
morel
UNLEASH THE MUSIC
2019

UNLEASH THE MUSIC

Over three and a half decades of engineering, designing and manufacturing some of the world's premier speakers make surpassing previous achievements a challenge. But knowing there is always room for progress can serve as a driving force, enabling us to define barriers and determine how to provide solutions through advanced material use, innovative engineering, and perfecting manufacturing processes. This solution-oriented approach forms the building blocks of Morel's business and its success.

Our dedicated engineers are continually striving to perfect Morel products by constantly researching for a better understanding of how speakers work beyond the mechanical level. In the automotive world, it is extremely critical that we comprehend the delicate balance between acoustic parameters of a car and mechanical limitations in speaker design.

Morel's pursuit to achieve perfect reproduction and musical accuracy is also an accomplishment owed to our total manufacturing control and the special cooperation between our research and development and manufacturing teams.

The new car audio range represented in these pages demonstrates Morel's mastery of creating the near perfect balance between the machine and acoustic performance.

A JOURNEY OF DISCOVERY: THE FAT LADY PROJECT

The Morel *fat lady* is more than just an iconic, high-end home audio loudspeaker system. It started as a three year project conducted by our engineers that enabled us to push boundaries, stretch the imagination, and to look for new ways to build a loudspeaker that could genuinely recreate "the live experience", that electric feeling of really "being there" at a concert.

Throughout the development process, Morel learned how to exploit the acoustic potential of new materials and techniques, some of which were borrowed from Formula One racing and the aerospace industry. Some examples are the extensive use of carbon fibre in the very complex *fat lady* cabinet and drive units, and a high-tech material called Rohacell (used between two carbon fibre layers to form a sandwich construction for some Morel woofer cones).

The *fat lady* project also led to a new topology in crossover design. Much of what was learned was adapted to the new Morel car audio line, bringing the quest for "sound stage" and "image" stability within the car environment much closer to reality.

Such a radical product demands meticulous attention to detail throughout its journey, from a mass of parts to a finished and tested speaker system ready for sale. In order to facilitate this, Morel created new advanced manufacturing and testing procedures, which all Morel products benefit from.

THE ULTIMATE TEST

Each Morel car audio system was designed to present music as close to the real thing as possible. Hearing is believing, so experience Morel for yourself!

Technology Bar

- One-piece Carbon cone
- Hexatech™ aluminum VC
- EVC™ structure
- Acuflex™ coated - midrange & tweeter
- Neodymium magnet motor
- Titanium bobbin -woofer
- Shielded magnet
- C.A.R. Filter™
- Uniflow™ Air Chassis technology
- Low resonance rear cavity - midrange & tweeter
- Silver-plated Van Den Hul linear crystal wire -midrange terminal
- Lotus Grille
- Extra Large 3" voice coil

38 ANNIVERSARY LIMITED EDITION

The new 38 Anniversary Limited Edition system is the culmination of over three decades of R&D and manufacturing expertise, marking the next evolution for high-end car audio.

What sets this speaker system apart from the competition? It starts with the materials, like the titanium voice coils (in the woofers), carbon fibre/ Rohacell sandwich cones and the machined aluminum face plates for the tweeter and midrange. Add the advanced crossover with top quality components and Lotus grille and you begin to see why the 38 is a CEA 2014 Innovations Award recipient.

This speaker set embodies some of our best ideas brought to life. With a specially designed new Uniflow™ Air technology that can provide increased air and sound flow in the woofer (up to four times more than in previous Morel drivers), the 38 has an open and aerodynamic chassis and magnet system design that reduces inter-modulation distortion, stretching the neodymium high grade magnet segment even further.

The 38 LE marks a new level of sound quality with incredible accuracy in audio reproduction combined with exceptional musicality. This set, available as a 2- or 3-way system, delivers what you would expect to hear from speakers of this stature—a beautifully natural, dynamic and articulated sound, placing the listener in the best seat in the house for an emotionally engaging life-like experience.

WOOFER	
	38 LE W
Nominal Impedance (Ohm)	4
Power Handling (WRms)	140
Sensitivity (2.83V/1M) dB	88
Resonant Freq. Fs Hz	47
Voice Coil Diameter mm (inch)	74 (3)
Voice Coil Type/Bobbin	Titanium
Cone Type	Triple layer sandwich cone
Cone Material	Carbon fiber/ Rohacell sandwich
Unit Diameter mm (inch)	165 (6.50)
Mounting Depth mm (inch)	61 (2.4)

TWEETER & MIDRANGE		
	38 LE TW	38 LE M
Nominal Impedance (Ohm)	6	6
Power Handling (WRms)	130	100
Sensitivity (2.83V/1M)	90	88
Frequency Response Hz	1000-20000	300-6000
FS (Hz)	1200	450
Voice Coil Diameter mm (inch)	28 (1.125)	54 (2.125)
Magnet System	Double Neodymium Magnet	Neodymium rear vented
Dome Type	Acuflex™ hand coated soft dome	Acuflex™ hand coated soft dome
Unit Diameter mm (inch)	62.6 (2.4)	100.18 (3.93)
Mounting Depth mm (inch)	14.25 (0.56)	18 (0.7)

CROSSOVER		
	MX380 LE	MX280 LE
Crossover Point	W:600Hz/12dB M:6dB/3300Hz/12dB T:4000Hz/12dB	W:2000Hz/12dB T:1800Hz/12dB
Crossover Controls	Tweeter +/- 2dB Midrange +2dB	Tweeter +/- 2dB
Wiring Options	Bi Wire / Bi amp	Bi Wire / Bi amp

Technology Bar
One-Piece carbon cone
Hexatech™ Aluminum VC
EVC™ structure
Acuflex™ coated tweeter
Double Neodymium Magnet Motor
Shielded Magnet
MXR direct Crossover
C.A.R Filter™
Uniflow™ Chassis
Lotus transparent grille
Copper shorting rings
Under-hung Voice Coil
Extra large 3" voice coil

SUPREMO

The Supremo is Morel's reference mobile audio sound system. Employing technical innovation from Morel's flagship home audio speaker, the *fat lady*. This new generation Supremo is the a recipient of the 2012 CEA Innovation award.

The Supremo represents a tour de force of Morel's expertise and craftsmanship, elevating car audio musical presentation to a whole new level.

We challenge you to experience the Supremo. You will be drawn irresistibly to the music, feeling the same adrenaline rush as being present at a live concert, but this time in your own car.

Supremo Woofer
An optimized version of the *fat lady* mid-bass woofer, for precision, linearity, dynamics, and wide frequency range.

Supremo Piccolo Tweeter
Seamlessly matches the Supremo woofer with an exceptionally low resonance point and flat frequency response.

MXR Crossover
Engineered to meet the most challenging acoustic conditions of a car, the new MXR crossovers employ Mundorf components, positive phase, sharp roll-off, and resistor-free signal paths to create total sound integration between the Supremo components for a realistic three-dimensional sound.

Model	Size & Configuration	Power Handling (Wrms) / Peak Power (W)	Sensitivity (2.83V/1M) (dB)	Frequency Response (Hz)	Crossover
SUPREMO 602	6½" 2-way	140 / 600	89	40-25000	MXR SUPREMO

Technology Bar

- One-Piece DPC cone
- Hexatech™ Aluminum VC
- EVC™ structure
- 28mm Acuflex™ coated tweeter
- Titanium bobbin
- Shielded Magnet
- C.A.R Filter™
- Uniflow™ Chassis
- Lotus grille-tweeter & midrange
- Octopus Grille-woofer
- Extra large 3" voice coil

ELATE TITANIUM

The Elate is recognized as an icon in car audio. Morel's R&D re-engineered this series to combine newly developed technologies to deliver precision, musicality and high power capability like never before.

