



SUPREMO SERIES

USER GUIDE

"... the success of any great audio system starts with its drivers...this review was just evidence to me that Morel is determined to build what it takes – exceptional drivers. In my opinion, the Supremo Piccolo tweeters are the stars of this system, bringing out the minutest details in every genre of music I threw at them. Not to knock the invested technology in the Supremo SW6 woofers & surreal crossovers – they do an outstanding job of complementing the Piccolo in delivering a near flawless performance."

"Kudos to Morel for setting such a standard."

Casey Thorson, Car Audio & Electronics



SUPREMO SERIES - MOREL'S CROWN JEWEL

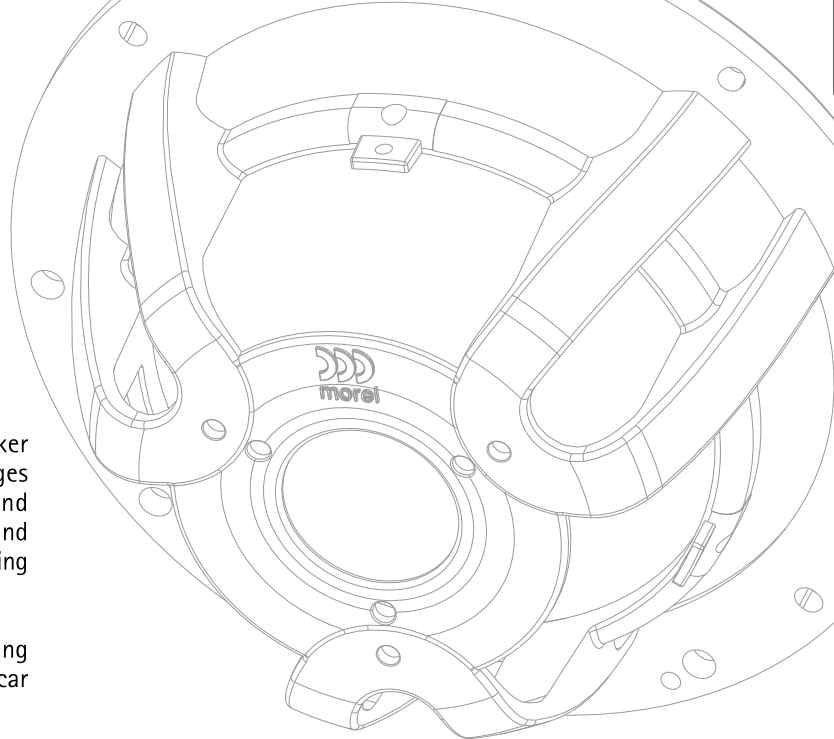
Dear Valued Customer,

Thank you for choosing Morel's award-winning Supremo speaker system. Built for true music lovers, the Supremo series leverages three decades of technological firsts, design excellence, and manufacturing know-how to deliver unsurpassed performance and sound quality so you will hear every detail and nuance while retaining tonal accuracy and musical warmth.

Awarded the Speaker of the year 2007 by EISA (European Imaging & Sound Association), the Supremo is the top-notch of Morel's car audio component line.

The Supremo Series is available as a 2-way system and as individual components, providing greater application flexibility, and maximizes the full potential of the Supremo drivers. Supremo components include the Supremo tweeter, Supremo Piccolo tweeter, Supremo 5", 6" and 9" woofers and the Supremo MXS-2.0 crossover.

The Supremo series was designed to achieve true audiophile grade sound within the unique challenges of the car audio environment, so you can truly feel the magic of live performance on the road...

