



Elate Carbon Neo Installation Guide

Elate Carbon Neo

62, 63, 93, 62A, 63A, 93A

Components

MT550, ECN MW6,
ECN MW9, ECN MM3,
MXT280C, MXT380C



Dear Customer,

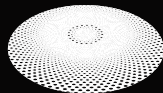
Thank you for choosing Morel for your car audio speaker solution. Morel prides itself on engineering and producing the best high-fidelity speaker systems. We hope you enjoy your Elate Carbon Neo speakers for years to come. If you have any questions, please contact your Morel dealer or Morel support at: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

Components

ECN MW6, and ECN MW9 Woofer



X2



X2



X8

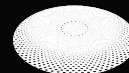


X8

ECN MM3 Midrange



X2



X2



X8



X8

MT550 Tweeter



X2



X2



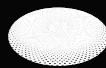
X2



X2



X4

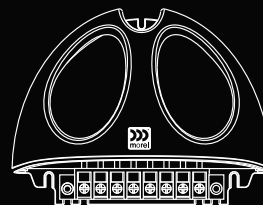


X2



X2

MXT380C/MXT280C Crossover



X2



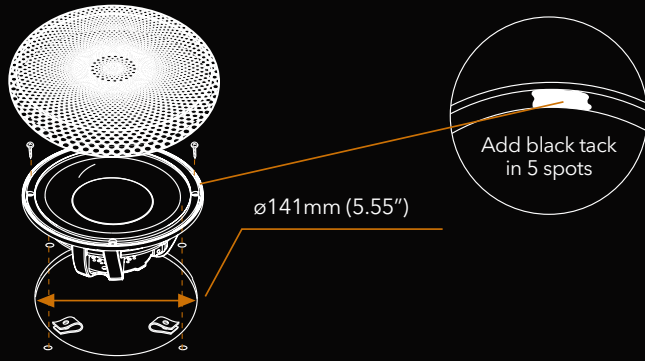
