

Elate Carbon Neo Installation Guide

Elate Carbon Neo Pro

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

Components

ECN Alto, ECN MW6, ECN MW9, ECN MM3, MXT280C,MXT380C



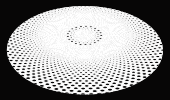
Dear Customer,

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

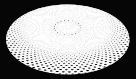

X2


X8


X8

ECN MM3 Midrange


X2

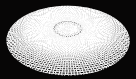

X2


X8


X8

ECN Alto Tweeter

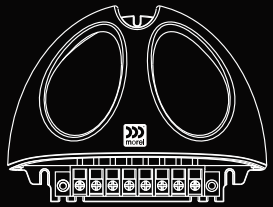

X2


X2


X6


X6

MXT380C/MXT280C Crossover

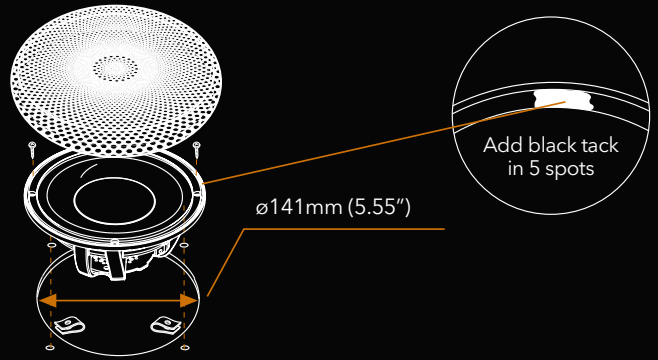

X2


X6

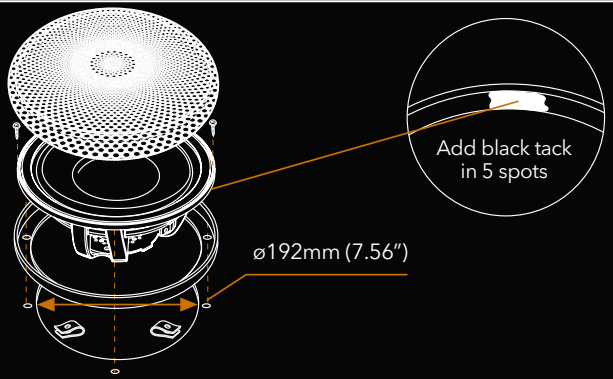

X6

Woofer, Midrange and Alto Tweeter Mounting

