Masterpiece CI Series
High-Performance In-Wall and In-Ceiling Loudspeakers

Truth in Sound
State-of-the-art Truth in Sound: Masterpiece™ CI Series offers the biggest, boldest, and most lifelike performance possible.

We consider something a masterpiece when skill and artistry shape the familiar in unexpected ways, revealing an essential truth.

For MartinLogan, the essential truth is astonishing and unprecedented audio realism.

From extreme home theater to transcendent 2-channel listening, Masterpiece CI achieves the pinnacle of discreet in-wall and in-ceiling loudspeaker design: state-of-the-art Truth in Sound that takes up no floor space. Featuring lightning-fast, low-distortion, Folded Motion XT Obsidian tweeters, handcrafted Vojtko crossover networks, and unidirectional carbon fiber multi-section cone drivers with Nomex® backers, each model of the Masterpiece CI Series delivers astonishing realism. This is a loudspeaker that is a tribute to the acoustic achievements of MartinLogan’s original iconic masterpiece, our flagship floorstanding electrostatic speakers.

This new generation of custom installation loudspeakers artfully blends over 30 years of audio design and engineering innovation, refining it into a startling fresh loudspeaker ideal.

Each model features a family of exclusive, interlinked MartinLogan technologies that achieve a level of performance beyond that of traditional speakers.

MartinLogan presents a rare opportunity for you to own your own Masterpiece.

Let us show you.

The Masterpiece CI Series by MartinLogan
Statement 40XW Tech

If your performance benchmark is MartinLogan’s most ambitious floorstanding hybrid electrostatic loudspeakers, it’s going to be quite a challenge to achieve that level of accuracy and impact in an in-wall speaker.

Challenge accepted. The Statement 40XW is a triumph of audio engineering. Its performance (and sheer size) rivals the very best of our electrostatic models, with full-on speed and high-frequency accuracy, incredibly detailed midrange, and lifelike deep bass impact. And yet it takes up absolutely no space in your room and vanishes into any decor.

It’s an incredible sixteen tweeters, and sixteen mid-range drivers, and eight woofers, arrayed in a line-source design and built directly into your wall, delivering awe-inspiring levels of full-spectrum dynamic output even in the largest listening areas.

The keys to this performance are superior components and innovative design. The multi-driver design allows each driver and tweeter to operate with extreme efficiency. This combination of high-resolution drivers, each working to offset the demands on the others, results in a highly accurate and distortion-free performance, even during the most demanding sonic passages, and even at realistic volume levels. The large line-source design also ensures the same sonic impact over a large area of listening positions. There’s no drop-off, as can be the case with smaller, point-source designs.

With each channel featuring a mind-boggling forty drivers, you simply have to hear the Statement 40XW to believe it.

Statement 40XW—The Benefits of Line Source Configuration. The line-source design, a tall vertical array of identical sets of drivers, shares significant characteristics with hybrid electrostatic loudspeakers—something we know a little about.

Like electrostatic speakers, line-source arrays restrict vertical dispersion, eliminating the majority of a room’s performance-destroying sound reflections.

In the Statement 40XW, the combination of the natural 80-degree horizontal dispersion pattern...
of the Folded Motion XT tweeters, and the sheer
52-inch-tall cliff of vertical tweeters, minimizes
side-wall, floor, and ceiling reflections whose short
arrival times tend to interfere with our perception
of “direct” sound.

The result is a broad, enveloping soundstage, with
an accurate, lifelike rendering of the most subtle
imaging details, even in an ample listening space.

Statement 40XW—Surprisingly Discreet
Installation. Whether you are designing a new
listening room from the ground up or retrofitting
a room back to the studs, it’s the perfect time
to incorporate built-in audio. And if you’re
planning a larger than average space, it’s worth
considering a massive line-source loudspeaker
that both vanishes into your decor, and puts even
the farthest seat in the sweet spot.

The Statement 40XW incorporates a reinforced,
sealed, acoustically-inert back box enclosure
that isolates and decouples the drivers from the
wall surface.

This sealed box enclosure, with its uniform volume
and material, eliminates in-wall variables from
the acoustic equation, guaranteeing a consistent,
accurate performance in any installation. The
sealed design also effectively eliminates audio
leak-through into adjoining rooms.

It fits comfortably between studs and works with
both 1/2- or 5/8-inch wallboard.