Borrowing technologies from Morel's high-end cutting-edge hifi raw-drivers, the Elate Titanium woofers feature a new titanium bobbin (voice coil former) made to produce a quick transient response that aligns with the acoustic challenges of the car, allowing the woofer to match different enclosures for different car doors. The woofers continue to employ Morel's C.A.R filter™ and 3-inch EVC™ with Hexatech™ technology. Complementing the woofers is the new MT350 hand-crafted Acuflex™ soft dome tweeter with a vented cavity design for improved transiency and dynamic range. The tweeter has a smaller footprint and a completely new mounting design for easier installation in factory locations. An improved CDM880 Acuflex™ soft dome midrange provides lower resonance and a higher X-Max.

When it all comes together, the new Elate Titanium series recreates a soundstage with astounding transparency and imaging, while being more musically dynamic than ever.

Model	Size & Configuration	Power Handling (Wrms) / Peak Power (W)	Sensitivity (2.83V/1M) (dB)	Frequency Response (Hz)	Crossover
ELATE TI 503/502	5¼" 3-way / 2-way	160 / 1000	87	40-25000	
ELATE TI 603/602	6½" 3-way / 2-way	180 / 1000	88	30-25000	MXT380 / MXT280
ELATE TI 903/902	8¾" 3-way / 2-way	200 / 1000	89	25-25000	

Technology Bar

- Hybrid: One-Piece DPC cone Hybrid Integra: Paper Composite Cone
- Hexatech™ Aluminum VC
- EVC™ structure
- Acuflex™ coated tweeter
- Hybrid Magnet Motor
- Shielded Magnet
- MXR direct Crossover
- Hybrid: C.A.R Filter™ Hybrid Integra: Integra time aligned structure
- Uniflow™ Chassis
- Octopus Grille
- Large 2" voice coil

HYBRID & HYBRID INTEGRA

Some proclaim the Hybrid as one of the best sounding speaker systems we produce, and the latest generation takes it steps closer to perfection. At the heart of the new Hybrid is an unconventional, innovative and highly effective Hybrid magnet system. These woofers are now paired up with our famed MT230 tweeters and MXR crossovers to deliver extraordinary sound that's even more pleasing to the ear than before.

The addition of the 2013 CEA Innovation award winning Hybrid Integra expands the installation options of the Hybrid series. Morel's Integra concept minimizes phase error and allows the sound field to be constant in all directions, making it easy to achieve audiophile grade performance even when space is limited.

Model	Size & Configuration	Power Handling (Wrms) / Peak Power (W)	Sensitivity (2.83V/1M) (dB)	Frequency Response (Hz)	Crossover
HYBRID 402	4" 2-way	100 /300	89	70-25000	MXR240.3
HYBRID 502	5¼" 2-way	120 / 500	90	60-25000	MXR240.3
HYBRID 602	6½" 2-way	140 / 600	91	50-25000	MXR240.3
HYBRID INTEGRA 402	4" Point source	80 / 250	89	80-25000	MXR250i
HYBRID INTEGRA 502	5¼" Point source	90 / 250	90	70-25000	MXR250i
HYBRID INTEGRA 602	6½" Point source	100 / 300	91	65-25000	MXR250i

DESIGN AND TECHNOLOGY

Innovative technology and a distinct design philosophy have been the guiding ideas at the heart of Morel. Since the founding of the company, Morel established a reputation for manufacturing original and distinctive products that meet the challenge posed by the acoustic limitations in a car in order to achieve realistic audio performance and better product reliability. This can only be achieved by Morel's total control over all manufacturing and testing processes.

The following explains some of the iconic technological traits that have become the foundation of Morel speaker designs:

Lotus Grille

The new Morel grille has a specific pattern of holes in different shapes and diameters engineered to minimize the "horn" effect (high frequency peak caused by the resonant frequency of multiple same-size holes). Innovative metal processing enabled the construction of a very thin nearly transparent grille that hardly affects the sound at all frequencies whilst maintaining structural integrity to protect the drivers. The Lotus grille is a registered design protecting Morel's intellectual property.

Woofer Cones

Strength, shape, weight and damping-finding the correct correlation between these four aspects of a cone require technical experience and practical know-how. Our latest generation of drivers takes these carefully balanced parameters to a new level, utilizing shallow, one-piece cone constructions for wide dispersion, accuracy and low distortion.

Carbon Fibre

Derived from the drivers of our award winning *fat lady* speaker system, this cone design is comprised of two exterior carbon fibre skins sandwiching a layer of Rohacell, a high strength, featherweight foam. The combination forms a cone that is light, strong and properly damped for naturally uncoloured audio reproduction.

DPC

DPC, or Damped Polymer Cone, is a direct derivative of the cones Morel has built its reputation upon. With high self-damping characteristics, this cone provides exceptional sound quality without coloration or harshness.

Paper Composite

In use since the first loudspeakers, paper continues to be an exceptional material of choice. Morel's latest paper composite cones are ultra lightweight, making them an exceptional pairing for drivers using smaller motors and voice coils.

Titanium Bobbin

The bobbin material has influence on the acoustical parameters of the driver, its power handling and the reproduced sound quality. By using titanium bobbin, Morel intended to raise the Mechanical Factor (QMS) in order to enable a wider selection of enclosure types and sizes. As for the sound quality, one is able to discern a distinctively "crisper" sound when compared to an equivalent driver with aluminum bobbin. The rigid characteristic of titanium, along with its other advantages produce a driver that is tonally balanced and accurate, with exceptionally fast transient response.

Hexatech™ Aluminium Voice Coil

Made from 100% aluminium wire shaped like a honeycomb, the Hexatech™ voice coil reduces air gaps in the coil windings, thereby increasing efficiency by up to 20%. Being lightweight, Hexatech™ voice coils are largely responsible for the extraordinary fast transient response Morel drive units are known for.

Acuflex™ Technology

A specially engineered damping compound applied to the soft domes of specific Morel tweeters and midranges. The combination of these materials creates a diaphragm that exhibits controlled cancelling break up (accurate–flexing), meaning each break-up mode is counteracted by another in the opposite direction. This cancellation of break-up modes leaves nothing but the pure, natural sound Morel tweeters and midrange are famous for.

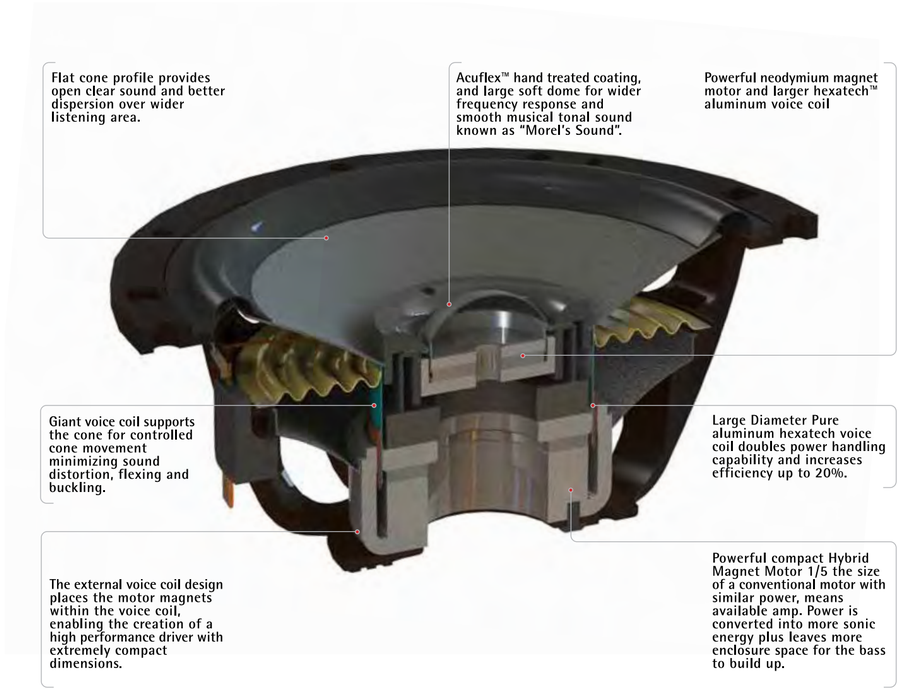
Integra

Derived from the word "integrate", Integra is a speaker consisting of both a woofer and tweeter that share a common chassis. Unlike a coaxial, its recessed tweeter is concentrically aligned with the woofer cone. This minimizes phase error and allows the sound field to be constant in all directions, creating a near perfect time alignment.