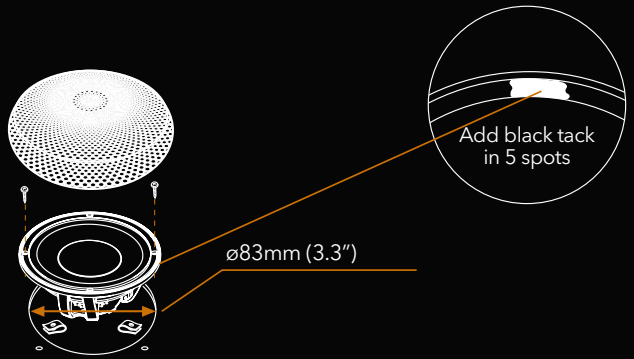
ECN MW6 woofer



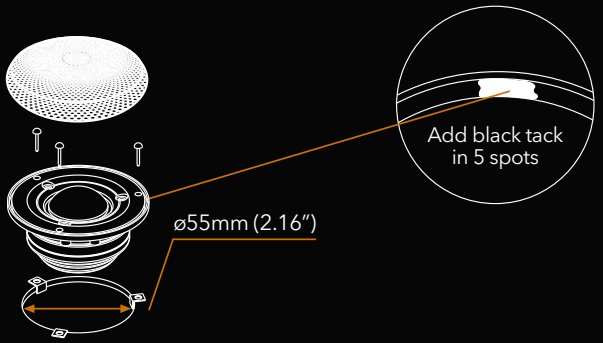
ECN MW9 woofer



ECN MM3 midrange

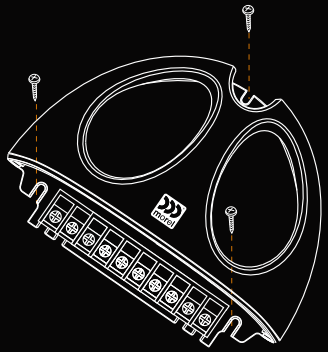


ECN Alto Tweeter



Crossover Mounting

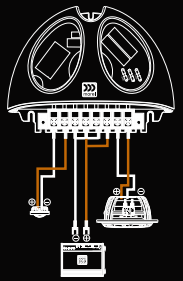
Crossover mounting



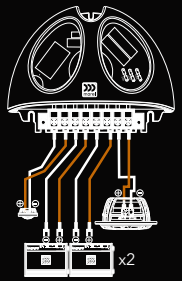
Passive Systems - Crossover Connections

2-WAY Systems Crossover

① Standard wire connection/ With bridged jumpers

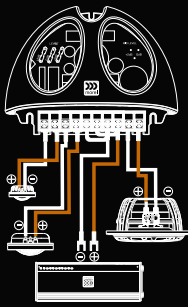


② Bi Amp connection/ No bridged jumpers

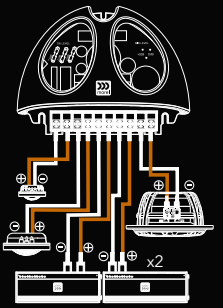


3-WAY Systems Crossover

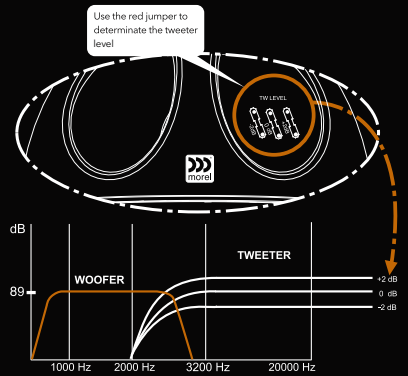
① Standard wire connection/ With bridged jumpers



