



# GORE® Portable Electronic Vents

CASE STUDY

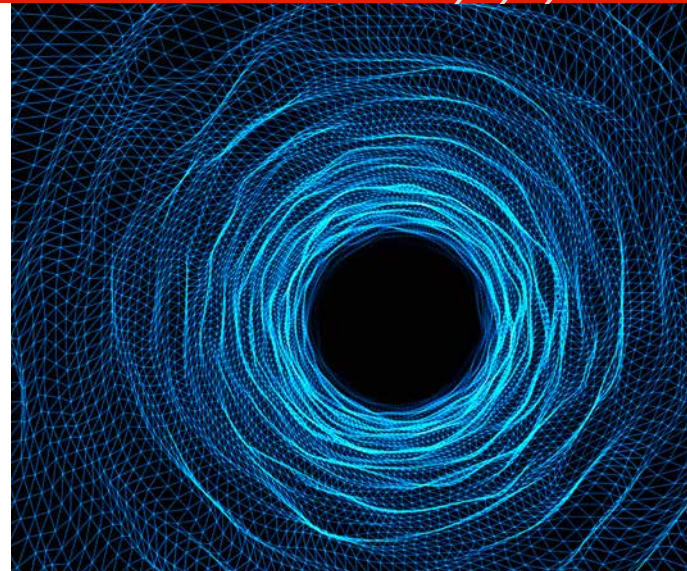
## Tripled Airflow Eradicates Speaker Distortion

### CHALLENGE:

The client noticed at the end of their design validation process that there was significant distortion coming from the speaker of their device.

The noise appeared when the speaker was operated and the handset was compressed at the same time. This resulted in low sound quality when audio or video files were played.

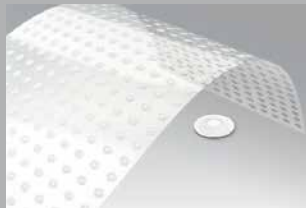
The client approached Gore to develop a solution which would reduce or eliminate the speaker distortion.



### SOLUTION:

Product model PE12

Once the Gore engineering team received samples of the device, their analysis identified a pressure difference between the inside and outside of the phone, which stopped the speaker diaphragm from moving freely. Gore engineers understood that to avoid pressure differentials and achieve an improved pressure equalization, a higher airflow would be needed. The airflow was improved by increasing the active area size of the vent and using a more breathable venting material.



A vent with a greater airflow usually means that its water protection is decreased, however the Gore PE12 product was able to triple the airflow while still maintaining IPX8 water protection.



#### ADAPTABLE SOLUTIONS

With a vast range of technical insights from our experienced team of engineers, Gore was able to identify the problem and develop a venting material (PE12) that tripled the airflow and eradicated the speaker distortion.



#### CLIENT COLLABORATION

Gore was able to keep an open line of communication with the client to discuss risks, uncertainties, opportunities and improvements, while maintaining a close collaborative relationship to ensure the best solution was developed. In addition, Gore's ability to rapidly develop a suitable product and sample quickly enabled a seamless solution to the problems faced by the client.



#### PRODUCT INNOVATION

Since being introduced, the PE12 vent has become the standard pressure venting material used within waterproof handsets. This product has been so innovative that it is now used by various clients across the globe who have faced similar problems.

### RESULTS:



#### Performance:

New pressure venting material (PE12) provided 3 times the airflow as the old one (PE8)



#### Reliable Water Protection:

Unique venting material allows for an excellent balance between IPX8 water protection and increased airflow



#### Minimized:

Significant reduction in distortion





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## Why GORE® Portable Electronic Vents?

Leading OEMs select Gore because our products and services enable them to develop differentiated and innovative products with low development and supply chain risk in a fast-paced, highly competitive market.

### Product and Application Leadership

Grounded in a deep understanding of material science and acoustics, Gore provides the optimum venting solution. We balance the trade-offs between diverse problems such as adverse operation environments, immersion events and acoustic performance.

### Global and Localized Sales and Technical Support

With outstanding worldwide technical and service support, our local sales and technical teams collaborate with OEMs and their contract manufacturers to ensure there are no surprises before or after product launches.

### Reliable Performance

Our testing labs are dedicated to researching and developing acoustic and water resistant technologies. This significant investment into exploring the science of reliability ensures that our products are consistently dependable and work as expected every time.

### Trustworthy Partner

Our global supply chain is robust and agile enough to provide short lead times, consistent quality and sufficient capacity for the largest programs and fastest ramps.

## Contact Us

For additional assistance, please contact a Gore representative.

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