Magnet Technology

Morel's experience in motor design has allowed it to harness the magnetic energy in extremely effective manners. Typically the bigger the magnet the more energy however; in automobiles, there is often not the space for physically large magnets. Morel offers a number of solutions to deal with this problem.

HYBRID INTEGRA CUT SECTION



Ferrite
Ferrite magnets are the most commonly used in speakers. While they look similar, there are several grades of magnets. Morel uses only the highest intensity available in its designs. As a result, Morel's magnetic systems are highly compact yet deliver more magnetic flux than conventional ferrite magnets.

Neodymium
The most powerful magnet available, neodymium enables Morel to create physically compact speakers, such as tweeters and midrange, that fit in very limited spaces without limiting the quality of sound.

Double Ferrite
Morel's double ferrite drive system generates more magnetic energy than a single magnet of similar size, increasing efficiency and the dynamic range. The position of the secondary magnet fixed above the top plate in the motor is the key in controlling stray magnetic flux, thus generating a more focussed magnetic field while also contributing to the "shielded" characteristic of our speakers.

Hybrid
The Hybrid motor drive system uses a ferrite magnet together with a very powerful neodymium magnet. Combined they create a compact, lightweight motor system that is up to four times more powerful than conventional designs of the same size. With Hybrid, more amplified power is converted into sonic energy for flawless performance, even in a small driver.

External Voice Coil (EVC)™ Technology
Morel speakers with EVC™ technology utilize voice coils that are up to three times larger than those used in conventional loudspeakers. The EVC™ design moves the magnetic drive system to within the voice coil, eliminating stray magnetic flux by effectively directing all the magnetic energy to the voice coil. The result is an ultra efficient and powerful design, that is highly compact with efficient heat dissipation and reduced cone breakup for lower distortion.

Under-Hung Voice Coil
An under-hung voice coil features a voice coil winding height shorter than the magnetic gap. This means the voice coil is within the magnetic energy field at all times leading to greater articulation and transient response.

Shielded Magnet Technology
The modern car environment is highly sensitive to stray magnetic fields. Vehicles now use several computer control devices throughout the car, and conventional non-shielded speakers can be a threat to the vehicle's electrical integrity. Morel speakers featuring the company's EVC™ technology are more than 90% shielded—safe for installation in today's high-tech vehicles.

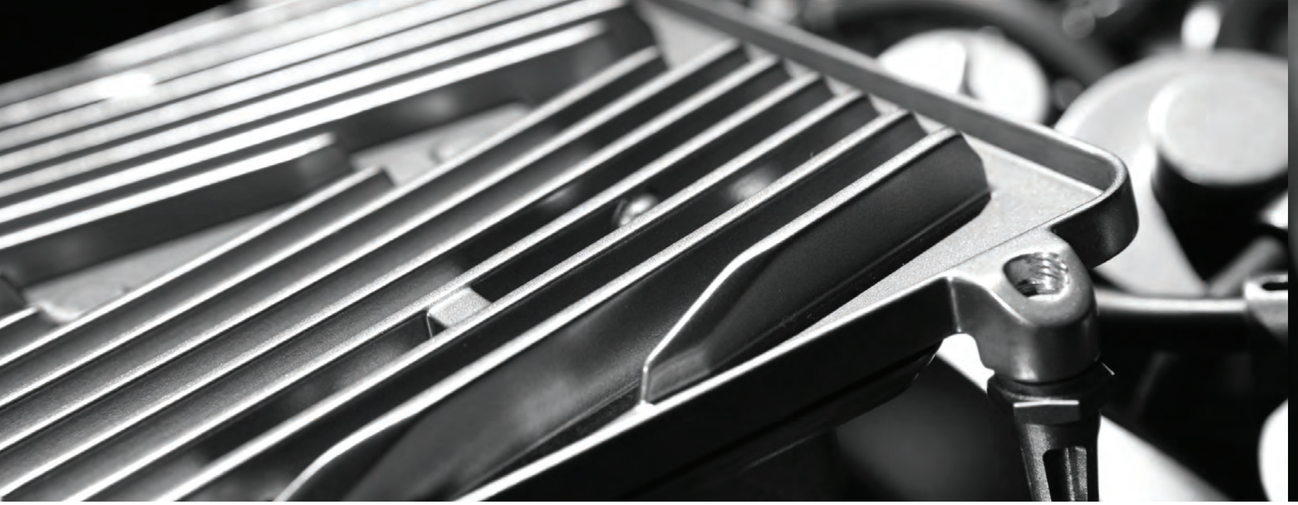
C.A.R. Filter™ (Controlled Acoustic Resistance)
In most automotive applications, speakers are installed in a virtual free-air environment, such as a door, which provides minimal acoustic loading. The C.A.R. Filter™ improves the acoustic loading by controlling airflow within the driver, mimicking the effects of a cabinet while improving power handling by 30%. This provides greater control over the cone movement for improved bass dynamics.

Uniflow™ Chassis
Uses an open design that is aerodynamically efficient, allowing air and sound waves to flow uniformly and smoothly. Its geometric shape also eliminates interference with the woofer's moving components, enabling the use of a low-profile spider for greater support and stability.

PFS™ - Progression Field Symmetry engineering
Produces longer linear excursion enabling the spider and surround to reach optimal performance especially at high output levels. Under extreme conditions, the spider and surround progressively act as "shock absorbers" to prevent voice coil displacement and bottoming, and improve voice coil linearity.

MXR Crossover
Morel Crossover Resolution (MXR) system combines high quality components and varying features that improve the sound presentation and overall sound quality of Morel's systems. The MXR crossover system is designed to ensure that drivers integrate seamlessly with minimum loss of signal quality to preserve the natural and tonal balance of our speakers.

Grand Dome
Grand Dome Geometry membrane technology is a stiff, convex paper cone that provides the excellent off-axis performance enabling multiple speaker mount locations in the car. The well damped, stiff cone design allows the speaker to produce excellent mid-bass frequencies.



Technology Bar

- Paper Composite Cone / Carbon Cone (Nano)
- Hexatech™ Aluminum VC
- EVC™ structure
- Acuflex™ coated tweeter
- Double Ferrite Magnet Motor
- Shielded Magnet
- MXR direct Crossover
- C.A.R Filter™
- Octopus Grille
- Large 2" voice coil
- Ultra Shallow Architecture (Nano)
- Grand Dome Geometry (Nano)
- Neodymium magnet motor (Nano)
- PSF™ (Progressive Field Symmetry-Nano)
- Z.P.I. Technology (Nano Integra)

Virtus Nano Carbon

Virtus Nano Integra Carbon

Virtus

VIRTUS AND VIRTUS NANO

The Virtus 2-way and 3-way components systems offer Morel's core technological virtues that make them a performance value. Every Virtus system incorporates many advanced designs that leverage over four decades of innovation and craftsmanship. Features such as the External Voice Coil (EVC™) motor and large 2.1" diameter Hexatech aluminum voice coils, C.A.R. filter, MXR crossover technology and Morel's legendary 1.1" Acuflex™ soft dome tweeters bring emotion to music with a balance of rich, natural midrange, high frequency detail and vibrant bass that represents Morel's trademark acoustic signature.

