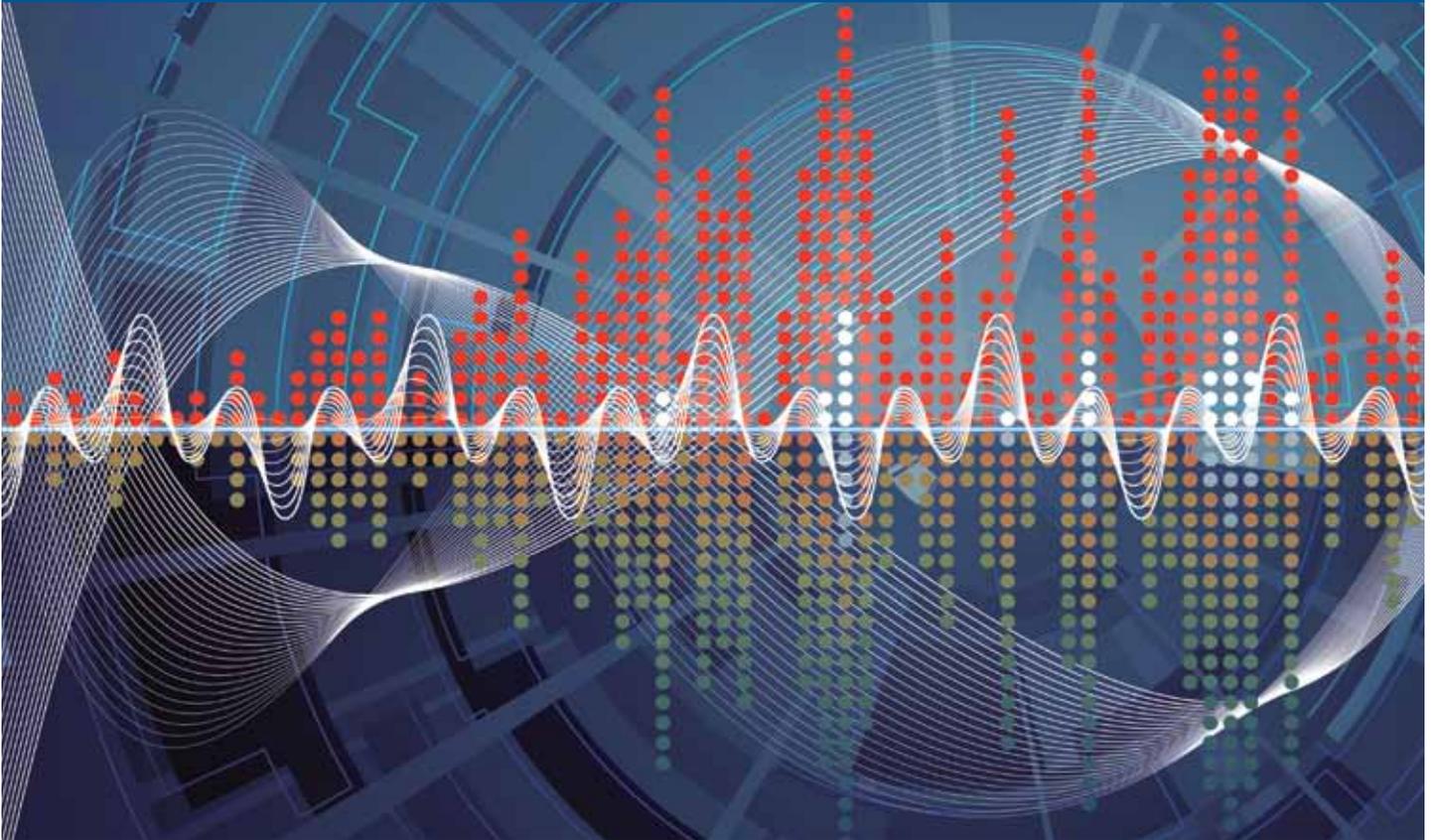


# **MISCOQ**

*For The Sound You Want*



## **CORPORATE PROFILE**

# Creating The Sound You Want

MISCO is one of the world's leading designers and manufacturers of custom loudspeakers and audio systems. We help our customers achieve the sound they want, for thousands of diverse applications, in numerous markets such as medical, military, gaming, aerospace, transportation, commercial, high-end home audio, and professional sound. Those customers include manufacturers, distributors, and consultants who all want to deliver precisely the right sound in their products and installations.

We are the only broad market US loudspeaker company that does it all—design engineering, prototyping, testing, and manufacturing—in our US-based facilities. Our domestic production offers distinct advantages to OEMs and contractors; including quick and accurate communications, lower costs, and shorter lead times. For our customers that manufacture in Asia, MISCO also manufactures and distributes from Dong Guan, China.

## Sounding Great Everywhere

How did we achieve all of this? Start with MISCO's 65 years of experience. We've gained a deep knowledge of all things audio that gives us insights into engineering and building speakers for every audio application you can think of. For example, the high power and durability of our professional sound applications help performance and reliability in aerospace applications.

## Running A Lean Machine

Our business model is simple: MISCO solves audio problems for other companies. We offer top-quality, customized audio products at competitive prices, with delivery times that meet our customer's schedules. To make it all happen, we put lean manufacturing and continuous improvement practices to work throughout our operations.