X6



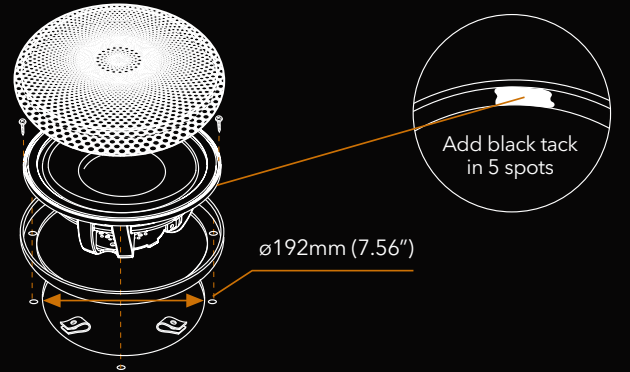
X6

Woofer, Midrange Mounting

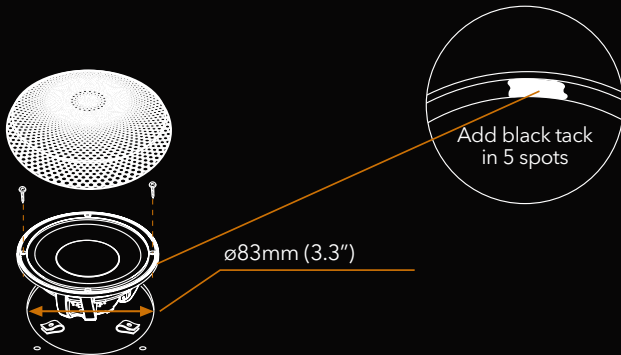
ECN MW6 woofer



ECN MW9 woofer

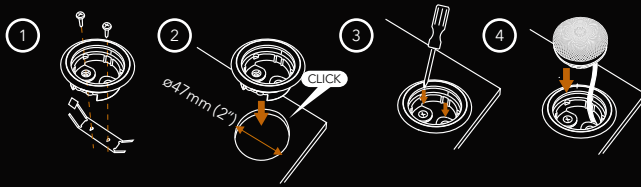


ECN MM3 midrange



MT550 Tweeter and Crossover Mounting

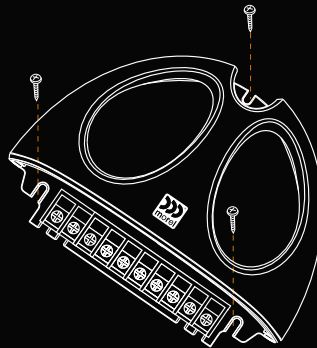
MT550 Flush Mount



MT550 Surface Mount



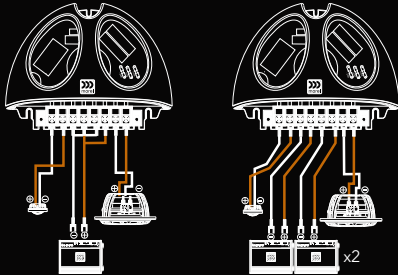
Crossover mounting



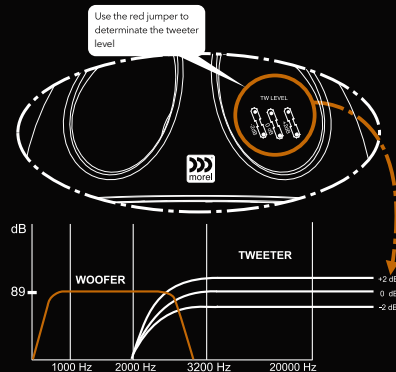
Passive Systems - Crossover Connections

2-WAY Systems Crossover

- ① Standard wire connection/
With bridged jumpers
- ② Bi Amp connection/
No bridged jumpers

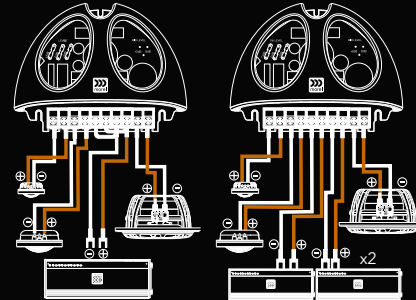


2-WAY Crossover Alignment System

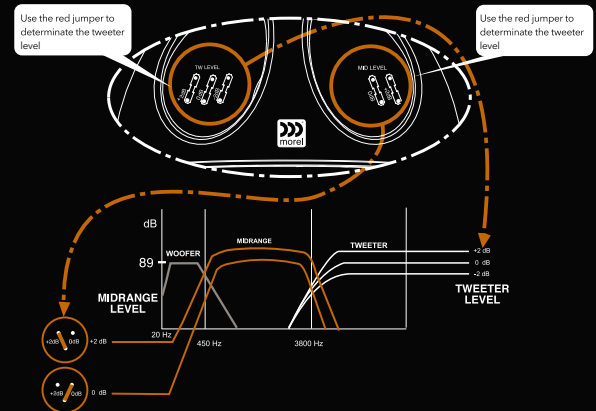


3-WAY Systems Crossover

- ① Standard wire connection/
With bridged jumpers
- ② Bi Amp connection/
No bridged jumpers

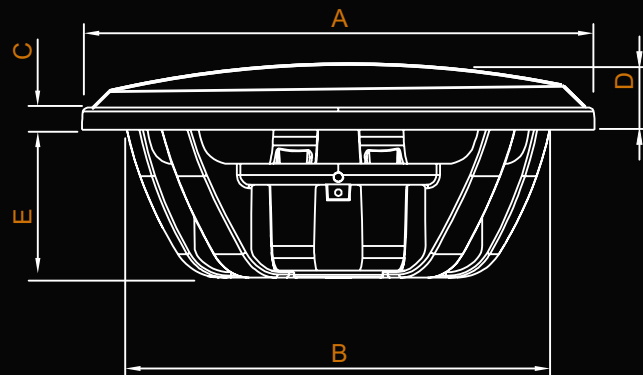
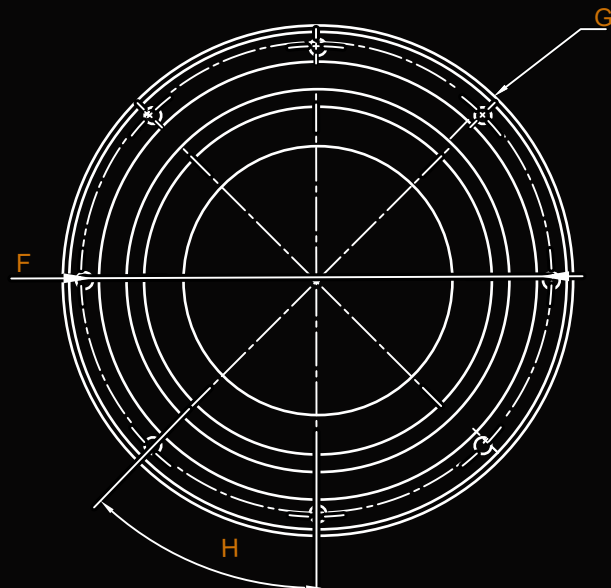