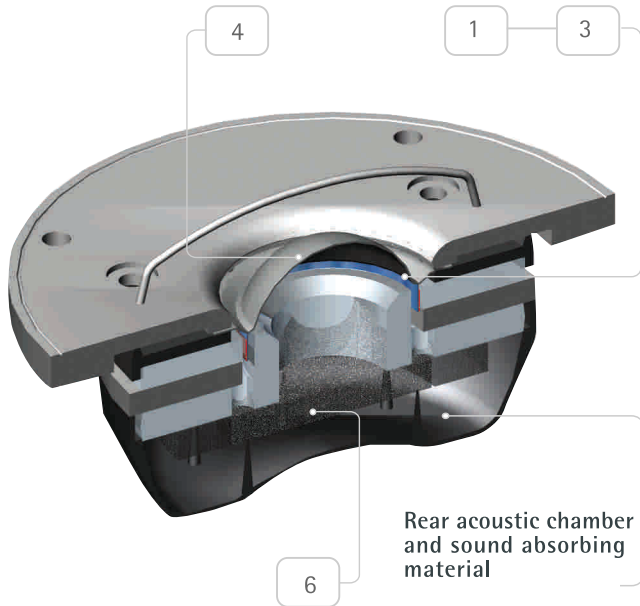


Technological features

Original components, optimal sound

When Morel set out to improve the state of the art in car audio, it identified the key barriers to optimal sound and found innovative ways to solve them. The company's technologies have been at the forefront of many audio "firsts."

Supremo Tweeter cut-section



1. Under-hung voice coil

Supremo is based on Morel's linear dynamic under-hung voice coil configuration, which allows the voice coil to move in a significantly higher magnetic field and remain there during operation. This configuration enables linear excursion of the coil and higher magnetic flux, eliminating inter-modulation distortion while considerably improving the dynamic range, transient response, and efficiency.

2. External Voice Coil (EVC)[™]

Morel's voice coil is three times larger than in conventional speakers with the same cone diameter enabling clear and precise sound reproduction even at higher sound levels. The large cone provides better support for the membrane, thus, enabling the use of shallower cone construction for improved dispersion and the reduction of cone break up during speaker operation.

3. Hexatech[™] aluminum voice coil

The Hexatech honeycomb structure reduces air gaps and increases efficiency by up to 20%. The lightweight structure allows for the quick transient response necessary for accurate music reproduction with incredible detail.

4. Acuflex[™] coating

Acuflex is a specially engineered material that ensures effective damping, and reduces distortion levels and unwanted resonance, to provide audiophile-grade and warm sound characteristics.

Supremo Woofer cut-section



5. Hybrid™ motor drive magnet system

The combination of neodymium and ferrite magnets is up to four times more powerful than conventional magnets of the same size. With the hybrid magnet structure, more amplifying power can be converted into sonic energy, for flawless performance even in a small driver.



6. C.A.R. (Controlled Acoustic Resistance) Filter™

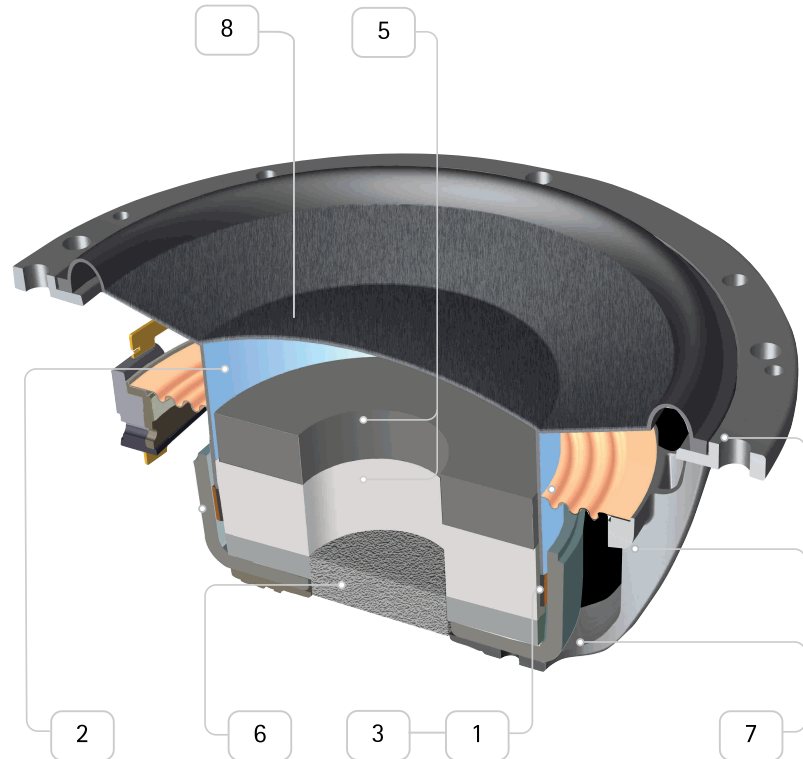
Specially designed for car audio applications, where drive units are often installed within free-air environments. The filter mimics the effect of a cabinet to restrain air flow within the drive unit and control cone movement, thereby improving the acoustical loading and power handling.