The ultra slim-mount Virtus Nano Carbon and Virtus Nano Integra Carbon systems are designed to fit where space is limited. This high fidelity solution is the shallowest component system in car audio, featuring a maximum mounting depth of only 0.67" (17mm). A powerful neodymium EVC™ motor and a unique domed cone and suspension design ensure the Virtus Nano performs every bit as well as its namesake.

Model	Size & Configuration	Power Handling (Wrms) / Peak Power (W)	Sensitivity (2.83V/1M) (dB)	Frequency Response (Hz)	Crossover
VIRTUS 402	4" 2-way	100 / 300	88	70-22000	MXR200.3
VIRTUS 503 / 502	5¼" 3-way / 2-way	120 / 300	90	65-22000	MXR300 / MXR200.3
VIRTUS 603 / 602	6½" 3-way / 2-way	140 / 300	91	55-22000	MXR300 / MXR200.3
VIRTUS NANO CARBON 603 / 602	6½" 3-way / 2-way	100/ 300	91	50-22000	MXR200.3n / MXR300n
VIRTUS NANO INTEGRA CARBON 602	6½" 2-way	100/ 350	88	50-25000	MXR200.3n

Technology Bar

- Treated Paper Composite Cone
- 28 mm soft dome tweeter (2-way)
- 25 mm soft dome tweeter (Integra)
- MXR direct crossover
- High grade ferrite magnets
- Integra structure - Integra
- 1.5" voice coil - woofer

TEMPO ULTRA & TEMPO ULTRA INTEGRA

The Tempo Ultra features both 2-way and point source solutions for those music aficionados who demand outstanding sonic performance and power while still getting tremendous overall value. The models feature a large voice coil and a stronger magnet system, which provide increased power handling (up to 30% more than the current Tempo), with lower distortion levels and improved bass response. Morel's renowned 1.1" (28mm) soft dome tweeter delivers the detail and dynamics for a truly memorable musical experience.

The Integra point source design was developed to reproduce a constant and coherent sound field. Whether it is being used for rear-fill or as the main components for a front stage, the Tempo Ultra Integra will provides great dynamics, soundstage orientation and neutrality.

Model	Size & Configuration	Power Handling (Wrms) / Peak Power (W)	Sensitivity (2.83V/1M) (dB)	Frequency Response (Hz)	Crossover
TEMPO ULTRA 502	5¼" 2-way	100	89	65-22000	WF: 3200Hz 6dB TW: 3200Hz 6dB (±2dB)
TEMPO ULTRA 602	6½" 2-way	120	90	55-22000	
TEMPO ULTRA 572	5x7" 2-way	110	90	60-22000	
TEMPO ULTRA 692	6x9" 2-way	130	91	50-22000	
TEMPO ULTRA INTEGRA 402	4" Point source	60	85	80-22000	
TEMPO ULTRA INTEGRA 502	5¼" Point source	100	89	55-22000	
TEMPO ULTRA INTEGRA 602	6½" Point source	110	90	50-22000	
TEMPO ULTRA INTEGRA 572	5x7" Point source	100	90	60-22000	
TEMPO ULTRA INTEGRA 692	6x9" Point source	140	92	35-22000	

Technology Bar

- Treated Paper Composite Cone
- High grade ferrite magnets
- Soft Dome Tweeter
- MXR direct Crossover

MAXIMO ULTRA MKII & MAXIMO ULTRA INTEGRA

The Maximo Ultra marks a significant leap forward in entry-level speaker performance. Built with the same quality craftsmanship Morel is known for, this new speaker series was designed to push the sound boundaries while being easily installed in factory locations and integrate with factory head units or small amplifiers. If performance value is what you are after, look no further than the Maximo Ultra.

Model	Size & Configuration	Power Handling (Wrms) / Peak Power (W)	Sensitivity (2.83V/1M) (dB)	Frequency Response (Hz)	Crossover
MAXIMO ULTRA 502	5¼" 2-way	80 / 160	89	50-22000	3500 Hz ,6dB
MAXIMO ULTRA 602	6½" 2-way	90 / 160	90.5	50-22000	
MAXIMO ULTRA MKII 603	6½" 3-Way	100 / 180	90.5	50-20000	MXR130
MAXIMO ULTRA COAX 4	4" Coaxial	45 / 100	87.5	75-20000	5700 Hz ,6dB
MAXIMO ULTRA COAX 5	5¼" Coaxial	70 / 140	89.5	55-20000	4400 Hz ,6dB
MAXIMO ULTRA COAX 6	6½" Coaxial	80 / 160	91	55-20000	5600 Hz ,6dB
MAXIMO ULTRA COAX 6X9	6x9" Coaxial	100 / 120	92	45-20000	5000 Hz ,6dB

Technology Bar

- Treated Paper Composite Cone
- High grade ferrite magnets
- Soft Dome Tweeter
- MXR direct Crossover
- Hybrid magnet motor
- Corrugated ultra light surround
- Low energy loss crossover network

MAXIMUS 602 V2

The new Maximus 602v2 is even more versatile than before. Featuring a re-engineered woofer with a highly efficient hybrid magnet motor and improved suspension, the latest variant delivers bass notes with greater impact and more dynamic midrange, while improving power handling by 50%.

Developed to be an easy, high-fidelity upgrade to any factory 2-way system, the Maximus handles more power so you can add an amplifier to reach even greater output levels but still maintain high levels of fidelity.

Model	Size & Configuration	Power Handling (Wrms) / Peak Power (W)	Sensitivity (2.83V/1M) (dB)	Usable Frequency Response (Hz)	Crossover
MAXIMUS 602v2	6½" 2-way	90 / 180	94	60-22000	Integrated crossover 6dB / 12 dB

CCWR254

Broadband speakers that cover both midrange and high frequency audio spectrums are becoming increasingly popular in new vehicles. As a result, Morel developed the CCWR 254 as a premium wide range driver with detailed highs and a lush midrange in a compact size.

Even with its diminutive 2.5" diameter, the new CCWR 254 employs some of Morel's best technologies including an extremely powerful dual neodymium EVC™ magnet motor along with a full copper sleeve. The computer optimized design ensures superb linearity and high magnetic flux enabling the CCWR 254 to span a frequency response of 300Hz-19kHz with ultra- low distortion across its frequency range.

Model	Size & Configuration	Power Handling (Wrms) / Peak Power (W)	Sensitivity (2.83V/1M) (dB)	Usable Frequency Response (Hz)	Crossover
CCWR254	2½" wide range speaker	40 / 80	84.5	300-19000	High-pass 350 Hz

THE ULTIMATE BASS EXPERIENCE

The same uncompromising dedication to innovation, craftsmanship and sound quality that have made Morel the choice of music aficionados worldwide, bring you leading subwoofer design and technology for the ultimate bass experience.

Morel's design principles take a broader approach than what is found in common subwoofers that focus on enclosure size and output, creating a balance of control, extension and transparency within a system.
The subwoofer seems to disappear into a system, becoming an instrument of the music.