The low profile, paintable, micro-perforated grille
presents a clean, near-invisible aesthetic. One of
the world’s most incredible audio performances,
from practically invisible loudspeakers!
Masterpiece CI Tech

Folded Motion® XT Obsidian Tweeters.
MartinLogan’s signature Folded Motion tweeter is a miracle of audio engineering. Its folded thin-film diaphragm gives it a much larger surface area than traditional dome tweeters of the same size. This “squeezing” design requires significantly less excursion than a dome tweeter, too, revealing controlled dispersion characteristics and vanishingly low distortion. These tiny tweeters mimic the high-frequency detail and response speed of a large electrostatic panel in a small space.

Masterpiece CI Series steps up the game with the Folded Motion XT Obsidian tweeters, which advance thin-film transducer technology even further.

The Folded Motion XT design features a 40% larger radiating surface and 80 x 30-degree controlled dispersion. This innovation increases audible bandwidth without sacrificing details, and minimizes distortion to an unprecedented level, even while increasing the efficiency of the tweeter’s already lightning-fast response time.

The result is superior realism and alarming specificity. Folded Motion XT takes thin-film transducers to the next level—it’s aurally astonishing.

“What would life be if we had no courage to attempt anything?”
– Vincent Van Gogh
• Five drivers
  • One tweeter: Folded Motion® XT Obsidian
  • Two mid/bass: 5.25-inch • Two passive: 6.5-inch
  • Unidirectional carbon fiber multi-section cones with Nomex® backers
  • Vojtko™ crossover network constructed from audiophile-grade components
  • Phenolic baffle • Sealed back box • Die-cast aluminum mounting-lock system
  • Pre-install brackets (sold separately)
Powerful Mid-Frequency and Bass Drivers with Unidirectional Carbon Fiber Multi-Section Cones with Nomex® Backers. Masterpiece CI loudspeakers feature cones custom-built using unidirectional carbon fiber, a material that is twice as strong as steel but with a sixth of the density, for exceptional rigidity without excessive weight. They are designed in multiple sections to take full advantage of the benefits of this material.

Each cone is reinforced by a Nomex backer, for additional damping that prevents ringing and reduces breakup modes in these extremely rigid cones. The drivers feature powerful, efficient magnet structures, enabling massive excursion and huge sound output, while preserving deep bass details, even at sustained, lifelike volume levels.

**Driver Engineering Details.** Masterpiece CI features innovation upon innovation. To deliver more accuracy in the critical midrange, the mid-frequency drivers have had their suspensions (spider and surround) “stiffened.” Stiffening the suspension raises the driver’s resonant frequency and optimizes its performance to achieve a more natural roll-off, inherently keeping it in an ideal range for mid-frequency reproduction.

Each cone includes a concave dust cap that adds additional strength and rigidity, while further reducing breakup modes. An inverted surround design maximizes clearance behind the grille, helping enhance driver excursion, clarity, and linearity.

Masterpiece CI mid-range and bass sections perfectly blend with the extreme accuracy of the high resolution Folded Motion XT tweeters, for a bold, seamless, distortion-free line-source performance throughout large listening areas.

Tribute 5XW and Monument 7XW feature passive radiators constructed from the same high-strength, low mass material as the woofers—unidirectional carbon fiber multi-section cone diaphragms with Nomex® backers. These passive radiators ensure shockingly powerful, dynamic, and distortion-free bass from a small, unobtrusive, sealed enclosure.

“It is not enough to know your craft - you have to have feeling. Science is all very well, but for us imagination is worth far more.”

– Edouard Manet
• THREE DRIVERS
• ONE TWEETER: FOLDED MOTION® XT OBSIDIAN • TWO MID/BASS: 5.5-INCH
• UNIDIRECTIONAL CARBON FIBER MULTI-SECTION CONES WITH NOMEX® BACKERS
• VOJTKO™ CROSSOVER NETWORK CONSTRUCTED FROM AUDIOPHILE-GRADE COMPONENTS
• PHENOLIC BAFFLE • SEALED BACK BOX • DIE-CAST ALUMINUM MOUNTING-LOCK SYSTEM
• PRE-INSTALL BRACKETS (SOLD SEPARATELY)
Proprietary Vojtko™ Crossover Networks.

Vojtko Crossovers are named after MartinLogan’s chief audio technologist, Joe Vojtko.

