
UNFORGETTABLE.
Mirage
M-SI SERIES

THE BEST LOUDSPEAKER YOU WILL NEVER HEAR.

Some artists believe their work "says" something beyond evidence. And if you don't hear it, you've missed the point.

Other artists insist their work "says" nothing extra at all. They'll let you hear whatever you want.

All artists, however, hope their work will remain unforgettable.

A loudspeaker is an instrument charged with reproducing an artist's work as faithfully as possible. It should not take liberties with the complex interplay of pitch, timbre, and intensity. A loudspeaker should never, ever "say" anything.

And yet, a loudspeaker must be unforgettable, too.

A MUSICAL JOURNEY

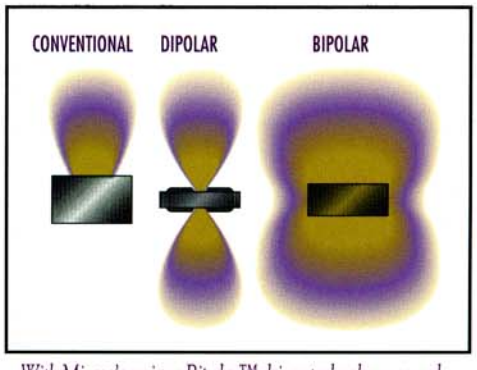
Mirage knows the traditional criteria for building high-performance loudspeakers. A broad and flat frequency response. Minimal distortion. Realistic stereo imaging. These should add up to faithful music reproduction. Yet something is missing: Why do such loudspeakers leave the listener unmoved?

The answer is simple: Like paint on canvas, a conventional loudspeaker forms a two-dimensional scene. That may work for a painting. But, like a sculpture, music is present in all three dimensions. How do you bring it to life?

Four years ago Mirage re-shaped conventional design with the M-1 Bipolar™ loudspeaker. Music came alive. And listeners were moved.

Unlike conventional forward radiating or dipolar loudspeakers, both of which radiate sound in a teardrop pattern, Mirage's Bipolar technology disperses sound 360 degrees around the speaker. If you could see the Bipolar musical wavefront, it would appear much like the ripples formed by dropping a pebble into a still pond. What you hear is music with a lifelike spectral balance you'd normally enjoy only in fine concert halls.

Here's how it works: Mirage Bipolar loudspeakers feature drivers on the front and the back of the cabinet. The rear-radiating sound is delivered in-phase with the direct output from the front, like a pulsing column, creating a seamless soundstage throughout the listening area.



With Mirage's unique Bipolar™ driver technology, sound radiates in-phase a full 360 degrees around the loudspeaker. The dispersion of conventional front-radiating and dipolar systems severely restricts the depth and width of the soundstage.

In a defining moment, the world-acclaimed Mirage M-1 Bipolar loudspeaker transcended the old limits of music reproduction. Audio critics around the world shouted their praise. Renowned critic Larry Archibald of Stereophile magazine said: "The Mirage M-1 has allowed me to listen to more music, of greater variety, with more involvement, fewer headaches, and more outrageous pleasure than any other speaker I've ever had in any house I've ever lived in."*

Clearly, with the Mirage M-1 and the other M-Series loudspeakers it spawned, the grand question — "Will a loudspeaker ever sound as real as a live performance?" — had been whittled down to a manageable dimension.

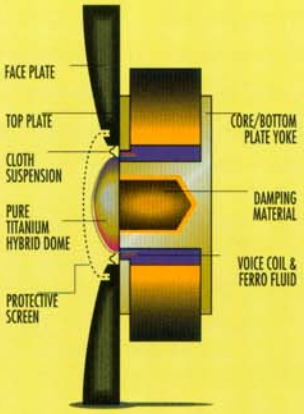
But the musical journey has just begun.

Introducing the new Mirage M-si Series Bipolar loudspeakers.

A VIRTUOSO PERFORMANCE

With the new M-si Series, Mirage takes Bipolar performance to a new level. Advances in materials and fabrication techniques over the past several years have provided the opportunity to exceed the original M-Series' performance in virtually every respect.

In developing the new M-si Series, Mirage engineers and acousticians highlighted four critical areas: tweeter and midrange design; midrange and woofer cone materials; crossover points and slopes; and cabinet construction. The results are a collection of loudspeakers which set higher standards of excellence in Bipolar imaging, treble and midrange transparency, phase coherency, and resonance-free construction.