Technology Bar
One piece carbon Hybrid Cone
Hexatech™ Aluminum VC
EVC™ structure
Double Ferrite Magnet Motor
Uniflow™ Chassis
Extra large 5.1" voice coil
PFS architecture
Large X-MAX (Ultimo TI)
Accucenter™ (Ultimo TI)
Titanum bobbin (Ultimo TI)
Copper Shorting ring (Ultimo TI)
DMM™ (Double Magnet Motor -Ultimo TI)

ULTIMO TITANIUM AND ULTIMO TITANIUM SC

Winner of the 2014/2015 EISA best subwoofer of the year award, the new flagship Ultimo Titanium further improves the extraordinary combination of musicality and high power handling the original Ultimo subwoofers were known for.
The Ultimo Titanium are equipped with gigantic 5.1" Hexatech™ External Voice Coil (EVC™) which utilizes Morel's latest titanium bobbin technology, high temperature aluminum Hexatech™ voice coil winding, and a new copper shorting ring. The unique double magnet motor coupled with the PFS™ suspension system ensures maximum linearity and truly flat response. Combined, each of these technologies help make the new Ultimo Titanium the lowest distortion and most dynamic subwoofer series Morel has ever produced. Equally new, the Ultimo Titanium SC series shares many of its technological attributes with the Ultimo Titanium, yet offers improved efficiency while requiring less power to operate.
Both the Ultimo Titanium and Ultimo Titanium SC subwoofer series benefit from the incorporation of Morel's titanium voice coil technology and continued parameter optimization, thus enabling them to work more efficiently in smaller enclosures than their predecessors while improving their performance.

Model	Nominal Impedance (Ohms)	Power Handling (Wrms)	Max. Trans. Pwr Handling (10ms) W	Sensitivity (2.83V/1M) (dB)	Frequency Response (Hz)
ULTIMO 122	2	1000	3000	87	10-900
ULTIMO 124	4	1000	3000	86.3	10-900
ULTIMO 102	2	1000	3000	86.1	10-900
ULTIMO 104	4	1000	3000	85	10-900
ULTIMO 802	2	800	3000	84	20-900
ULTIMO 804	4	800	3000	83.7	20-900
ULTIMO SC 122	2	600	2000	89	10-900
ULTIMO SC 124	4	600	2000	89	10-900
ULTIMO SC 102	2	600	2000	88	10-900
ULTIMO SC 104	4	600	2000	87	10-900

Technology Bar

- Paper Composite Cone
- High efficiency motor design
- Copper coated aluminum voice coil

PRIMO

The Primo was engineered to offer the Morel build and sound quality to those who are looking for exceptional value. Available in 8", 10" and 12" sizes, Primo subwoofers feature stiff, treated paper cones, high-grade ferrite magnets and 2-inch voice coils to provide superior electromechanical force, ensuring linearity.

Primo was designed to work well in both sealed and vented applications, to deliver great efficiency, enabling it to generate high output levels (dB's) even with a modest power amplifier.

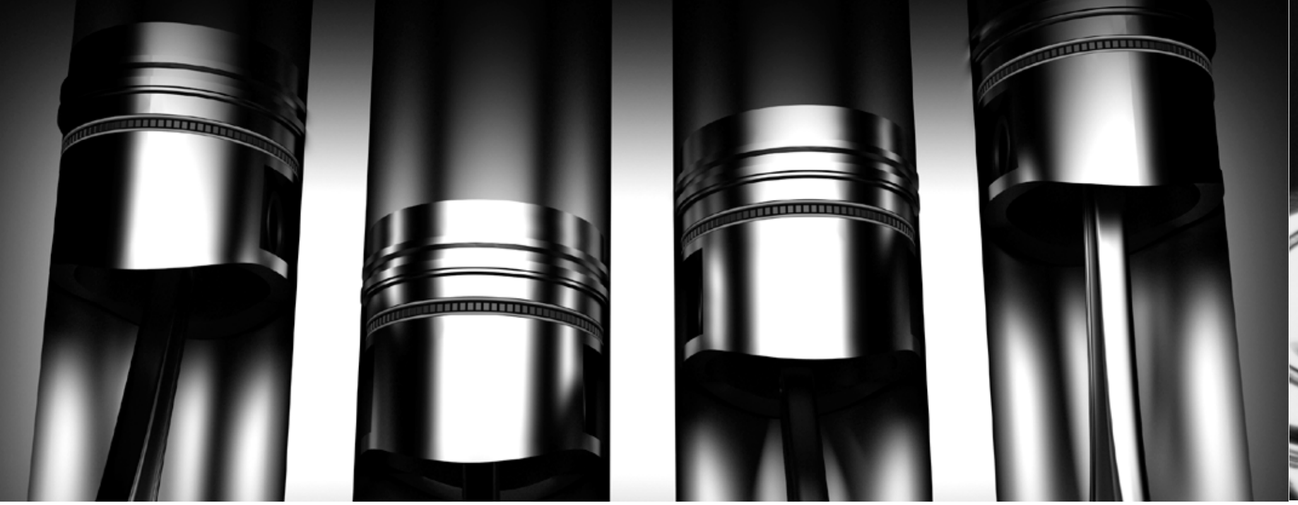
Model	Nominal Impedance (ohms)	Power Handling (Wrms)	Max. Trans.Pwr Handling (10ms) W	Sensitivity (2.83V/1M) (dB)	Frequency Response (Hz)
PRIMO 124	4	350	700	91	22-900
PRIMO 104	4	300	600	90	25-900
PRIMO 804	4	250	500	89	28-900