His unique approach to crossover design is just as crucial to MartinLogan’s Truth in Sound as are our innovative electrostatic and Folded Motion thin-film driver technologies. A Vojtko Crossover isn’t just a set of design requirements; it’s a philosophy.

Vojtko Crossovers are hand-built from the highest quality components and avoid overly complex topologies. This crossover has a straightforward objective: breathtaking realism.

Hand Selected Components. In designing each crossover topology, we take the drivers themselves into consideration. Carefully selected drivers, engineered for specific performance characteristics, are kept within their optimal frequency range by the custom Vojtko Crossover.

Each crossover is handcrafted using exceptional polypropylene and polyester capacitors, custom wound and large steel laminate low-DCR inductors, and double thick PCBs. This precision-tuned network preserves even the most microscopic sonic nuances while handling the full dynamics of any source. It’s a recipe for vanishingly low distortion and seamless driver integration.

The most critical aspect of a Vojtko Crossover design is the final voicing, always conducted in a real-world environment. This uniquely pragmatic approach guarantees that even the most amazing MartinLogan loudspeakers, like the massive Statement 40XW, deliver Truth in Sound in any room, including yours.

“The artist must be a philosopher...an artistic genius should have no other guide except the torch of reason.”

– Jacques-Louis David
• **FOUR DRIVERS**
• **ONE TWEETER:** FOLDED MOTION® XT OBSIDIAN
• **TWO MID:** 3.5-INCH
• **ONE BASS:** 8-INCH

• UNIDIRECTIONAL CARBON FIBER MULTI-SECTION CONES WITH NOMEX® BACKERS
• VOJTKO™ CROSSOVER NETWORK CONSTRUCTED FROM AUDIOPHILE-GRADE COMPONENTS
• SEALED BACK BOX
• DIE-CAST ALUMINUM MOUNTING-LOCK SYSTEM
• PRE-INSTALL BRACKETS (SOLD SEPARATELY)
• SQUARE GRILLE (SOLD SEPARATELY)
Phenolic Baffle and Sealed Back Box Enclosure. One key to replicating the performance of traditional loudspeakers with hidden, built-in speakers is the use of sealed, controlled-volume, back boxes.

Statement 40XW, Monument 7XW, Tribute 5XW, and Icon 3XW, feature baffles of incredibly dense phenolic resin polymer fronted by an aluminum faceplate. This phenolic resin polymer is the same material we use in the Neolith’s massive, acoustically-inert cabinet. It offers extraordinary material consistency that naturally minimizes deleterious resonances and vibrations.

Masterpiece CI back boxes fit into standard stud walls. They provide controlled and predictable airspace (volume) within which the specially engineered drivers can perform at their best. The sealed box removes variables, like wall cavity size and construction quality, from the acoustic equation, guaranteeing a consistent, accurate performance, regardless of installation specs.

Also, the hermetically sealed design keeps sound from leaking through walls. By controlling the sealed space volume and damping characteristics, and maintaining complete control over driver performance, crossover design, and cabinet construction, Masterpiece CI in-wall and in-ceiling speakers achieve an emotionally engaging experience on par with the performance of the world’s most exceptional floorstanding speakers. (Our own.)

Die-cast Aluminum Mounting-Lock System. A simple, yet robust die-cast aluminum mounting-lock system maximizes strength while allowing quick, trouble-free installation. Pocketed screw holes help hold the drill steady, making installation a snap. When not in use, mounting locks are secured within a self-contained housing. When moved into place, they couple the chassis firmly to the ceiling or wall, increasing the rigidity of surfaces. If ever removed, the locks retract and latch back in their housings. Each speaker includes a full-size installation template featuring quick-reference instructions, and die-cut guides for marking the cutout hole.

Spring-Loaded Binding Posts. With easy pre-installation access, our spring-loaded binding posts feature a large 4.5mm wire access hole and connect via banana plug, pin, or 10AWG bare wire.