The Voice Of An Angel

High frequencies — such as the clash of a cymbal or the tinkling of a piano's upper keys — are the undoing of many otherwise fine loudspeakers. A tweeter may sound shrill; a truly bad tweeter may sound like glass breaking. In either case, the results are unreal and fatiguing to the ears.

This in large part is why expensive "electrostatic" tweeters enjoy such high regard among critical listeners. These tweeters exhibit a "transparency" and swiftness conventional dynamic tweeters lack. However, electrostatic tweeters typically exhibit an unacceptable degree of "overhang" as well. Like a trained musician, a good tweeter must not turn staccato into legato.

For the new M-si Series, Mirage has created the first dynamic tweeter which can claim the transparency and speed of an electrostatic or ribbon design — without overhang. Its sweet sound can best be termed angelic.

The Mirage Pure Titanium Hybrid (PTH) tweeter consists of a feather-light, pure titanium one-inch dome on a cloth suspension system. The dome's low mass and rigid, close-tolerance shape ensure near-instantaneous response to signal inputs, while the cloth suspension prevents any post-signal resonance. The revolutionary PTH™ tweeter achieves the lowest difference tone distortion of any high frequency transducer Mirage has ever measured.

All loudspeaker drivers are designed for optimum distortion and dispersion performance over a certain range of frequencies. Tweeters and midrange drivers can play only so low before distortion arises; midrange drivers and woofers can extend only so high before their output becomes undesirably directional, like a narrow beam of light. Then, a tweeter with clean low-end response has "trickle-down" benefits for the entire speaker system.

Inherent in the PTH tweeter's design is a low fundamental resonance which allows it to extend lower, without distorting, into a range in which its dispersion is widest, or more "omnidirectional." Indeed, the tweeter's off-axis response is nearly identical to its on-axis response, which translates to better spectral balance in the listening area.

The anatomy of transparency: Mirage's Pure Titanium Hybrid tweeter uses a feather-light dome on a cloth suspension that eliminates ringing. A low fundamental resonance allows it to extend lower, without distortion.

Commanding The Symphony

In essence, a crossover conducts the performance of the loudspeaker's various drivers. And like a real-life conductor, it is often underappreciated in its role.

A crossover is the first thing music signals encounter when they enter a loudspeaker. From here, the signals are distributed to the appropriate driver. The first rule in crossover design is to avoid creating any distortion as the signal is passed along.

Mirage selects only the highest-quality components for its crossovers. All attempts are made to reduce not only the number of components, but also the distance any signal must travel, in order to minimize distortion.

Circuits that conduct music: Designing a crossover demands good science and golden ears. Mirage uses only the finest crossover components and chooses optimal points and slopes. The M-1si crossover conducts the performance of three pairs of drivers, maintaining phase coherency and therefore spectral balance throughout the listening area.

Next, one must choose the optimal crossover points and slopes. ("Slope" refers to the rate at which one driver takes over from its neighbor.) For some manufacturers, this process is a simple mathematical exercise. However, for Mirage, it is an exercise in seeking perfection.

Especially in a Bipolar design, coherency — or the seamless transition from low-to-higher-frequency driver — plays a critical role in achieving spectral balance throughout the listening area. Without phase coherency from one driver to another, subtle musical details can be virtually swallowed up, and grander moments entangled in a collapsed spatial image.

Mirage performed extensive measurements — using ears and instruments — in order to ensure phase coherency in the new M-si Series. The results can be heard in an absence of crossover distortion, an exceedingly flat response, and a natural timbral balance.

Grace Under Pressure

When the going gets loud, many loudspeakers start going...to pieces. The forces at work on midrange drivers and woofers — even at moderate volume levels — can derail a cone-shaped driver from its ideal piston-straight path. The result, of course, is distortion. It may be heard in the middle frequencies as harshness, and in the lower frequencies as muddiness.

However, it won't be heard in the new M-si Series. The all-new midrange and bass drivers are injection-molded polypropylene cones impregnated with carbon and other proprietary additives for increased strength and rigidity, with no gain in weight. The resulting tight, well-controlled cone motions guarantee clean and forceful reproduction, right down to the deepest bass notes.