SUBWOOFERS	ULTIMO TITANIUM 122	ULTIMO TITANIUM 124	ULTIMO TITANIUM 102	ULTIMO TITANIUM 104	ULTIMO TITANIUM 802	ULTIMO TITANIUM 804	ULTIMO TITANIUM SC122	ULTIMO TITANIUM SC124	ULTIMO TITANIUM SC102	ULTIMO TITANIUM SC 104	PRIMO 124	PRIMO 104	PRIMO 804
Nominal Impedance (ohms)	2	4	2	4	2	4	2	4	2	4	4	4	4
Power Handling (Wrms)	1000	1000	1000	1000	800	800	600	600	600	600	350	300	250
Max. Trans.Pwr Handling (10 ms) W	3000	3000	3000	3000	3000	3000	2000	2000	2000	2000	700	600	500
Sensitivity dB (2.83V/1M)	87	86.3	86.1	85	84	83.7	89	89	88	87	91	90	89
Frequency Response (Hz)	10-900	10-900	10-900	10-900	20-900	20-900	10-900	10-900	10-900	10-900	22-900	25-900	28-900
Cone Material	Carbon-fiber laminated paper	Carbon-fiber laminated paper	Carbon-fiber laminated paper	Carbon-fiber laminated paper	Carbon-fiber laminated paper	Carbon-fiber laminated paper	Carbon-fiber laminated paper	Carbon-fiber laminated paper	Carbon fiber laminated paper	Carbon fiber laminated paper	Laminated paper	Laminated paper	Laminated paper
Net Weight Kg (pound)	6.7 (15)	6.7 (15)	6.5 (14.3)	6.5 (14.3)	6.1 (13.44)	6.1 (13.44)	6.3 (13.9)	6.3 (13.9)	6.1 (13.44)	6.1 (13.44)	4.70 (10.36)	4.56 (10.05)	3.86 (8.5)
Driver displacement L (cu.ft.)	2.6 (0.09)	2.6 (0.09)	2.34 (0.08)	2.34 (0.08)	2.0 (0,07)	2.0 (0,07)	2.6 (0.09)	2.6 (0.09)	2.34 (0.08)	2.34 (0.08)	2.6 (0.09)	2.34 (0.08)	2.0 (0.07)
Voice Coil Diameter mm (inch)	130 (5.1)	130 (5.1)	130 (5.1)	130 (5.1)	130 (5.1)	130 (5.1)	130 (5.1)	130 (5.1)	130 (5.1)	130 (5.1)	51 (2)	51 (2)	51 (2)
Voice Coil Height mm (inch)	37 (1.45)	37 (1.45)	37 (1.45)	37 (1.45)	37 (1.45)	37 (1.45)	31 (1.2)	31 (1.2)	31 (1.2)	31 (1.2)	24 (0.94)	24 (0.94)	24 (0.94)
Voice Coil Type/ Former	Titanium	Titanium	Titanium	Titanium	Titanium	Titanium	Titanium	Titanium	Titanium	Titanium	Aluminum	Aluminum	Aluminum
Voice Coil Wire	Hexatech™ Aluminum	Hexatech™ Aluminum	Hexatech™ Aluminum	Hexatech™ Aluminum	Hexatech™ Aluminum	Hexatech™ Aluminum	Hexatech™ Aluminum	Hexatech™ Aluminum	Hexatech™ Aluminum	Hexatech™ Aluminum	Copper	Copper	Copper
Number of Layers	2	2	2	2	2	2	2	2	2	2	2	2	2
Max. Linear Ex./Xmax - mm (inch)	± 12.5 (0.5) (Each way)	± 12.5 (0.5) (Each way)	± 12.5 (0.5) (Each way)	± 12.5 (0.5) (Each way)	± 12.5 (0.5) (Each way)	± 12.5 (0.5) (Each way)	± 9.5 (0.37) (Each way)	± 9.5 (0.37) (Each way)	± 9.5 (0.37) (Each way)	± 9.5 (0.37) (Each way)	± 8 (0.3) (Each way)	± 8 (0.3) (Each way)	± 8 (0.3) (Each way)
Magnet System	Double Magnet Vented	Double Magnet Vented	Double Magnet Vented	Double Magnet Vented	Double Magnet Vented	Double Magnet Vented	Double Magnet Vented	Double Magnet Vented	Double Magnet Vented	Double Magnet Vented	High grade ferrite	High grade ferrite	High grade ferrite
HE-Magnetic Gap Height - mm (inch)	12 (0.5)	12 (0.5)	12 (0.5)	12 (0.5)	12 (0.5)	12 (0.5)	12 (0.47)	12 (0.47)	12 (0.47)	12 (0.47)	8 (0.3)	8 (0.3)	8 (0.3)
B-Flux Density (T)	0.64	0.64	0.64	0.64	0.64	0.64	0.61	0.61	0.61	0.61	0.66	0.66	0.66
BL Product/BXL (T.M)	13	13	13	13	13	13	6.39	10.9	6.93	10.8	10.5	10.05	9.07
DC Resistance	1.7	3.7	1.7	3.7	1.7	3.7	1.3	3	1.3	3	3.2	3.2	3.2
Voice Coil Induct. @1 kHz (MH)	0.14	0.44	0.14	0.44	0.14	0.44	0.47	1.39	0.34	1.07	1.15	1.1	1.14
Suspension Compliance CMS - mm/N	0.37	0.33	0.36	0.46	0.19	0.17	0.34	0.3	0.31	0.37	0.23	0.27	0.19
Mechanical Q Factor	5.09	6.53	4.34	4.37	3.88	4.31	6.18	5.8	4.46	4.58	3.64	3.59	4.44
Electrical Q Factor QES	0.61	0.50	0.58	0.41	0.73	0.61	0.63	0.52	0.55	0.51	0.61	0.49	0.68
Total Q Factor QT	0.54	0.46	0.51	0.37	0.62	0.53	0.57	0.47	0.49	0.46	0.52	0.43	0.6
Mech.Resistance RMS	3.42	2.94	4.26	3.37	5.49	5.26	3.42	3.7	3.85	4.22	5.85	4.45	3.96
Moving Mass MMS gr	134	134	127	127	107	107	135.8	127.8	102	111.4	105	70	59
Equiv. Can Air Load VAS Liter (cu.ft.)	117 (4.12)	103 (3.63)	66 (2.33)	85 (3.02)	17 (0.60)	16(0.56)	88.8 (3.13)	92.2 (3.25)	54 (1.93)	63 (2.24)	60 (2.11)	40 (1.41)	12.6 (0.44)
Resonant Frequency Fs Hz	24	24	24	24	39	39	26	26	27	27	32	35	45
Effective Piston Area SD Sq.cm	471	471	363	363	254	254	448	448	448	346	434	320	219
Unit Diameter mm (inch)	305 (12)	305 (12)	263 (10.53)	263 (10.53)	222 (8.74)	222 (8.74)	305 (12)	305 (12)	263 (10.53)	263 (10.53)	305 (12)	263 (10.53)	223 (8.77)
Mounting Depth mm (inch)	146.9 (5.78)	146.9 (5.78)	140.3 (5.52)	140.3 (5.52)	120 (4.72)	120 (4.72)	151.5 (5.96)	151.5 (5.96)	143 (5.62)	143 (5.62)	140 (5.51)	130 (5.11)	115 (4.52)
Mounting Cutout mm (inches)	270 (10.62)	271 (10.62)	232 (9.13)	233 (9.13)	200 (7.87)	201 (7.87)	263 (10.35)	264 (10.35)	225.15 (8.87)	225.15 (8.87)	270 (10.62)	230 (9.05)	194 (7.63)

* Morel operates a policy of continuous product design improvement, consequently specifications are subject to alteration without prior notice.

MOREL PERFORMANCE SERIES AMPLIFIERS

Innovation is at the heart of every Morel speaker. Now our design team is applying the same philosophy and dedication into automotive electronics with the introduction of the new Morel Performance Series car audio amplifiers.



MPS AMPLIFIERS

As a high fidelity speaker manufacturer, Morel thoroughly recognizes how poorly designed amplifiers and electronics can ruin the performance potential of a speaker system. With this in mind, the engineering directive for the MPS amplifiers was simple—produce a series of amplifiers to be exceptionally musical and dynamic, with clean, uncolored power that can drive speakers to their full sonic potential.
The MPS amplifiers were developed with proper, audiophile grade components to ensure the highest-level performance. High fidelity Op amps, noise rejecting balanced differential inputs, microprocessor controlled protection circuitry, and input voltages of up to 20 volts make these serious amps. Add to that their unique features and installation friendly design, the MPS amplifiers set new boundaries for affordable amplifiers.

MODEL	MPS 4.400	MPS 1.550	MPS 5.950
RMS POWER @ 14V 4 Ohm	4 x 70w	1 x 350w	4 x 70w + 1 x 350w
RMS POWER @ 14V 2 Ohm	4 x 100w	1 x 550	4 x 100w + 1 x 550w
THD+N	0.05%	0.15%	0.05% (main) 0.15% (sub)
Frequency Response (main)	10Hz-30kHz	N/A	10Hz-30kHz
Frequency Response (sub)	N/A	10-220Hz	10-220Hz
S/N Ratio (Rated Power, A-weighted)	100dB	100dB	100dB
Channel separation	64dB	N/A	64dB
Damping Factor	>100	>150	>100 (main), >150 (sub)
Selectable Input Range	Yes (x1/x2)	Yes (x1/x4)	Yes (x1/x2/x4)
Input Voltage Range (main, x1)	200mV-5V	N/A	200mV-5V
Input Voltage Range (main, x2)	400mV-10V	N/A	400mV-10V
Input Voltage Range (sub, x1)	N/A	200mV-5V	200mV-5V
Input Voltage Range (sub, x4)	N/A	800mV-20V	800mV-20V