**Aerospace speaker  
(EN4FR-1000A)**



**Automated adhesive dispensing for consistent performance and minimized variation.**



**End-of-Line testing validates customer specified product parameters.**



**Massive 3.4 Kilojoule Magnetizer for large neodymium or ferrite magnet structures.**

# Optimized Processes

Creating custom loudspeakers and amplifiers can be long haul, but we've streamlined the process down to four MISCO phases:

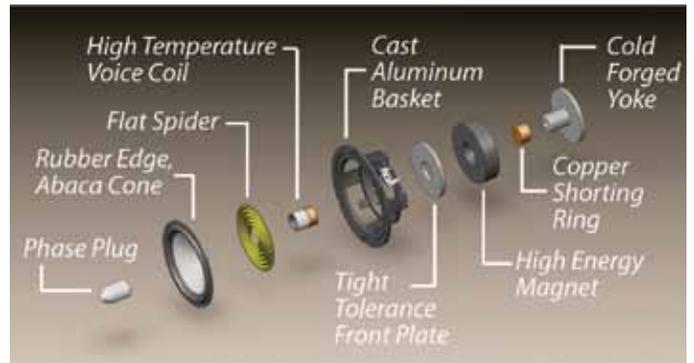
**Development:** Understanding our customer's needs, and the sound characteristics they want to hear, is always step one. We discuss factors such as performance, environmental considerations, quantities, and cost. There's a good chance we already have a speaker or amplifier that meets all the requirements. If not, we'll modify an existing MISCO product or custom engineer a new design.

**Design:** MISCO engineers are wizards at designing and simulating the performance of our speakers and amplifiers using the latest 3D CAD tools (such as SolidWorks) plus a variety of electro-magnetic software and acoustical modeling software. They also use internally developed, MISCO-proprietary programs, calculators and simulators. We're big on simulation because it's a powerful time-saver that reduces design time to days. These tools allow us to create virtual transducer and speaker system models that predict loudspeaker parameter and output levels.

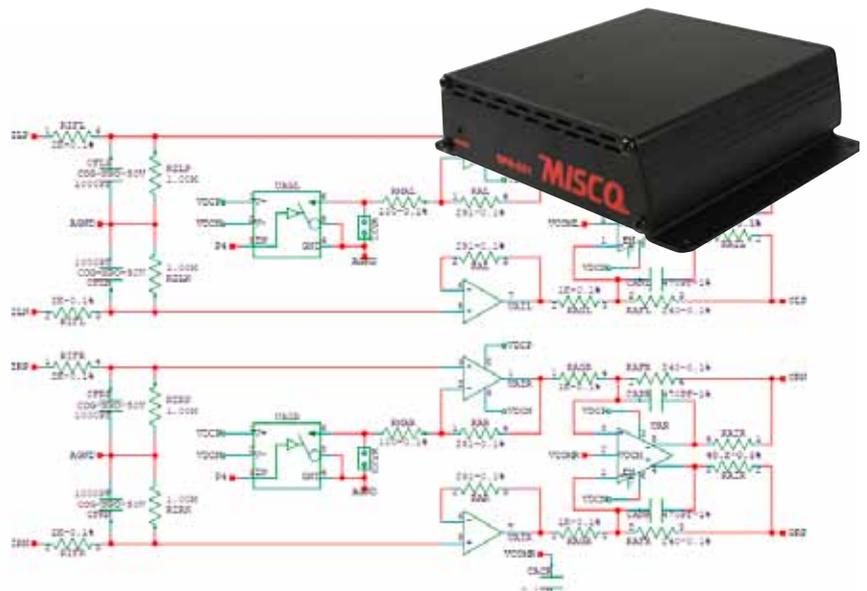
Our precision engineering can perform force/pressure structural analysis on individual parts; and test fits, seals, part interference, paths of motion, and so on before physically prototyping a single part. MISCO engineers collaborate closely with customer engineers and designers, working as a specialized part of the overall MISCO/customer team.

**Prototype and Testing:** Prototype speakers are built by the same in-house MISCO team that manufactures all of our speakers. This gives everyone a preview of how the speaker's production will flow, and provides an accurate prototype for performance testing. Testing is a thorough process which validates that everything specified, designed, and modeled in the first two phases made it into the actual loudspeaker.

We conduct power testing using automated equipment in a special chamber—a necessity when pumping thousands of watts of audio signal into a speaker.



Every MISCO speaker combines precision engineering with our international supply chain to ensure the highest quality.



MISCO provides off-the-shelf or custom class "D" amplifiers.



Power Test Chamber with custom software assures reliability.

**Manufacturing and Quality Control:** Once approved by the customer, we ramp up the loudspeaker and amp design to full production. MISCO facilities handle all aspects of speaker manufacturing and final performance testing. There's no sampling or spot checking. Every MISCO speaker is individually tested and must meet rigorous requirements before it ships, whether made in the USA or China.

We're always focused on producing high-quality, defect-free products. Our dedicated quality and continuous improvement teams ensure that our quality management system, and the entire MISCO operation, meet ISO 9001 standards.



**Line Array for Medical UltraSound**

## Fundamentals for the Future

More than six decades ago, MISCO was a modest storefront operation that fixed radio and TV speakers. Nobody then could have imagined our company today; a highly respected provider of high quality audio system solutions. Even though audio technology has dramatically changed over MISCO's history, our business fundamentals have not wavered:

- Listen to customers and solve their problems.
- Provide innovative audio thinking.
- Deliver the highest quality from initial design through final product.
- Back everything we make with the best customer support in the business.

These principles will carry MISCO into the future. We'll continue to offer our customers leading-edge solutions based on our open and synergistic disciplines. And we'll keep improving and expanding our core capability: To engineer and produce customized, turnkey audio solutions that ensure our customers get the sound they want.



**21" ProSound Sub Woofer**



**4" Customized Military Design**



**Gaming Woofer with 2.1 Channel Amp.**

**MISCO**  
*For The Sound You Want*

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