7. Uniflow™ chassis

The Uniflow aerodynamic chassis allows air and sound waves to flow uniformly and smoothly, eliminating interference with the woofer's moving parts. The geometric design enables the use of a low-profile spider that provides greater support and stability to the voice coil and cone under the most demanding operating conditions.

8. One piece cone

Morel's one-piece integrated cone minimizes cone break up and distortion to ensure precise reproduction of acoustic detail.



SUPREMO TWEETERS

Morel's innovative Supremo tweeters – Supremo and Supremo Piccolo – deliver unsurpassed performance, redefining the state-of-the-art in car audio. Built for music lovers, these mobile audio tweeters are the result of intensive R&D dedicated to delivering the sweetest sound while reproducing every detail with unbelievable accuracy. You will hear things that you never heard before, guaranteed.

The Supremo tweeters feature:

Soft Acuflex coated 1 1/8" (28mm) dome resulting in wider dispersion and softer sound characteristics; this enables hours of non-fatigue listening enjoyment. The under-hung configuration enables linear excursion of the coil and higher magnetic flux, thus eliminating inter-modulation distortion while considerably improving the dynamic range, transient response, and efficiency.

The large aluminum Hexatech™ voice coil together with a powerful neodymium magnet structure provides higher power-handling and a high transient response.

The Supremo tweeters handle low-mid frequencies with ease. The low resonance point – Supremo at 680Hz, and Supremo Piccolo at 800Hz – enables a lower crossover point, which provides installers with greater system design flexibility, enhanced soundstage and imaging.

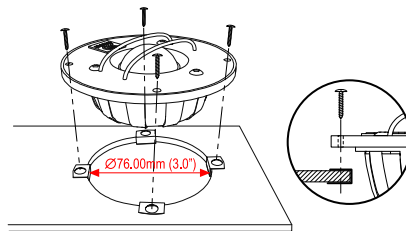
The Supremo is available in a 4" (100mm) diameter faceplate and the Supremo Piccolo is available in a 2 5/8" (67mm) diameter faceplate. These are ideal sizes for dashboard and A-pillar installations in most cars.

Supremo tweeters use Van Den Hul silver-plated linear crystal cables for input connections, enabling a long working life of clean signal transmission.

All Supremo tweeters go through stringent quality control and compatibility testing. To ensure the tweeters are perfectly matched, Morel provides a birth certificate for each pair.

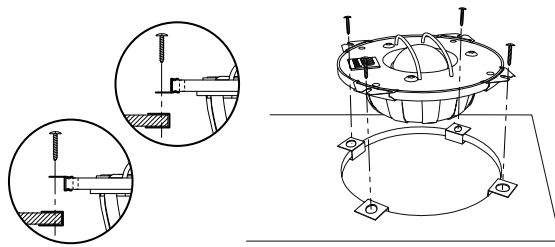
Supremo Tweeter mounting guide

Flush mounting

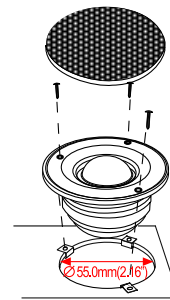


Custom mounting

reversible steel clip for multi-position mounting.



Supremo Piccolo mounting guide



SUPREMO WOOFERS

Morel engineered the Supremo SW woofers to complement the Supremo and Supremo Piccolo tweeters. Employing similar technological features, the Supremo SW woofer is Morel's ultimate solution for robust and precise mid/bass drivers.

As in the Supremo tweeters, the Supremo woofers are also based on Morel's unique linear, dynamic, under-hung voice coil configuration that enables linear excursion of the coil and higher magnetic flux, thus eliminating inter-modulation distortion while considerably improving the dynamic range, transient response, and efficiency.