3-WAY Crossover Alignment System



Dimensions

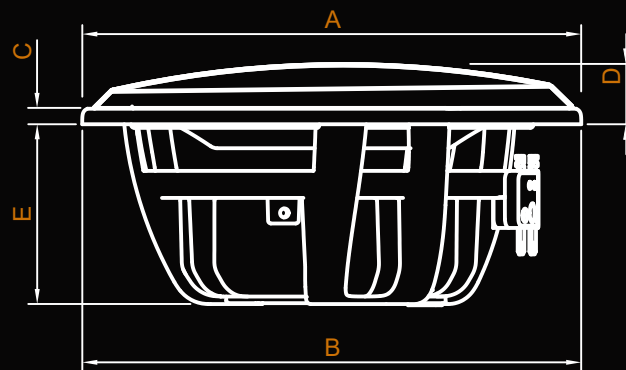
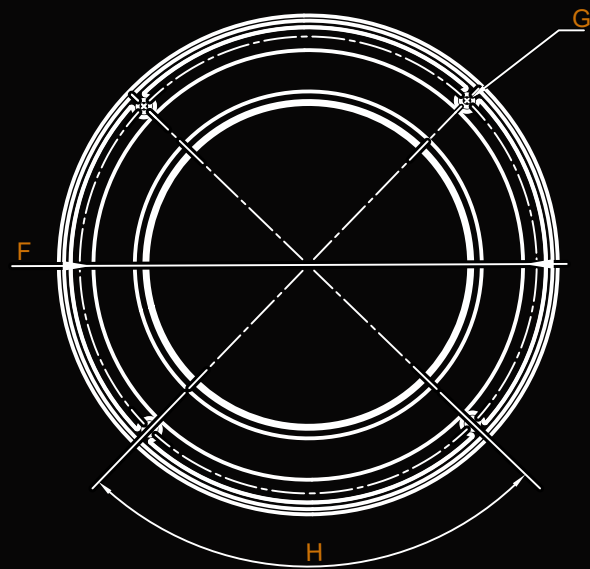
ECN MW9 Woofer



WITH RING FOR GRILL		
A	Ø 222mm (8.75 inch)	Ø 231.8mm (9.12 inch)
B	Ø 192mm (7.55 inch)	
C	5mm (0.19 inch)	
D	12.2mm (0.48 inch)	13.2mm (0.52 inch)
E	71mm (2.79 inch)	66.9 mm (2.63 inch)
F	Ø 214mm (8.42 inch)	
G	Ø 4.2mm (0.17inch)	
H	45°	