Pre-Installation Brackets are available for every model in the Masterpiece CI Series, except for the Statement 40XW, which requires unique considerations for installation.
Masterpiece CI
Specifications
**Monument 7XW**

- **Frequency Response**
  - 52–25,000 Hz ± 3 dB
- **Tweeter Dispersion (horizontal x vertical)**
  - 80° x 30°
- **Sensitivity**
  - 95 dB @ 2.83 volts/meter
- **Impedance**
  - 4 ohms. Compatible with 4, 6, or 8 ohm rated amps.
- **Crossover Frequencies**
  - 200, 3200 Hz
- **Tweeter Aiming**
  - Rotatable tweeter for horizontal or vertical installations
- **High-Frequency Driver**
  - 1.25 x 2.4 inch (3.2 x 6.1 cm) Folded Motion XT Obsidian transducer with 4.5 x 2.75 inch (11.4 x 7 cm) diaphragm.
- **Mid-Frequency Driver**
  - 6.5-inch (16.5 cm) black unidirectional carbon fiber multi-section cone with Nomex® backer and cast aluminum basket, sealed back chamber format. Concave dust cap.
- **Low-Frequency Drivers**
  - Two 6.5-inch (16.5 cm) black unidirectional carbon fiber multi-section cone with Nomex® backer and cast aluminum basket, sealed back chamber format. Concave dust cap.
- **Passive Radiators**
  - Three 6.5-inch (16.5 cm) unidirectional black carbon fiber cone with Nomex® backer and cast aluminum basket, sealed back chamber format. Concave dust cap.
- **Binding Post Inputs**
  - Push style (two sets for easy installation)
- **Components**
  - Custom air core coil inductors, polypropylene film capacitors, and low DF electrolytic capacitors. Thermal/current protection.
- **Suitable Amplifier Range**
  - 20–300 watts
- **Max Power Handling**
  - 150 watts
- **Weight**
  - 44.5 lb (20.2 kg)
- **Required Opening (including tolerance)**
  - 45.57 x 9.29 inch (1157 x 236 mm)
- **Projection From the Wall Surface**
  - 0.31 inch (7.8 mm)
- **Depth Required Behind the Wall Surface**
  - 3.8 inch (96.5 mm)
- **Optional Accessories**
  - Pre-install bracket (PN: 7XWBRK)

**Statement 40XW**

- **Frequency Response**
  - 49–25,000 Hz ± 3 dB
- **Tweeter Dispersion (horizontal x vertical)**
  - 80° x 30° line source
- **Sensitivity**
  - 95 dB @ 2.83 volts/meter
- **Impedance**
  - 4 ohms. Compatible with 4, 6, or 8 ohm rated amps.
- **Crossover Frequencies**
  - 200, 3200 Hz
- **High-Frequency Drivers**
  - Sixteen 1.25 x 2.4 inch (3.2 x 6.1 cm) Folded Motion XT Obsidian transducer with 4.5 x 2.75 inch (11.4 x 7 cm) diaphragm.
- **Mid-Frequency Drivers**
  - Sixteen 3.5-inch (8.9 cm) black unidirectional carbon fiber multi-section cone with Nomex® backer and cast aluminum basket, sealed back chamber format. Concave dust cap.
- **Low-Frequency Drivers**
  - Eight 6.5-inch (16.5 cm) black unidirectional carbon fiber multi-section cone with Nomex® backer and cast aluminum basket, sealed back chamber format. Concave dust cap.
- **Binding Post Inputs**
  - Push style (two sets for easy installation)
- **Components**
  - Custom air core coil inductors, polypropylene film capacitors, and low DF electrolytic capacitors.
- **Suitable Amplifier Range**
  - 50–800 watts
- **Max Power Handling**
  - 400 watts
- **Weight**
  - 150 lbs (68.1 kg)
- **Required Wall Cavity (width)**
  - Minimum: 14.5 inch (368 mm)
  - Maximum: 16.5 inch (420 mm)
- **Required Wall Cavity (height, unobstructed)**
  - Minimum: 89 inch (2260 mm)
- **Enclosure (width x height x depth, excludes padding)**
  - 14.3 x 84.2 x 3.4 inch (361 x 2137 x 85 mm)
- **Grille (height x width)**
  - 11.5 x 59.5 inch (902 x 1511 mm)
- **Installation Kit (included—choose appropriate size)**
  - 1/2-inch drywall (PN: 40XWIWK05)
  - 5/8-inch drywall (PN: 40XWIWK0525)
**Tribute 5XW**

**Frequency Response**
71–23,000 Hz ± 3 dB

**Tweeter Dispersion (horizontal x vertical)**
80° x 30°

**Sensitivity**
94 dB @ 2.83 volts/meter

**Impedance**
4 ohms. Compatible with 4, 6, or 8 ohm rated amps.

**Crossover Frequency**
2400 Hz

**Tweeter Aiming**
Rotatable tweeter for horizontal or vertical installations

**High-Frequency Driver**
1.25 x 2.4 inch (3.2 x 6.1 cm) Folded Motion XT Obsidian transducer with 4.5 x 2.75 inch (11.4 x 7 cm) diaphragm.