The ironic fact is, without the new tweeter design, this performance would not have been possible. Because, like the tweeter, the midrange driver is designed with a low fundamental resonance, that allows it to perfrom distortion-free at the lower frequencies where its dispersion is optimal. And, since the tweeter covers lower-than-usual frequencies, the midrange driver avoids dealing with the higher frequencies where its dispersion would become undesirably directional.

Dynamic duo: Mirage's completely new bass and midrange drivers are injection-molded polypropylene cones impregnated with carbon and other proprietary additives for increased strength and rigidity.

Correspondingly, with extended low-end response from the midrange driver, the woofers never become directional as a consequence of straining to reproduce upper-bass and lower-midrange frequencies. The woofers are dedicated only to the lowest of bass frequencies, delivering them in a truly omnidirectional pattern.

Structural and musical integrity: Mirage cabinets use tongue-in-groove construction and rigid cross-bracing to stamp out unwanted vibrations before they join the music. Even the bass ports are designed for minimum wind-noise distortion.

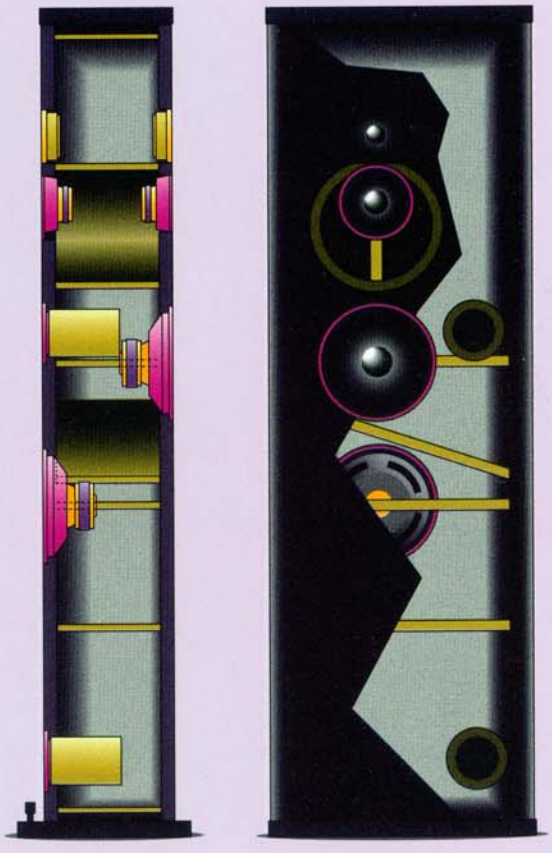
Silence Is Golden

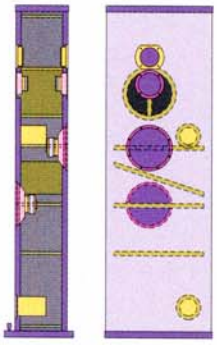
It may sound ironic to suggest that the new Mirage M-si Series are the best loudspeakers you'll never hear. Solid, tongue-in-groove construction, rigid cross bracing, and thick medium-density fiberboard (MDF) outer walls ensure that the M-si Series cabinets will never themselves contribute to the music. They will not pulsate in harmony with pounding bass notes; nor will they vibrate in unison with vivid highs. These are the tightest, most vibration-free enclosures Mirage has ever produced.

And they look it. Graced with highly polished black high-gloss trim panels, the M-si Series exudes an architectural honesty in keeping with the finest interior decors, both modern and traditional.

But that's not the end of the story. Rounded baffles front and rear ensure that the soundwaves emitted by the drivers are not subjected to "edge" diffraction upon meeting sharp cabinet edges. Imagine disrupting the ripples created by dropping a pebble into a pond and you will see how edge diffraction corrupts a musical wavefront.

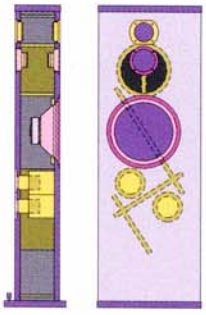
In another effort at soundproofing, the bass ports on the M-si Series have been re-engineered for maximum efficiency and minimum wind-noise distortion. Because no matter how soft or loud you play your music, silence can indeed be golden.





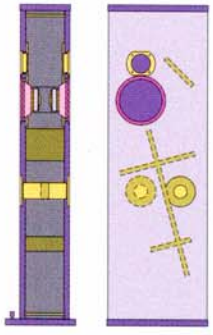
M-1si

The ultimate performer: Fully symmetrical, three-way Bipolar system. Dual 8-inch subwoofers in individual chambers generate bass down to below 20Hz. Low tweeter and midrange crossover points ensure minimal distortion and optimal dispersion for ideal Bipolar performance.



