



Virtus Nano Carbon Installation Guide

Virtus Nano Carbon

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Virtus Nano Carbon Integra

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Components

MM2, MW6, MXR200.4,
MXR130, MXR250.4i
MT120N

Dear Customer,

Thank you for choosing Morel for your car audio speaker solution. Morel prides itself on engineering and producing the best high-fidelity speaker systems. We hope you enjoy your Virtus Nano Carbon speakers for years to come. If you have any questions, please contact your Morel dealer or Morel support at: www.morelhifi.com

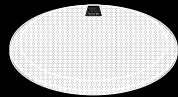


Virtus Nano Carbon

4", 6.5" Woofer / Integra



X2



X2



X8



X8

MT120N Tweeter (in 2-WAY / 3-WAY)



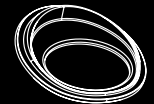
X2



X2



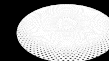
X2



X2



X4

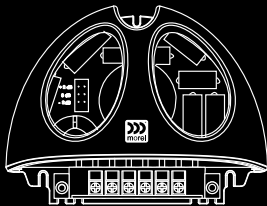


X2



X2

MXR 200.4/250.4i Crossover



X2

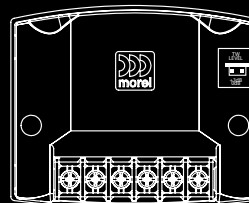


X6



X6

MXR 130 Crossover



X2



X4

MM2 Midrange



X2



X2



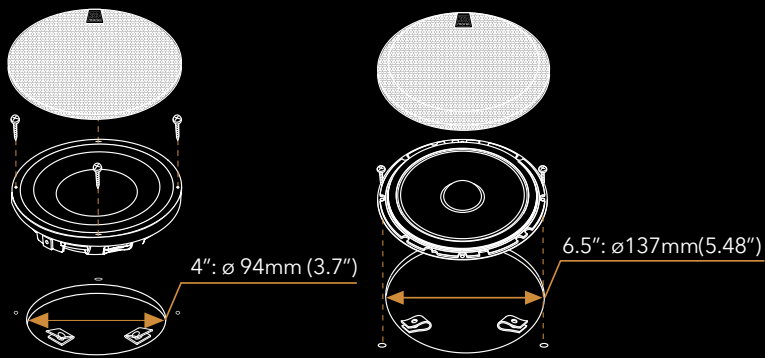
X8



X8

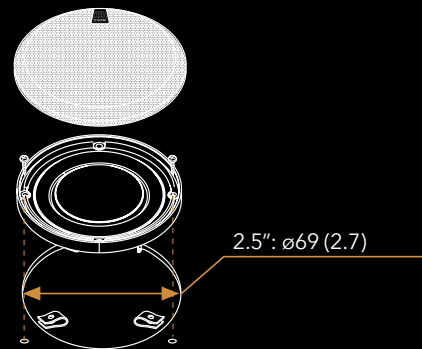
Midrange, Woofer and Tweeter mounting

4", 6.5" Woofer / Integra



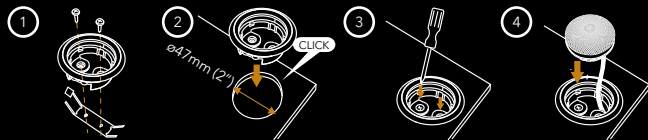
MT120N

MM2

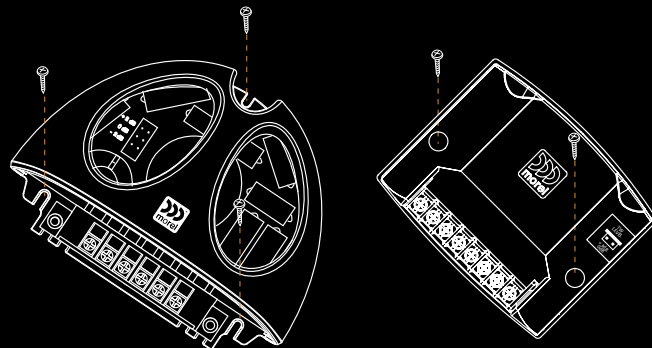
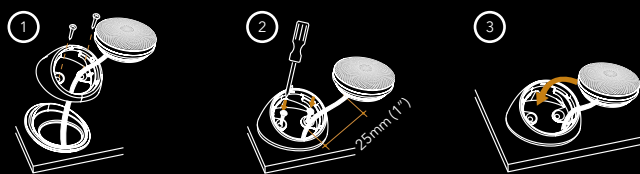