**Low-Frequency Drivers**
Two 5.25-inch (13.33 cm) black unidirectional carbon fiber multi-section cone with Nomex® backer and cast aluminum basket, sealed back chamber format. Concave dust cap.

**Passive Radiators**
Two 6.5-inch (16.5 cm) black unidirectional carbon fiber multi-section cone with Nomex® backer and cast aluminum basket, sealed back chamber format. Concave dust cap.

**Binding Post Inputs**
Push style (two sets for easy installation)

**Components**
Custom air core coil inductors, polypropylene film capacitors, and low DF electrolytic capacitors. Thermal/current protection.

**Suitable Amplifier Range**
20–250 watts

**Max Power Handling**
125 watts

**Weight**
25.5 lb (11.6 kg)

**Overall Size (height x width x depth)**
31.13 x 10.6 x 4.09 inch (790.82 x 269.2 x 103.93 mm)

**Required Opening (including tolerance)**
29.82 x 9.29 inch (757 x 236 mm)

**Projection From the Wall Surface**
0.31 inch (7.8 mm)

**Depth Required Behind the Wall Surface**
3.8 inch (95.5 mm)

**Optional Accessories**
Pre-install bracket (PN: 3XWBRK)

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**Icon 3XW**

**Frequency Response**
71–23,000 Hz ± 3 dB

**Tweeter Dispersion (horizontal x vertical)**
80° x 30°

**Sensitivity**
94 dB @ 2.83 volts/meter

**Impedance**
4 ohms. Compatible with 4, 6, or 8 ohm rated amps.

**Crossover Frequency**
2400 Hz

**Tweeter Aiming**
Rotatable tweeter for horizontal or vertical installations

**High-Frequency Driver**
1.25 x 2.4 inch (3.2 x 6.1 cm) Folded Motion XT Obsidian transducer with 4.5 x 2.75 inch (11.4 x 7 cm) diaphragm.

**Low-Frequency Drivers**
Two 5.25-inch (13.33 cm) black unidirectional carbon fiber multi-section cone with Nomex® backer and cast aluminum basket, sealed back chamber format. Concave dust cap.

**Passive Radiators**
Two 6.5-inch (16.5 cm) black unidirectional carbon fiber multi-section cone with Nomex® backer and cast aluminum basket, sealed back chamber format. Concave dust cap.

**Binding Post Inputs**
Push style (two sets for easy installation)

**Components**
Custom air core coil inductors, polypropylene film capacitors, and low DF electrolytic capacitors. Thermal/current protection.

**Suitable Amplifier Range**
20–250 watts

**Max Power Handling**
125 watts

**Weight**
15.5 lb (7 kg)

**Overall Size (height x width x depth)**
15.98 x 9.94 x 4.11 inch (405.95 x 252.6 x 104.3 mm)

**Required Opening (including tolerance)**
14.66 x 8.64 inch (372 x 219 mm)

**Projection From the Wall Surface**
0.31 inch (7.8 mm)

**Depth Required Behind the Wall Surface**
3.8 inch (95.5 mm)

**Optional Accessories**
Pre-install bracket (PN: 3XWBRK)
Sistine 4XC

**Frequency Response**
60–20,000 Hz ± 3 dB

**Tweeter Dispersion (horizontal x vertical)**
30° x 80°

**Sensitivity**
92 dB @ 2.83 volts/meter

**Impedance**
4 ohms. Compatible with 4, 6, or 8 ohm rated amps.

**Crossover Frequencies**
400, 2250 Hz

**High-Frequency Driver**
1.25 x 2.4 inch (3.2 x 6.1 cm) Folded Motion XT Obsidian transducer with 4.5 x 2.75 inch (11.4 x 7 cm) diaphragm.

**Mid-Frequency Drivers**
Two 3.5-inch (8.9 cm) black unidirectional carbon fiber multi-section cone with Nomex® backer and cast aluminum basket, sealed back chamber format. Concave dust cap.