Dimensions

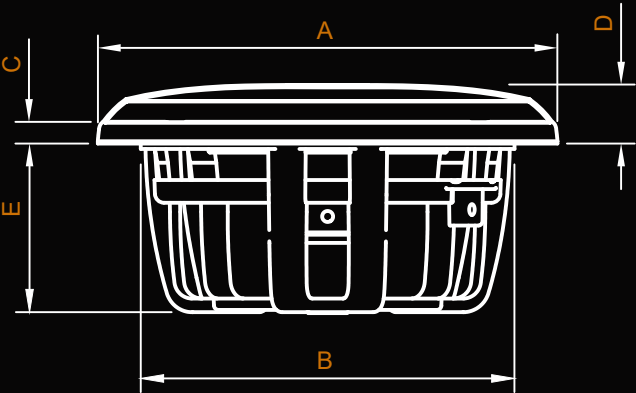
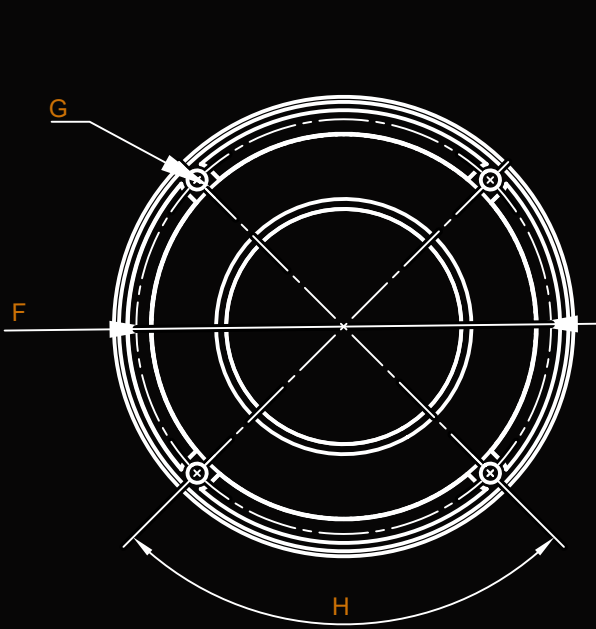
ECN MW6 Woofer



A	Ø 165mm (6.5 inch)
B	Ø 192mm (7.55 inch)
C	5.2mm (0.2 inch)
D	29.5mm (1.16 inch)
E	60.2mm (2.37 inch)
F	Ø 152mm (5.98 inch)
G	Ø 4.2mm (0.17inch)
H	90°

Dimensions

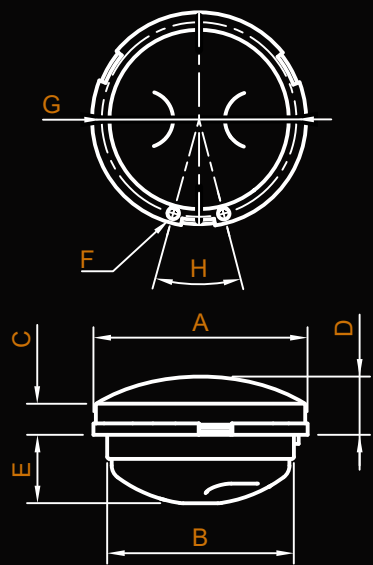
ECN MM3 Midrange



A	Ø 100mm (3.9 inch)
B	Ø 82mm (3.22 inch)
C	4mm (0.15 inch)
D	14.17mm (0.55 inch)
E	37.5mm (1.47 inch)
F	Ø 92mm (3.62 inch)
G	Ø 4.2mm (0.16inch)
H	90°

Dimensions

ECN MT550 Tweeter



A	Ø 43mm (1.64 inch)
B	Ø 39.23 (1.54 inch)
C	3.6mm (0.14 inch)
D	13mm (0.12 inch)
E	11.5mm (0.45 inch)
F	7.9mm (0.31 inch)
G	39mm (1.5 inch)
H	30°

Specifications

WOOFERS	ECN MM3	ECN MW6	ECN MW9
Nominal Impedance (ohm)	4	4	4
Power Handling Wrms	120	180	200
Max. Trans. Pwr Handling Wrms	400	1000	1000
Sensitivity (2.83 V/1M) dB	87	87	89
Frequency response Hz	90-6000	30-4000	25-3000
Resonant Freq. Fs Hz	88	45	44
Voice Coil Diameter mm (inch)	54 (2.125)	75 (3)	75 (3)
Voice Coil Height mm (inch)	10 (0.4)	14.50 (0.57)	14.50 (0.57)
Voice Coil Type/Former	Aluminium	Titanium	Titanium
Voice Coil Wire	Hexatech™ Aluminium	Hexatech™ Aluminium	Hexatech™ Aluminium
DC Resistance (ohm)	3	3.6	3.6
Voice Coil Induct. @1 kHz (mH)	0.175	0.615	0.615
Magnet System	Neodymium	Neodymium	Neodymium Double magnet rear vented
HE-Magnetic Gap Height mm (inch)	4	5 (0.20)	5 (0.20)
B-Flux Density (T)	0.94	0.75	0.74
BL Product/BXL	4.2	6.51	5.15
Max. Linear Ex./Xmax mm (inch)	±3mm(0.12)	±4.75mm (0.18)	±4.75mm(0.18)
Suspension Compliance CMS - mm/N	0.54	0.67	0.36
Electrical Q Factor QES	0.54	0.47	0.61
QTS	0.45	0.43	0.56
QMS	2.66	7.19	6
Mech. Resistance RMS- N • S / M	1.17	1	1.2
Moving Mass MMS - gr/ounce	5.3(0.21)	18 (0.63)	30 (1.05)
Equiv. Can Air Load VAS - L (cu.ft.)	1.15(0.05)	13.3 (0.47)	30.9 (1.1)
Effective Piston Area SD sq.cm (sq.inch)	38(1.5)	120 (18.6)	219 (33.95)
Cone Type	Triple Layer Cone (TLC)	Triple Layer Cone (TLC)	Triple Layer Cone (TLC)
Cone Material	Carbon Fibre composite	Carbon Fibre composite	Carbon Fibre composite
Unit Diameter mm(inch)	100 (3.90)	165 (6.50)	222 (8.75)
Mounting Depth mm (inch)	38 (1.50)	61 (2.40)	71 (2.80)
Mounting Cutout	83 (3.3)	141 (5.55)	192 (7.56)
Net Wight Kg (lb)	0.38 (0.84)	1.18 (2.60)	1.42 (3.13)