The 3" (75 mm) EVC Hexatech™ voice coil improves cone support and linearity, increases SPL and power handling. The Hexatech™ VC extremely light and efficient structure allows quick transient response essential for accurate music reproduction.

The Supremo woofers also employ a unique hybrid magnet motor structure (combined ferrite and neodymium magnets) which is up to 4 times more powerful than conventional magnets of the same size, enabling a shallow cone, resulting in wider sound dispersion, bigger sound stage, enhanced detail and clarity.

The large EVC coupled with the unique hybrid magnet motor structure produces remarkably high power-handling, high efficiency, as well as a wide and natural dynamic range.

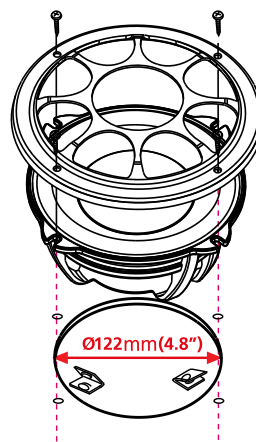
Supremo SW woofers' Acuflex coated paper cone delivers wider dispersion and softer sound characteristics, providing increased durability and reduced cone break-up.

Supremo SW woofers utilize an aerodynamic die-cast Uniflow chassis to minimize vibration noise and for increased durability. It also provides shallow mounting capabilities delivering greater support and stability to the voice coil and cone under the most demanding operating conditions.

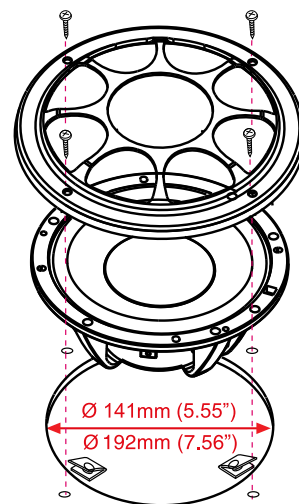
Supremo SW woofers are available in 5", 6", and 9".

Supremo Woofer mounting guide

5 1/4" Unit Mounting



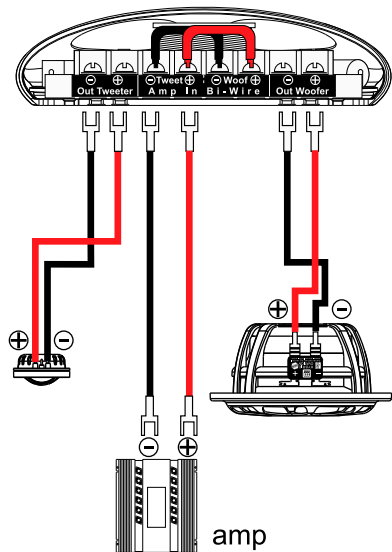
6 1/2" & 9" Unit Mounting



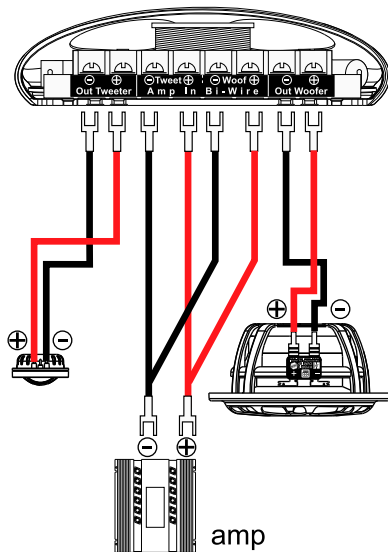
SUPREMO CROSSOVER MXS-2.0

WIRING OPTIONS FOR SUPREMO MXS-2.0 CROSSOVER

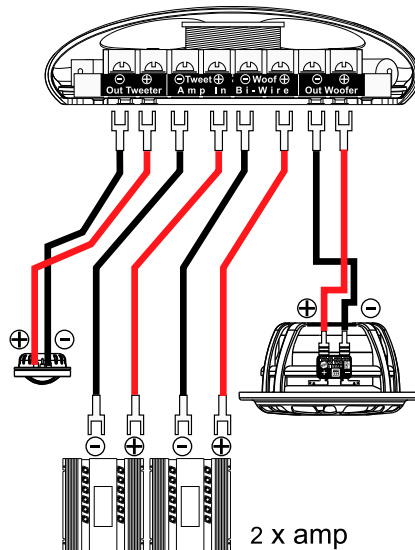
1 Standard Wire connection/ With bridged jumpers