PREAMP	MPS 4.400	MPS 1.550	MPS 5.950
Filters (main)	HP/LP, 40Hz-400Hz	N/A	HP/LP, 40Hz-400Hz
Filters (sub)	N/A	LP, 40-220Hz	LP, 40-220Hz
Crossover slope	12dB/Octave	12dB/Octave	12dB/Octave
Subwoofer Level Control	No	YES, 0-20dB	YES, 0-20dB
Channel Input Mode	Yes (2/4 channel)	No	Yes (2/4/6 channel)
Subsonic Filter	No	Selectable Off/25Hz/35Hz	Selectable Off/25Hz/35Hz
TURN ON			
DC Offset	Yes	Yes	Yes
Signal Sensing	Yes	Yes	Yes
Remote	Yes	Yes	Yes

WOOFERS	SUPREMO MW 6	ELATE TI MW 5	ELATE TI MW 6	ELATE TI MW 9	HYBRID MW 4	HYBRID MW 5	HYBRID MW 6	HYBRID INTEGRA 4	HYBRID INTEGRA 5	HYBRID INTEGRA 6	VIRTUS MW 4	VIRTUS MW 5	VIRTUS MW 6	VIRTUS NANO MW 6	TEMPO U MW 5	TEMPO U MW 6	TEMPO U MW 5x7	TEMPO U MW 6x9	MAXIMO U 5W	MAXIMO U 6W
Nominal Impedance (Ohms)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Power Handling Wrms	140	160	180	200	100	120	140	80	90	100	100	120	140	80	100	120	110	130	80	90
Max. Trans.Pwr Handling Wrms	600	1000	1000	1000	300	500	600	250	250	300	300	300	300	250	250	250	250	280	220	240
Sensitivity (2.83V/1M)	89dB	87dB	88dB	89 dB	89 dB	90dB	91 dB	89dB	90dB	91dB	87 dB	91 dB	92 dB	91 dB	89 dB	90 dB	90 dB	91 dB	89	90
Frequency Response Hz	30-15000	40-5000	30-4000	25-3000	50-4200	45-3000	35-3000	80-5000	70-3800	65-3300	70-4500	65-4000	55-4000	50-3500	65-22000	55-22000	60-22000	50-22000	50-5000	60-5000
Resonant Freq. Fs Hz	60	58	54	45	82	56	45	92	82	75	80	75	65	85	65	50	59	50	70	55
Voice Coil Diameter mm (inch)	75 (3)	75 (3)	75 (3)	75 (3)	54 (2.1)	54 (2.1)	54 (2.1)	54 (2.10)	54 (2.1)	54 (2.1)	54 (2.1)	54 (2.1)	54 (2.1)	54 (2.1)	38 (1.50)	38 (1.50)	38 (1.50)	38 (1.50)	25	25
Voice Coil Height mm (inch)	6 (0.23)	14.50 (0.57)	14.50 (0.57)	14.50 (0.57)	10.50 (0.41)	10.50 (0.41)	11 (0.47)	10 (0.39)	12 (0.48)	12 (0.48)	8 (0.51)	11 (0.47)	11 (0.47)	10 (0.4)	10 (0.39)	10 (0.39)	10 (0.39)	14 (0.55)	9.6 (0.378)	9.6 (0.378)
Voice Coil Type/ Former	Aluminum	Titanium	Titanium	Titanium	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Kapton	Kapton	Kapton	Kapton	Aluminum	Aluminum
Voice Coil Wire	Hexatech™ Aluminum	Hexatech™ Aluminum	Hexatech™ Aluminum	Hexatech™ Aluminum	Hexatech™ Aluminum	Hexatech™ Aluminum	Hexatech™ Aluminum	Hexatech™ Aluminum	Hexatech™ Aluminum	Hexatech™ Aluminum	Hexatech™ Aluminum	Hexatech™ Aluminum	Hexatech™ Aluminum	Hexatech™ Aluminum	Copper	Copper	Copper	Copper	Copper	Copper
DC Resistance (Ohms)	3.5	3.6	3.6	3.6	3.2	3	3	3	3.3	3.3	3	2.7	2.7	2.7	3.0	3.0	3.0	3.2	3.5	3.1
Voice Coil Induct. @1 kHz (MH)	0.13	0.615	0.615	0.615	0.21	0.21	0.22	0.17	0.26	0.31	0.23	0.25	0.33	0.33	0.32	0.32	0.32	0.36	0.28	0.26
Magnet System	Neodymium double magnet	Double magnet rear vented	Double magnet rear vented	Double magnet rear vented	Hybrid rear vented	Hybrid rear vented	Hybrid rear vented	Neodymium	Neodymium	Neodymium	Double ferrite rear vented	Double ferrite rear vented	Double ferrite rear vented	Neodymium vented	High grade ferrite	High grade ferrite	High grade ferrite	High grade ferrite	High grade ferrite	High grade ferrite
HE-Magnetic Gap Height mm (inch)	16 (0.64)	5 (0.20)	5 (0.20)	5 (0.20)	4 (0.16)	4 (0.16)	4 (0.16)	4 (0.16)	5 (0.20)	5 (0.20)	4 (0.16)	4 (0.16)	4 (0.16)	4 (0.16)	4 (0.16)	4 (0.16)	4 (0.16)	4 (0.16)	5 (0.20)	5 (0.20)
B-Flux Density (T.M.)	0.65	0.66	0.75	0.74	0.83	0.83	0.83	0.9	0.9	0.85	0.48	0.65	0.65	0.76	0.76	0.76	0.76	1	0.9	0.9
BL Product/BXL	5.19	5.15	5.15	5.15	4.16	4.2	4.2	3.97	5.16	4.65	3.33	3.67	3.41	4.4	4.70	4.70	4.90	6.60	4.47	4.61
Max. Linear Ex./Xmax mm (inch)	±5 (±0.02)	±4.7 (±0.18)	±4.7 (±0.18)	±4.7 (±0.18)	±3.5 (±0.14)	±3.5 (±0.14)	±3.5 (± 0.14)	±2 (± 0.08)	±2.75 (±0.11)	±3.5 (±0.14)	±2 (±0.08)	±3.5 (± 0.14)	±3.5 (± 0.14)	±3 (±0.12)	±3 (±0.12)	±3 (±0.12)	±3 (±0.12)	±5 (±0.2)	±3 (±0.12)	±3 (±0.12)
Suspension Compliance CMS - mm/N	0.41	0.33	0.33	0.33	0.57	0.78	1.1	0.66	0.6	0.42	0.73	0.63	0.57	0.71	0.59	0.65	0.46	0.47	0.54	0.56
Electrical Q Factor QES	0.76	0.81	0.96	1.1	0.63	0.59	0.56	0.45	0.39	0.67	0.76	0.73	0.99	1.4	0.54	0.70	0.70	0.46	0.73	0.73
QTS	0.57	0.59	0.70	0.80	0.46	0.45	0.44	0.36	0.32	0.54	0.55	0.56	0.74	0.9	0.50	0.63	0.59	0.40	0.6	0.61
QMS	2.25	4.3	4.5	4.6	1.74	1.8	2.08	1.72	1.85	2.86	2	2.47	2.96	3.2	6.53	6.50	3.90	2.90	3.32	3.8
Mech.Resistance RMS - Ohm/meter	2.64	3.68	3.63	3.63	1.98	1.96	1.5	1.44	1.7	1.52	1.42	1.60	1.57	1.8	0.63	0.50	1.49	2.19	1.18	1.32
Moving Mass MMS - gr	14.59	14.0	17.0	26.6	6.8	9.9	11	4.4	6.11	8.12	5.96	9.9	12	17	10.11	15.9	15.5	19.45	8.43	14.44
Equiv. Can Air Load VAS - L (cu.ft)	8.08 (0.28)	3.50 (0.12)	7.00 (0.24)	26.00 (0.91)	3.17 (0.11)	8.87 (0.31)	21(0.74)	1.40 (0.04)	2.72 (0.37)	3.80 (0.13)	4.17 (0.15)	7.20(0.25)	11.38 (0.45)	5.5 (0.19)	5.72 (0.2)	16.19 (0.57)	15.9 (0.56)	35.2 (1.24)	6.15 (0.22)	15.31 (0.54)
Effective Piston Area SD sq.cm (sq. inch)	119 (18.45)	90 (13.95)	119 (18.45)	219 (33.95)	64 (9.92)	90 (13.95)	119 (18.45)	39 (6.04)	57 (8.83)	80 (37.8)	64 (9.92)	90 (13.95)	119 (18.45)	141 (0.15)	103 (15.97)	130 (20.15)	140 (21.7)	170 (26.35)	90	139
Cone Type	One-piece formed	One-piece formed	One-piece formed	One-piece formed	One-piece formed	One-piece formed	One-piece formed	Formed paper	Formed paper	Formed paper	Formed paper	Formed paper	Formed paper	Treated paper cone	Formed paper	Formed paper	Formed paper	Formed paper	Paper composite cellular fiber	Paper composite cellular fiber
Cone Material	Carbon fiber/ Rohacell sandwich	DPC	DPC	DPC	DPC	DPC	DPC	Composite cellular fiber	Composite cellular fiber	Composite cell. fiber	Composite cellular fiber	Composite cellular fiber	Composite cellular fiber	Composite cellular fiber	Composite cellular fiber	Composite cellular fiber	Composite cellular fiber	Composite cellular fiber	Treated paper	Treated paper
Unit Diameter mm (inch)	165 (6.50)	135 (5.25)	165 (6.50)	222 (8.75)	104 (4)	135 (5.25)	165 (6.50)	104 (4.0)	135 (5.25)	165 (6.5)	104 (4.0)	135 (5.25)	165 (6.50)	6.5 (0.26)	135 (5.31)	165 (6.49)	190x140	235x165	135 (5.25)	165 (6.50)
Mounting Depth mm (inch)	61 (2.40)	60 (2.36)	61 (2.40)	71 (2.80)	50 (2.10)	60 (2.36)	61 (2.40)	50 (2.10)	60 (2.36)	61 (2.40)	50 (2.10)	56.5 (2.22)	61 (2.36)	17 (0.7)	57 (2.25)	64 (2.52)	62 (2.45)	85 (3.35)	56 (2.22)	63 (2.50)
Mounting Cutout mm (inch)	141 (5.55)	120 (4.72)	141 (5.55)	192 (7.56)	95 (3.74)	120 (4.72)	141 (5.55)	95 (3.74)	120 (4.72)	141 (5.55)	95 (3.74)	120 (4.72)	141 (5.55)	137 (5.48)	112 (4.40)	141 (5.50)	176x126	218x150	112 (4.40)	141 (5.70)
Net Weight Kg (lb)	1.47 (3.20)	1.05 (2.31)	1.18 (2.60)	1.42 (3.13)	0.53 (1.1716)	0.60 (1.32)	0.60 (1.32)	0.50 (1.10)	0.60 (1.32)	0.75 (1.65)	0.54 (1.92)	0.67 (1.21)	0.739 (1.61)	0.45 (0.99)	0.98 (2.16)	1.1(2.42)	1.12 (2.46)	1.84 (4.05)	0.66 (2.36)	0.7 (2.50)