**Low-Frequency Driver**
8-inch (20.3 cm) black unidirectional carbon fiber multi-section cone with Nomex® backer and cast aluminum basket, sealed back chamber format. Concave dust cap.

**Controls**
Tweeter level (dB): +2, –2, 0
Position: Front R/Rear L, Front L/Rear R. For center choose either

**Binding Post Inputs**
Push style

**Components**
Custom air core coil inductors, polypropylene film capacitors, and low DF electrolytic capacitors. Thermal/current protection.

**Suitable Amplifier Range**
20–300 watts

**Max Power Handling**
150 watts

**Weight**
13.5 lb (6.1 kg)

**Overall Size (diameter x depth)**
12.8 x 7.5 inch (325 x 190 mm)

**Required Opening (including tolerance)**
11.46 inch (291 mm)

**Projection From the Wall Surface**
0.26 inch (6.6 mm)

**Depth Required Behind the Wall Surface**
7.2 inch (184 mm)

**Optional Accessories**
Pre-install bracket (PN: C8HTBRK)
Square grille (PN: C8HTSQ)
Circa 1982, the original MartinLogan prototype
The Birth of a Masterpiece

Picasso’s youthful realistic style soon gave way to the groundbreaking cubist images that made him famous. The more traditional style of the young Van Gogh matured into the bold, colorful impressionism we recognize today.

This same artistic trajectory was traveled by Gayle Martin Sanders and Ron Logan Sutherland, as they grappled with improving the “finicky” characteristics of classic electrostatic loudspeaker designs.

Early electrostatics were prized for their purity and clarity. But they were difficult to work with, needed lots of amplification, lacked bass, and had a limited soundstage. With the artful application of innovative materials and contemporary technology, Sanders and Sutherland improved the performance, and expanded the appeal, of this exalted audio technology.

By the early 1980s, MartinLogan had gained a worldwide reputation for superior electrostatic performance and arresting product design.

By the late 2000s, MartinLogan was not only producing the world’s most recognized electrostatic loudspeakers but also making strides in the use of alternative thin-film transducer materials. 2010 saw the introduction of the speakers featuring Folded Motion tweeter technology, which miniaturized a high-resolution thin-film transducer into a compact tweeter design. Folded Motion tweeter technology delivered electrostatic-like high-frequency detail in more traditional speaker design.

Today’s flagship Masterpiece CI Series of high performance loudspeakers is the culmination of nearly four decades of artistic growth and creative evolution.

It is, as its name implies, a masterpiece of audio realism and impact; destined to be a classic.
Folded Motion Drivers at Work.

How do you transform the breathtaking detail and lightning-fast accuracy of the world’s best electrostatic transducers into more traditional loudspeaker designs? That’s the (very) basic idea behind MartinLogan’s exclusive Folded Motion tweeter design—a uniquely engineered thin-film diaphragm that fits into a traditional speaker cabinet. This extremely low mass diaphragm “squeezes” air, demanding significantly less excursion than a typical dome tweeter. Its folded design allows a much larger surface area (compared to that of a regular 1-inch dome tweeter), controlled dispersion characteristics, and vanishingly low distortion—delivering much of the high-frequency detail and speed of a large, dynamic electrostatic panel in a small space.

Folded Motion XT tweeters, advanced thin-film transducer technology even further, with a 40% larger radiating surface. This increases audible bandwidth without sacrificing details and minimizes distortion to an unprecedented level while increasing efficiency and the tweeter’s lightning-fast response time. The result—superior realism.

High Magnetic Field Strength for Superb Control and Efficiency. Folded Motion tweeters incorporate neodymium iron boron (NIB) rare-earth magnets, with field strengths almost 20 times those of conventional magnet materials. Combining such a powerful magnetic motor system with an extremely lightweight diaphragm yields an outstanding force-to-mass ratio. Folded Motion tweeters are very efficient and always under perfect control. The sound that results is pure MartinLogan, with super-low distortion, astonishing clarity, and absolute precision.

Folded Motion Tweeters at Work. An array of neodymium magnets hold constant charges. A circuit trace on the folded polyamide diaphragm, driven by the amplifier, is given a charge that continuously reverses in reaction to the audio signal. Opposite charges attract and like charges repel, causing the diaphragm to “squeeze” air like an accordion and produce sound as the changes of the magnets and diaphragm interact.