2 Bi Wire connection/ No bridged jumpers



3 Bi Amp connection/ No bridged jumpers



SUPREMO CROSSOVER MXS-2.0

The Supremo 2-way component system was engineered to perform as either an active or passive speaker system, in order to provide installers with greater system design flexibility and to maximize the full potential of its drivers.

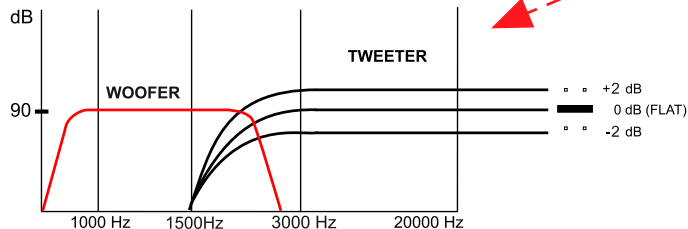
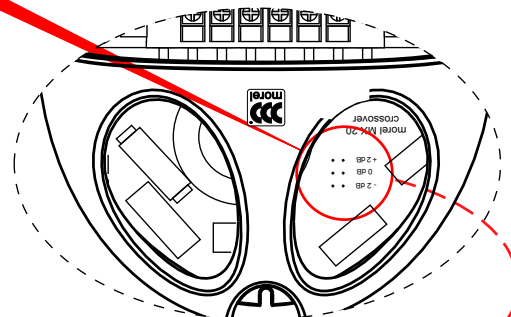
The new high quality crossover employs:

- Super high quality components, such as Mundorf capacitors and high quality self-bonded air coils. It offers heavy duty encapsulated input terminals and fiberglass PCB, with 2 oz (56.7 gr.) copper lead wires for greater durability and low distortion.
- A crossover point of 1900Hz with a 12dB/octave slope for improved soundstage and imaging in off-axis installations.
- +/- 2dB tweeter attenuation for improved soundstage and imaging in off axis installations.

TWEETER ATTENUATION LEVEL

The Supremo crossover offers a flexible tweeter attenuation level for improved soundstage and imaging.

Use the jumper to determine the tweeter +/- dB level



WOOFERS

	Supremo SW5	Supremo SW6	Supremo SW9
Nominal Impedance	4.00 ohm	4.00 ohm	4.00 ohm
Power Handling	120W	140W	150W
Max. Transient Power Handling	1000W	1000W	1000W
Sensitivity (2.83V/1M)	88dB	89dB	91dB
Frequency Response	35-4200Hz	25-5000Hz	20-2600Hz
FS	65Hz	62Hz	56Hz
Voice Coil Diameter	75.00mm (3.00")	75.00mm (3.00")	75.00mm (3.00")
Voice Coil Height	5.00mm (0.20")	5.00mm (0.20")	5.00mm (0.20")
Voice Coil Type/ Former	Aluminum	Aluminum	Aluminum
Voice Coil Wire	Hexatech aluminum	Hexatech aluminum	Hexatech aluminum
DC Resistance	3.50 ohm	3.50 ohm	3.50 ohm
Voice Coil Inductance @1kHz	0.20MH	0.22MH	0.22MH
Magnet System	Linear dynamic hybrid rear vented	Linear dynamic hybrid rear vented	Linear dynamic hybrid rear vented
HE-Magnetic Gap Height	16.00mm (0.64")	16.00mm (0.64")	16.00mm (0.64")
B-Flux Density	0.70T	0.70T	0.70T
BL Product/BXL	4.32	4.32	4.32
Max. Linear Excursion/Xmax	11.00mm (±5.5mm)	11.00mm (±5.5mm)	11.00mm (±5.5mm)
Suspension Compliance CMS	714	727	425
Mechanical Q Factor QES	0.61	0.75	1.20
Total Q Factor Q/T	0.45	0.55	0.72
QMS	1.72	2.14	2.70
Mechanical Resistance RMS	1.85kgS ¹	1.49kgS ¹	1.49kgS ¹
Moving Mass MMS	7.82gr	8.20gr	15.20gr
Equivalent Cas Air Load VAS	8.00L (0.28ft ³)	14.35L (0.51ft ³)	32.00L (1.14ft ³)
Effective Piston Area SD	90cm ² (13.95in ²)	119cm ² (18.45in ²)	219cm ² (33.95in ²)
Cone Type	One-piece formed	One-piece formed	One-piece formed
Cone Material	Coated cellular fiber	Coated cellular fiber	Coated cellular fiber
Unit Diameter	135.00mm (5.25")	165.00mm (6.50")	222.00mm (8.75")
Mounting Depth	60.00mm (2.36")	61.00mm (2.40")	71.00mm (2.80")
Mounting Cutout	120.00mm (4.72")	141.00mm (5.55")	192.00mm (7.56")
Net Weight	1.35kg (3.00lb)	1.47kg (3.20lb)	1.60kg (3.55lb)

