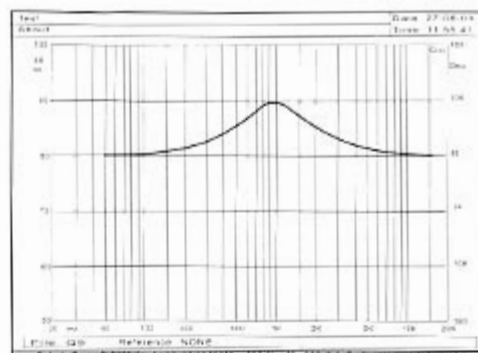
## TECHNICAL DATA

- Parametric 6-cgabek/7-band equalizer  
All bands: + - 10 dB adj. Range. Q=0.5 20
- Front channels EQ frequencies:
  - Center freq. 1. band 100 Hz (35 350 Hz)
  - Center freq. 2. band 300 Hz (100 1100 Hz)
  - Center freq. 3. band 1000 Hz (350 3000 Hz)
  - Center freq. 4. band 4800 Hz (1700 16000 Hz)
- Rear channels EQ frequencies:
  - Center freq. 2. band 300 Hz (100 1000 Hz)
  - Center freq. 3. band 1000 Hz (350 3300 Hz)
- Subwoofer channels EQ frequencies:
  - Center freq. 1. band 60 Hz (20 180 Hz)
- Switchable subsonic filter, 10-80 Hz 12 dB
- Phase adjust 0 deg. - 180 deg
- Balanced inputs for noise reduction. Switch Mode Power Supply (SMPS)
- Dimensions: 257 x 102 x 47 mm (Mountingplate 265 x 145 mm)

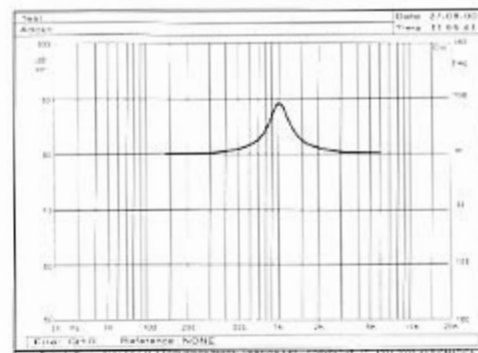
1. Parametric EQ:  $f=1000\text{Hz}$ ;  $Q=0,5$ ;  $G=+8\text{dB}$



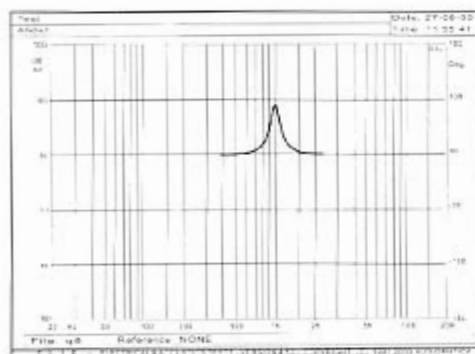
2. Parametric EQ:  $f=1000\text{Hz}$ ;  $Q=1,0$ ;  $G=+8\text{dB}$



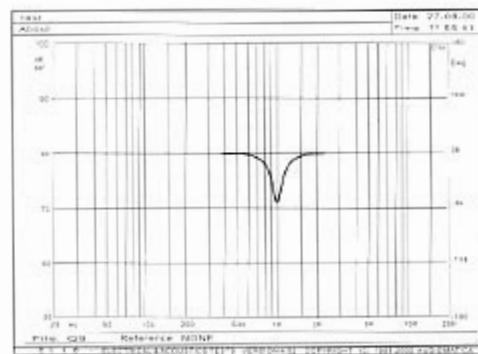
3. Parametric EQ:  $f=1000\text{Hz}$ ;  $Q=5,0$ ;  $G=+8\text{dB}$



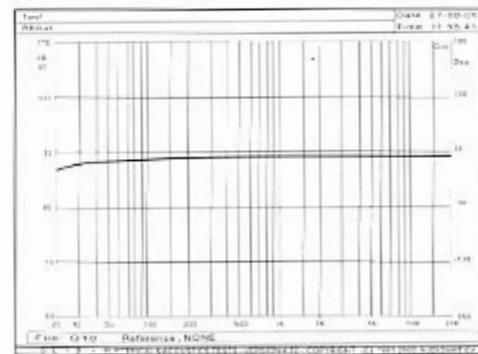
4. Parametric EQ:  $f=1000\text{Hz}$ ;  $Q=20$ ;  $G=+8\text{dB}$



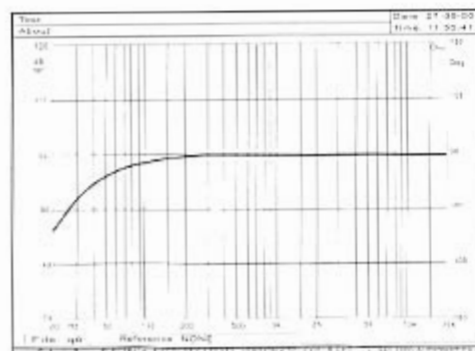
5. Parametric EQ:  $f=1000\text{Hz}$ ;  $Q=20$ ;  $G=+8\text{dB}$



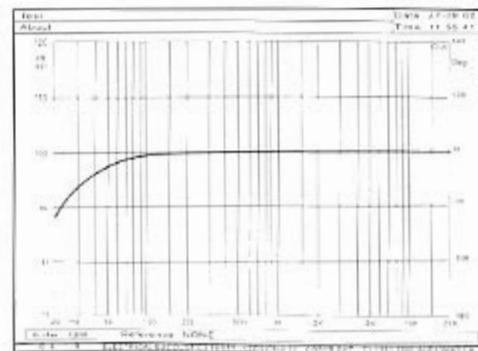
6. Subsonic filter: 10Hz;  $Q=0,5$



7. Subsonic filter: 50Hz;  $Q=0,5$



8. Subsonic filter: 50Hz;  $Q=1,0$



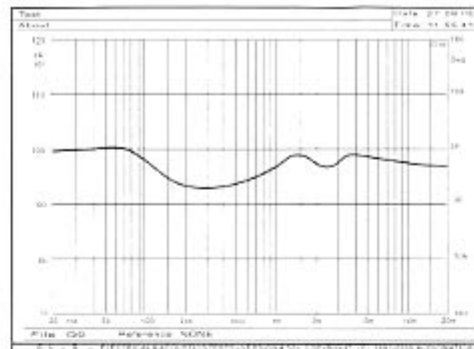
9. Subsonic filter: 50Hz;  $Q=1,1$



1. Parametric EQ:  $f=1000\text{Hz}$ ;  $Q=0,5$ ;  $G=+8\text{dB}$



2. Parametric EQ:  $f=1000\text{Hz}$ ;  $Q=1,0$ ;  $G=+8\text{dB}$



3. Parametric EQ:  $f=1000\text{Hz}$ ;  $Q=5,0$ ;  $G=+8\text{dB}$



4. Parametric EQ:  $f=1000\text{Hz}$ ;  $Q=20$ ;  $G=+8\text{dB}$