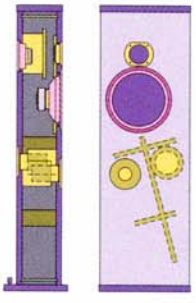
M-3si

Heir to the throne: A three-way, Bipolar system with the same fully symmetrical tweeters and midrange drivers as in the flagship M-1si. A dual-vented 10-inch bass driver with Electro Dynamic Braking™ provides tightly controlled deep bass reaching 24Hz. Outstanding Bipolar performance.



M-5si

Bound for greatness: Fully symmetrical, two-way Bipolar system featuring the same transparent PTH tweeter as in the M-1si and M-3si. Dual 6-1/2-inch bass drivers in a vented half-hemispherical cabinet provide usable bass down to 29Hz. Like all M-si models, the M-5si can be bi-amped or bi-wired via gold-plated, five-way speaker binding posts.



M-7si

The overachiever: Three-way system featuring the PTH tweeter plus a rear-facing MSE full-range driver to create life-like Bipolar imaging. A vented 8-inch bass driver with Electro Dynamic Breaking, as in the M-3si, provides tightly controlled deep bass reaching 32Hz. The M-7si requires as little as 50 watts per channel to achieve its rated performance.

THE ART OF NUMBERS

Art and technology may often seem at odds. For instance, a concert pianist revered as a fine "technician" seldom creates a memorable performance. And yet such deficiency cannot be measured.

You will see in the accompanying specifications that all Mirage M-si Series loudspeakers boast state-of-the-art performance figures. Alas, such numbers are quite forgettable.

Thankfully, it is not practical to create a specification in describing Mirage's Bipolar sound. As telling as they are, mere numbers cannot begin to reveal what your ears will hear.

That, we trust, will be unforgettable to you.

MIRAGE M-si SERIES SPECIFICATIONS

	M-1si	M-3si	M-5si	M-7si
SYSTEM TYPE	Bipolar radiator with dual subwoofer chambers - vented	Bipolar radiator vented	Bipolar radiator vented half-hemispherical cabinet design	Bipolar radiator vented
TWEETERS	2-1" (25.5mm) PTH pure titanium hybrid dome with cloth suspension	2-1" (25.5mm) PTH pure titanium hybrid dome with cloth suspension	2-1" (25.5mm) PTH pure titanium hybrid dome with cloth suspension	1-1" (25.5mm) PTH pure titanium hybrid dome with cloth suspension
MIDRANGE/FULL RANGE	2-5" (12.7cm) injection-molded/ polypropylene cones	2-5" (12.7cm) injection-molded/ polypropylene cones	—	1-5" (12.7cm) MSE™ injection-molded/ polypropylene cones
WOOFER	2-8" (20.3cm) Polyflex treated carbon-filled polypropylene with 1-1/2" (38mm) voice coils. Termination via Nitril/PVC surround	1-10" (25.4cm) carbon-filled polypropylene with 1-1/2" (38mm) voice coils with Electro Dynamic Braking™ Termination via Butyl surround	2-6 1/2" (16.5cm) injection-molded polypropylene with 1" (25.5mm) voice coils. Termination via Butyl surround	1-8" (20.3cm) injection-molded polypropylene cone, 1" (25.5mm) voice coils with Electro Dynamic Braking™ Termination via Butyl surround
FREQUENCY RESPONSE On axis +2dB Off axis +2dB @ 30°	 25Hz-33KHz 25Hz-20KHz	 30Hz-33KHz 30Hz-20KHz	 35Hz-22KHz 35Hz-20KHz	 38Hz-22KHz 38Hz-20KHz
DIRECTIONAL CHARACTERS	Mean front hemisphere within ±dB of the on-axis response	Mean front hemisphere within ±dB of the on-axis response	Mean front hemisphere within ±dB of the on-axis response	Mean front hemisphere within ±dB of the on-axis response
USABLE BASS RESPONSE	17Hz at -10dB anechoic chamber	24Hz at -10dB anechoic chamber	29Hz at -10dB anechoic chamber	32Hz at -10dB anechoic chamber
CROSSOVER POINTS	300Hz, 2.0KHz	350Hz, 2.0KHz	2.0KHz	480Hz, 2.0KHz
SENSITIVITY (Anechoic) (Bipolar in normal room)	82dB at 2.83V 1m anechoic chamber 86dB	83dB at 2.83V 1m anechoic chamber 87dB	84dB at 2.83V 1m anechoic chamber 88dB	84dB at 2.83V 1m anechoic chamber 88dB
IMPEDANCE	6 ohms nominal 4 ohms minimum	6 ohms nominal 4 ohms minimum	6 ohms nominal 4 ohms minimum	6 ohms nominal 4 ohms minimum
REC. AMP POWER (clipping less than 10%)	150-500 watts RMS per channel	100-300 watts RMS per channel	70-200 watts RMS per channel	50-175 watts RMS per channel
MAX POWER HANDLING	500 watts RMS	300 watts RMS	200 watts RMS	175 watts RMS
DIMENSIONS (HxWxD)	59.8" x 19.3" x 9.5" 152.3 x 49.1 x 24.2cm	52.5" x 18.1" x 8.3" 133.7 x 46.1 x 241.1cm	49" x 16" x 8" 124.6 x 40.7 x 20.3cm	45" x 14" x 7" 114.4 x 35.6 x 17.8cm
WEIGHT (each)	185 lbs (84 kg)	135 lbs (61 kg)	85 lbs (39 kg)	80 lbs (36 kg)
FINISH	Black high-gloss cabinet	Black high-gloss cabinet	Black high-gloss cabinet	Black high-gloss cabinet
GRILLE COLOR	Black	Black	Black	Black
FEATURES	Bi-amp/bi-wiring capable	Bi-amp/bi-wiring capable	Bi-amp/bi-wiring capable	Bi-amp/bi-wiring capable