Crossover mounting

Flush Mount



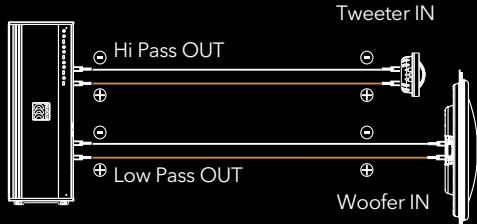
Surface Mount



Tweeter, Crossover Mounting

2-WAY System Wiring

ACTIVE SET UP (Outputs must be filtered)



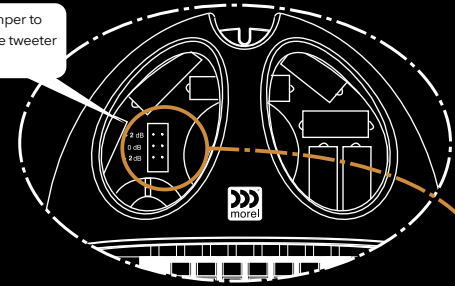
4-Channel amplifier with active crossovers required

Tweeter HP: 2,500Hz @ 12dB or 24dB slope

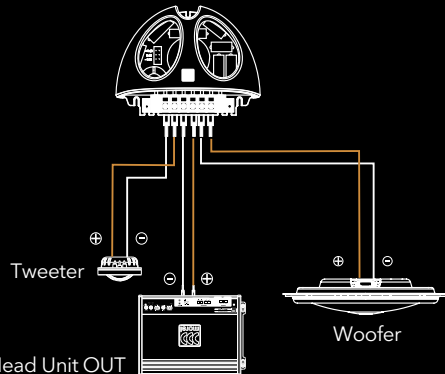
Woofers LP: 2,500Hz @ 12dB or 24dB slope

2-WAY System Alignment

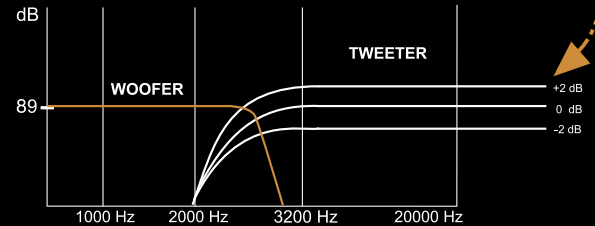
Use the red jumper to determine the tweeter +/- dB level



PASSIVE SET UP



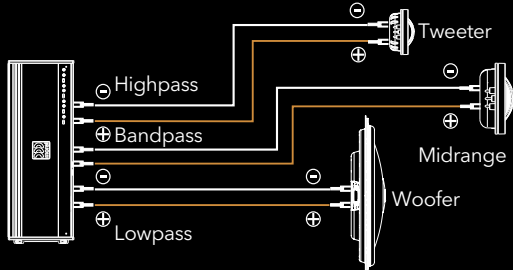
Amplifier OUT / Head Unit OUT



Crossover

3-WAY System Wiring

ACTIVE SET UP (Outputs must be filtered)