CROSSOVERS	MXT280C	MXT380C
Crossover Point	W: 2500Hz/12dB T: 2500Hz/12dB	W: 450Hz/12dB M: 450Hz/12dB 2700Hz/12dB T: 2700Hz/12dB
Crossover Controls	Tweeter +/- 2dB	Tweeter +/- 2dB Mid 0/- 2dB
Wiring Options	Bi wire / Bi amp	Bi wire / Bi amp

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

MIDS & TWEETERS	MT550
Nominal Impedance (ohm)	6
Power Handling Wrms	130
Max. Trans. Pwr Handling Wrms (10ms)	350
Sensitivity (2.83 V/1M) dB	90
Frequency Response Hz	1400-25000
FS Hz	900
Voice Coil Diameter mm (inch)	28 (1.25)
Voice Coil Former	Aluminium
Voice Coil Wire	Hexatech™ Aluminium
DC Resistance ohm	5.2
Magnet System	Double Neodymium rear chamber
Dome Type	Acuflex™ hand coated soft dome
Dome Material	Silk
Unit Diameter mm (inch)	43.00 (1.69)
Mounting Depth mm (inch)	13.2 (0.52)
Mounting Cutout mm (inch)	47.00 (2)
Net Weight Kg (lb)	0.07 (0.15)

Active Configuration

Setting up the Elate Carbon Neo system using an external electronic crossover network may very depending on the processor itself, the car cabin acoustic attributes, and the mounting location of the drive units. Choosing proper crossover points and slopes can greatly affect system performance.

The following guidelines should be used to assure each drive unit in the system performs to the highest level. The Optimal Crossover Point/Slope guide should be used for most vehicle applications. Advanced users may refer to the Recommended Crossover Range/Minimum Slope guide for fine system tuning.

Systems: 63A, 93A

Optimal Crossover Point/Slope
Tweeter highpass: 2,800Hz/24dB
Midrange lowpass: 2,800Hz/24dB
Midrange highpass: 250Hz/24dB
Woofer lowpass: 250Hz/24dB
*Woofer highpass: 40–80Hz/24dB

Recommended Crossover Range/Minimum Slope
Tweeter highpass: 2,000-3,500Hz/24dB
Midrange lowpass: 2,000-3,500Hz/24dB
Midrange highpass: 200-500Hz/24dB
Woofer lowpass: 200-500Hz/24dB
*Woofer highpass: 0–100Hz/24dB

* When used with an active subwoofer system.

Systems: 62A, 92A

Optimal Crossover Point/Slope
Tweeter highpass: 2,200Hz/24dB
Woofer lowpass: 2,200Hz/24dB
*Woofer highpass: 40–80Hz/24dB

Recommended Crossover Range/Minimum Slope
Tweeter highpass: 2,000-3,500Hz/24dB
Woofer lowpass: 2,000-3,500Hz/24dB
*Woofer highpass: 50–100Hz/24dB

Wishing you many years of sound enjoyment!



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