DESCRIPTIONS AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

*MSE™ Broad Spectrum Mirage Soundstage Enhancement Transducer • PTH™ Pure Titanium Hybrid Dome Tweeter • MSP™ and PTH™ are trademarks of Audio Products International, Corp. *Stereophile, Volume XII No.6, June 1989.*

Mirage

THE ORIGINAL BIPOLAR LOUDSPEAKER™

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3PMB005E

MIRAGE MC-si CENTER CHANNEL LOUDSPEAKER

MIRAGE MC-si
CENTRAL TO THE EXPERIENCE

AT MIRAGE LOUDSPEAKERS, WE BELIEVE THAT THE PERFECT SOUND SYSTEM EXPERIENCE IS A DELICATE COMBINATION OF DEDICATION AND PASSION.

WHEN WATCHING MOVIES, YOU MUST HEAR A FAITHFUL RECREATION OF THE COMPLEX LAYERS OF DIALOGUE AND EFFECTS INTERWOVEN BY HOLLYWOOD'S DEDICATED TECHNICIANS. FOR MUSIC, ALL THE NUANCES AND HARMONIES CREATED BY A PASSIONATE MUSICIAN MUST BE SUBTLY REVEALED.

IT IS A FORMIDABLE BALANCING ACT FOR ANY AUDIO SYSTEM, FRAUGHT WITH SONIC PITFALLS. FEW SYSTEM LOUDSPEAKERS CAN TRULY ACCOMPLISH IT.

THE MIRAGE MC-si CENTER CHANNEL LOUDSPEAKER HAS BEEN ENGINEERED TO PERFECTLY CAPTURE BOTH THE COMPLEXITY AND THE PASSION. TWENTY YEARS OF RESEARCH HAS RESULTED IN LEADING EDGE TECHNOLOGY AND OUTSTANDING PERFORMANCE. SONICALLY IDENTICAL TO THE ACCLAIMED MIRAGE M-si SERIES, THE MC-si WILL COMPLEMENT VIRTUALLY ANY PAIR OF PREMIUM FRONT CHANNEL SPEAKERS.

UNIQUE TO THE MIRAGE MC-si IS A USER-SELECTABLE JUMPER SYSTEM THAT ADJUSTS THE SONIC CHARACTER OF THE MC-si FOR ITS IMMEDIATE SURROUNDINGS BY SHAPING THE ACOUSTIC CONTOUR, REDUCING THE "BOOM" ASSOCIATED WITH SPEAKER PLACEMENT ON TOP OF A PROJECTION TELEVISION OR ON A SHELF UNIT.