6-Channel amplifier with active crossovers required

3-Way Component Systems

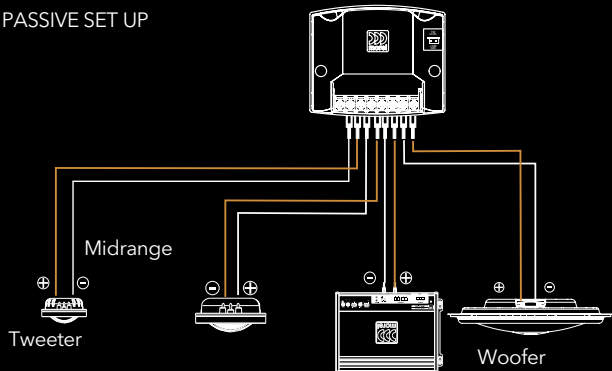
Tweeter HP: 2,500Hz @ 12dB slope

Midrange LP: 2,500Hz @ 12dB slope

Midrange HP: 500Hz @ 12dB slope

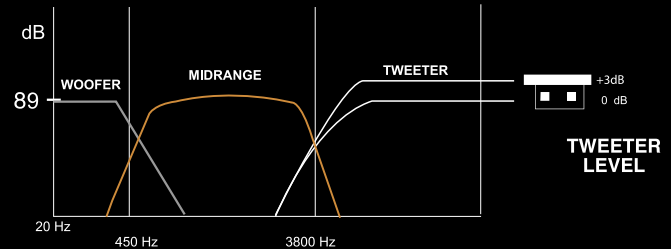
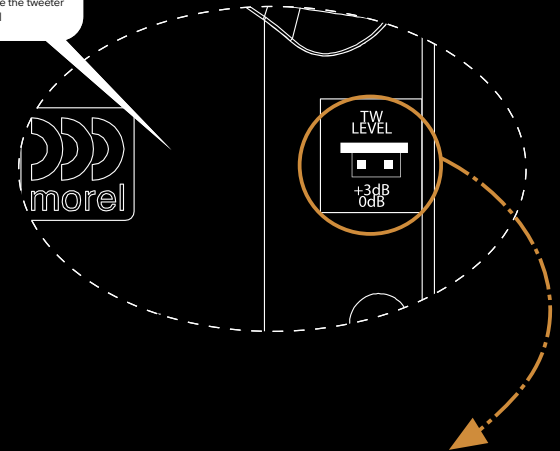
Woofer LP: 500Hz @ 12dB slope

PASSIVE SET UP



3-WAY System Alignment

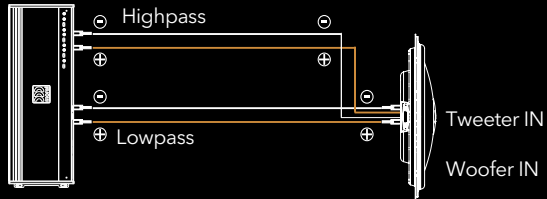
Use the red jumper to determinate the tweeter +/- dB level



Crossover

Integra System wiring

ACTIVE SET UP

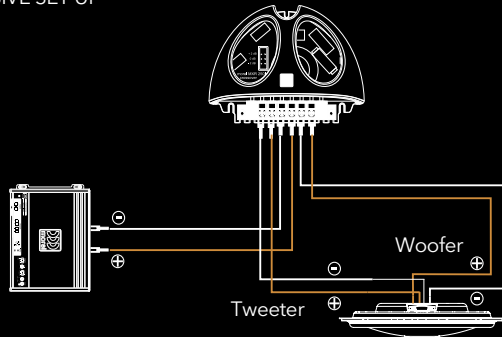


4-Channel amplifier with active crossovers required

Tweeter HP: 2,500Hz @ 12dB slope

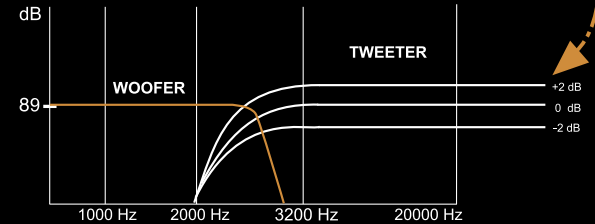
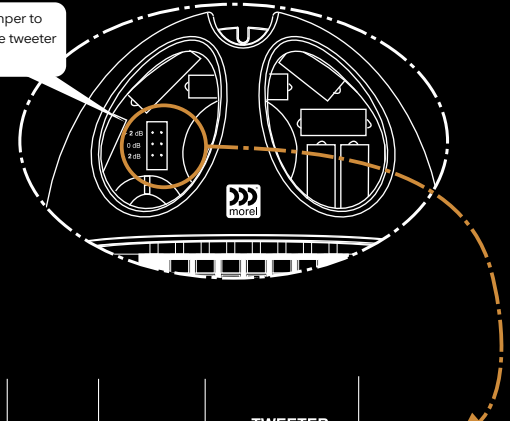
Woofer LP: 2,500Hz @ 12dB slope