* Morel operates a policy of continuous product design improvement, consequently specifications are subject to alteration without prior notice.

	MIDRANGES		TWEETERS						
	CDM880	CDM600	SUPREMO PICCOLO	MT350	MT230	MT220	MT120	TEMPO / TEMPO ULTRA	MAXIMO
Nominal Impedance (Ohm)	6	6	6	6	6	4	4	4	4
Power Handling (WRms)	100	100	220	130	130	110	80	80	80
Max Transient Power Handling W (10ms)	300	300	1000	350	350	300	250	250	230
Sensitivity (2.83V/1M) dB	89	90	93	90	93	90	90	90	90
Frequency Response Hz	300-6000	500-6000	1400-25000	1400-25000	1600-25000	1600-25000	1800-22000	1800-22000	2200-22000
FS Hz	500	550	900	1000	1200	1150	1150	1200	1100
Voice Coil Diameter mm (inch)	54 (2.125)	54 (2.125)	28 (1.125)	28 (1.125)	28 (1.125)	28 (1.125)	28 (1.125)	28 (1.125)	25 (1)
Voice Coil Former	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
Voice Coil Wire	Hexatech™ aluminum	Hexatech™ aluminum	Hexatech™ aluminum	Hexatech™ aluminum	Hexatech™ aluminum	Hexatech™ aluminum	Copper	Copper	Copper
DC Resistance Ohm	5.0	6.2	5.2	5.2	5.2	3.7	3.7	3.4	3.2
Magnet System	Neodymium rear vented	Neodymium rear vented	Neodymium flat pancake design	Double Magnet Neodymium rear vented	Double Magnet Neodymium	Neodymium	Neodymium	Neodymium	Neodymium
Dome Type	Acuflex™ hand coated soft dome	Selected soft dome	Acuflex™ hand coated soft dome	Acuflex™ hand coated soft dome	Acuflex™ hand coated soft dome	Acuflex™ hand coated soft dome	Acuflex™ hand coated soft dome	Selected soft dome	Selected soft dome
Dome Material	Silk	Silk	Silk	Silk	Silk	Silk	Silk	Silk	Silk
Unit Diameter mm (inch)	88.00 (3.50)	88.00 (3.50)	67mm (2.6)	43.00 (1.69)	45.00 (1.8)	45.00 (1.8)	45.00 (1.8)	45.00 (1.8)	45.00 (1.8)
Mounting Depth mm (inch)	21.00 (0.83)	21.00 (0.83)	32.00 (1.25)	13.00 (0.51)	20 (0.80)	20.00 (0.80)	20.00 (0.80)	20.00 (0.80)	20.00 (0.80)
Mounting Cutout mm (inch)	75.50 (2.97)	75.50 (2.97)	55 (2.16)	46.00 (1.81)	50.00 (2.00)	50.00 (2.00)	50.00 (2.00)	50.00 (2.00)	50.00 (2.00)
Net Weight Kg(lb)	0.22 (0.48)	0.2 (0.44)	0.35 (0.77)	0.07 (0.15)	0.067 (0.134)	0.06 (0.13)	0.06 (0.13)	0.06 (0.13)	0.06 (0.13)

CROSSOVERS	MXR SUPREMO	MXT380	MXR300	MXT280	MXR250I	MXR240.3	MXR200.3
Crossover Point	2200Hz 24dB/Oct	W: 400Hz/12dB M:6dB/3000Hz/12dB T: 3000Hz/ 12dB	W: 500Hz / 12dB M:18dB/ 2200Hz/ 12dB T: 2200Hz / 6dB	W: 300Hz/12dB T: 2000Hz /12dB	2200Hz /12dB/Oct	W: 2200Hz / 12dB T: 2200Hz / 12dB	2200Hz/12dB
Crossover Controls	Tweeter +/- 2dB	Tweeter +/- 2dB Mid +2dB	Tweeter +/- 2dB	Tweeter +/- 2dB	Tweeter +/- 2dB	Tweeter 0 /- 2dB / -4dB	Tweeter +/- 2dB
Wiring Options	Bi Wire / Bi amp	Bi Wire / Bi amp	N/A	Bi Wire / Bi amp	N/A	N/A	N/A

* Morel operates a policy of continuous product design improvement, consequently specifications are subject to alteration without prior notice.

Design by David Hakes

www.morelhifi.com

2017