ITS PURE TITANIUM HYBRID (PTH) TWEETER CONSISTS OF A PURE TITANIUM DOME ON A CLOTH SUSPENSION SYSTEM THAT ENSURES NEAR INSTANT RESPONSE TO SIGNAL INPUTS AND PREVENTS ANY POST-SIGNAL RESONANCE.

TWIN COMPUTER-DESIGNED WOOFER CONES ARE INJECTION MOLDED TO EXACT PARAMETERS; NECESSARY TO PRODUCE MINIMAL DISTORTION AND OPTIMIZE DYNAMIC RANGE. IMPREGNATED WITH CARBON AND OTHER PROPRIETARY ADDITIVES TO ADD STRENGTH, THEY NEVER SACRIFICE BASS AND MIDRANGE CLARITY WHEN YOU INCREASE VOLUME. AND OUR UNIQUE RUBBER SUSPENSION REDUCES DISTORTION EVEN FURTHER, IMPROVING TRANSIENT RESPONSE.

WITH THE MIRAGE MC-si, SOUND DISPERSION DOES NOT BECOME UNDESIRABLY DIRECTIONAL. PRECISELY DEFINED CROSSOVER FREQUENCIES AND SLOPES MAINTAIN OPTIMAL CENTER IMAGING THROUGHOUT THE ENTIRE SPECTRUM. YOUR EARS HEAR EXACTLY WHAT YOUR EYES SEE.

OUTSIDE, THE BLACK HIGH GLOSS EXTERIOR EXHIBITS AN ARCHITECTURAL HONESTY THAT SUITS ALL INTERIOR DECOR THEMES. ROUNDED FRONT AND REAR BAFFLES ENSURE THAT SOUND WAVES ARE NOT DISRUPTED BY EDGE DIFFRACTION. SOLID TONGUE-IN-GROOVE CONSTRUCTION, THE RIGID MIRAGE CROSS-BRACING SYSTEM, AND THICK MEDIUM DENSITY FIBERBOARD OUTER WALLS MAKE THE MIRAGE MC-si THE TIGHTEST, MOST VIBRATION FREE CENTER CHANNEL LOUDSPEAKER AVAILABLE.

THE MIRAGE MC-si CENTER CHANNEL LOUDSPEAKER IS BACKED BY THE MIRAGE 5-YEAR LIMITED WARRANTY AGAINST DEFECTS IN PARTS AND WORKMANSHIP.*

IF YOU LOVE YOUR MUSIC WITH THE SAME PASSION AS THE MUSICIANS WHO MADE IT, AND IF YOU ARE DEDICATED TO HEARING MOVIE SOUND EXACTLY AS IT WAS CRAFTED, THE MIRAGE MC-si CENTER CHANNEL LOUDSPEAKER WILL MAKE THE EXPERIENCE COME ALIVE FOR YEARS TO COME.

VISIT YOUR NEAREST AUTHORIZED MIRAGE LOUDSPEAKER DEALER TODAY. AND ASK FOR A PROPER INTRODUCTION.

*THE TERMS OF THE LIMITED WARRANTY MAY VARY FROM COUNTRY TO COUNTRY TO COMPLY WITH LOCAL LAW.

SPECIFICATIONS

	MC-si
SYSTEM TYPE:	BASS REFLEX 2 WAY MAGNETICALLY SHIELDED CENTER CHANNEL SPEAKER.
DRIVER COMPLEMENT TWEETER:	1 - 1" TITANIUM HYBRID DOME.
WOOFERS:	2 - 5-1/4" INJECTION MOLDED WITH RUBBER SURROUNDS.
FREQUENCY RESPONSE: (± 3 dB)	45 Hz - 23 kHz
USABLE BASS: (–10 dB)	41 Hz
CROSSOVER POINTS:	2,000 Hz
SENSITIVITY:	86 dB
IMPEDANCE:	8 OHMS
DYNAMIC AMPLIFIER POWER: (RMS)	N/A
RECOMMENDED AMPLIFIER POWER:	50 - 150 WATTS RMS/CHNL
MAXIMUM POWER HANDLING:	150 WATTS
DIMENSIONS: HxWxD IN.	8 x 19 x 11-3/4"
CM	20 x 48 x 29
FINISH:	BLACK HIGH GLOSS TOP & BOTTOM.
GRILLE:	BLACK GRILLE CLOTH.

Specifications and descriptions subject to change without notice.

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