TWEETERS

	Supremo	Supremo Piccolo
Nominal Impedance	6.00 ohm	6.00 ohm
Power Handling	220W	200W
Max. Transient Power Handling	1000W	1000W
Sensitivity (2.83V/1M)	92dB	90dB
Frequency Response	1.40 to 25KHz Limit: 0.30-50KHz	1.40 to 25KHz Limit: 0.30-50KHz
FS	680Hz	800Hz
Voice Coil Diameter	28.00mm (1.10")	28.00mm (1.10")
Voice Coil Former	Aluminum	Aluminum
Voice Coil Wire	Hexatech aluminum	Hexatech aluminum
DC Resistance	5.20 ohm	5.20 ohm
Magnet System	Neodymium flat pancake design	Neodymium flat pancake design
Dome Type	Acuflex soft dome	Acuflex soft dome
Dome Material	Silk	Silk
Unit Diameter	100.00mm (4.00")	67.00mm (2.63")
Mounting Depth	50.00mm (2.00")	32.00mm (1.25")
Mounting Cutout	100.00mm (4.00")	55.00mm (2.16")
Net Weight	0.45kg (1.00lb)	0.35kg (0.80lb)

CROSSOVER

	MX-2.0
Nominal Impedance	4 ohm
Power Handling	250 W
Crossover Point	1900Hz 12dB/octave 2nd order (Tweeter +Woofer)
Crossover Controls	+/- 2dB tweeter level attenuation
Wiring Options	Standard, bi-amp, bi-wire
Housing Material	Die-cast aluminium (silver)
Terminal Type	Large screws gold plated
Net Weight	0.85 Kg. (1.87 lb)

Supremo recommended enclosure size

Sealed enclosure 1

	Supremo SW 5	Supremo SW 6	Supremo SW 9
VB	2,5 liter (0.08 cu.ft)	5 liter (0.17 cu.ft)	24 liter (0.84 cu.ft)
Qtc	0.9	1.1	1.2
F-3	125 Hz	74 Hz	55 Hz

Sealed enclosure 2

VB	5,5 liter (0.19 cu.ft)	13,5 liter (0.47 cu.ft)	42 liter (1.48 cu.ft)
Qtc	0.7	0.8	1
F-3	120 Hz	74 Hz	47 Hz

Ported enclosure 1

VB	7,5 liter (0.26 cu.ft)	12 liter (0.42 cu.ft)	35 liter (1.24 cu.ft)
FB	77 Hz	55 Hz	38 Hz
F-3	75 Hz	61 Hz	45 Hz
Port Diameter	50,4 mm	50,4 mm	75 mm
Port Length	90 mm	120 mm	200 mm

Ported enclosure 2

VB	10 Liter (0.35 cu.ft)	15 Liter (0.53 cu.ft)	50 Liter (1.77 cu.ft)
FB	59 Hz	44 Hz	30 Hz
F-3	53 Hz	55 Hz	40 Hz
Port Diameter	50,4mm	50,4mm	75 mm
Port Length	125mm	150 mm	220 mm



Wishing you many years of sound enjoyment!



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