PASSIVE SET UP



Integra System alignment

Use the red jumper to determinate the tweeter +/- dB level



Specifications

VIRTUS NANO CARBON	MW4	MW6	INTEGRA 4	INTEGRA 6
Nominal Impedance (ohm)	4	4	4	4
Power Handling Wrms	90	100	80	100
Max. Trans. Pwr Handling Wrms	300	300	300	300
Sensitivity (2.83 V/1M)	88dB	88dB	87dB	87dB
Frequency response Hz	80-9200	50-5500	90-3800	50-5500
Resonance Freq. Fs Hz	95	68	105	73
Voice Coil Diameter mm (inch)	54 (2.16)	54 (2.16)	54 (2.16)	54(2.16)
Voice Coil Height mm (inch)	9 (0.35)	9.5 (0.4)	7.5 (0.3)	7.5 (0.3)
Voice Coil Type/Former	Aluminium	Aluminium	Aluminium	Aluminium
Voice Coil Wire	Hexatech™ Aluminium	Hexatech™ Aluminium	Hexatech™ Aluminium	Hexatech™ aluminium
DC Resistance (ohm)	3	3	3	3
Voice Coil Induct. @1 kHz (mH)	0.12	0.17	0.11	0.17
Magnet System	Neodymium Vented	Neodymium Vented	Neodymium Vented	Neodymium Vented
HE-Magnetic Gap Height mm (inch)	4 (0.16)	4 (0.16)	4 (0.16)	4 (0.16)
BL Product/BXL	4.68	3.85	3.87	4.18
Max. Linear Ex./Xmax mm (inch)	±3mm (0.12)	±3mm (0.12)	±1.75mm (0.07)	±3mm (0.12)
Electrical Q Factor QES	0.7	0.97	0.775	0.97
QTS	0.6	0.65	0.615	0.73
QMS	4.01	3.57	2.98	3.4
Moving Mass MMS - gr/os	8.57 (0.3)	14 (0.49)	5.84 (0.2)	11.8 (0.41)
Equiv. Can Air Load VAS - L (cu.ft ³)	1.48 (0.05)	11 (0.38)	0.7 (0.02)	7.5 (0.26)
Effective Piston Area SD sq.cm (sq.inch)	57(8.8)	139(21.545)	35.5(5.5)	116 (17.98)
Cone Type	Carbon Cone	Carbon Cone	Carbon Cone	Carbon Cone
Cone Material	Carbon + Foam Core	Carbon + Foam Core	Carbon + Foam Core	Carbon + Foam Core
Unit Diameter mm (inch)	109 (4.3)	167 (6.5)	109 (4.3)	167 (6.5)
Mounting Depth mm (inch)	17(0.7)	17(0.7)	17(0.7)	17 (0.7)
Mounting Cutout	93 (3.6)	137(5.48)	93 (3.6)	137 (5.48)
Net Weight gr	376	450	383	470

MIDRANGE / TWEETER	MM2	INTEGRA	MT120N
Nominal Impedance (ohm)	4	4	8
Power Handling Wrms	60	90	80
Max. Trans. Pwr Handling Wrms (10ms)	100	180	250
Sensitivity (2.83 V/1M) dB	83	90.5	90
Frequency Response Hz	200-5000	1800-20000	1800-22000
FS Hz	145	1000	1200
Voice Coil Diameter mm (inch)	20 (0.78)	28 (1.125)	28 (1.125)
Voice Coil Former	Kapton	Copper	Aluminium
Voice Coil Wire	Copper	Neodymium	Copper
DC Resistance ohm	3.2	5.2	5.2
Magnet System	Double Magnet Neodymium	Neodymium	Neodymium
Dome Type	Aluminium Formed Dome	Acuflex™ hand coated soft dome	Acuflex™ hand coated soft dome
Dome Material	Aluminium Anodized	Silk	Silk
Unit Diameter mm (inch)	76.7 (3)		43.00 (1.69)
Mounting Depth mm (inch)	9.3 (0.37)		13.2 (0.52)
Mounting Cutout	69 (2.7)		47.00 (2)
Net Weight gr	70		0.07 (0.15)

CROSSOVERS	MXR200.4	MXR130	MXR250.4i
Crossover Point	2200Hz/12dB/6dB	W: 800Hz/12dB M: 800Hz/6dB 5000Hz/6dB T: 5000Hz/6dB	2200Hz/12dB
Crossover Controls	Tweeter +/- 2dB		Tweeter +/- 2dB
Wiring Options	N/A	N/A	N/A

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



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