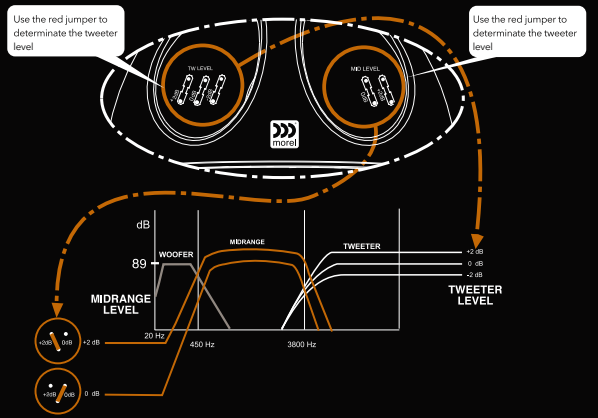
② Bi Amp connection/ No bridged jumpers



2-WAY Crossover Alignment System

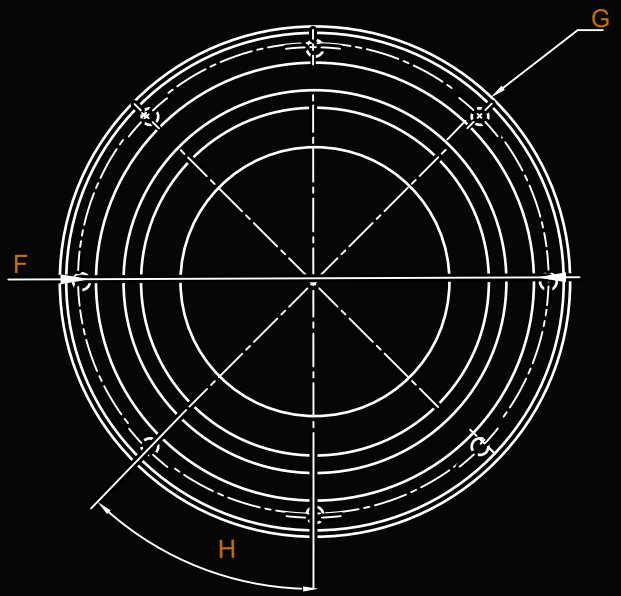


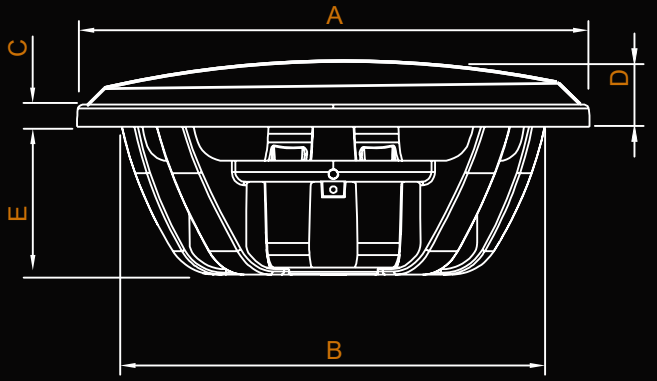
3-WAY Crossover Alignment System



Dimensions

ECN MW9 Woofer

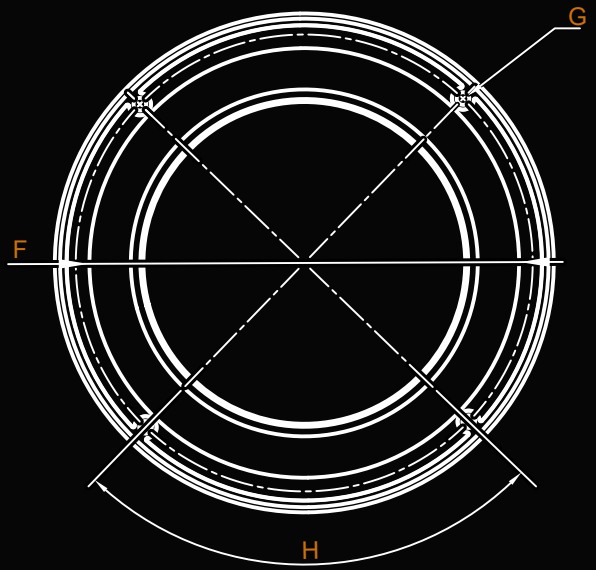


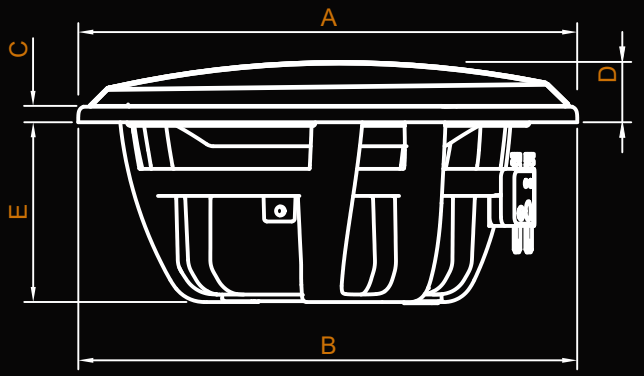


		WITH RING FOR GRILL
A	Ø 222mm (8.75 inch)	Ø 231.8mm (9.12 inch)
B	Ø 192mm (7.55 inch)	
C	5mm (0.19 inch)	
D	12.2mm (0.48 inch)	13.2mm (0.52 inch)
E	71mm (2.79 inch)	66.9 mm (2.63 inch)
F	Ø 214mm (8.42 inch)	
G	Ø 4.2mm (0.17inch)	
H	45°	

Dimensions

ECN MW6 Woofer

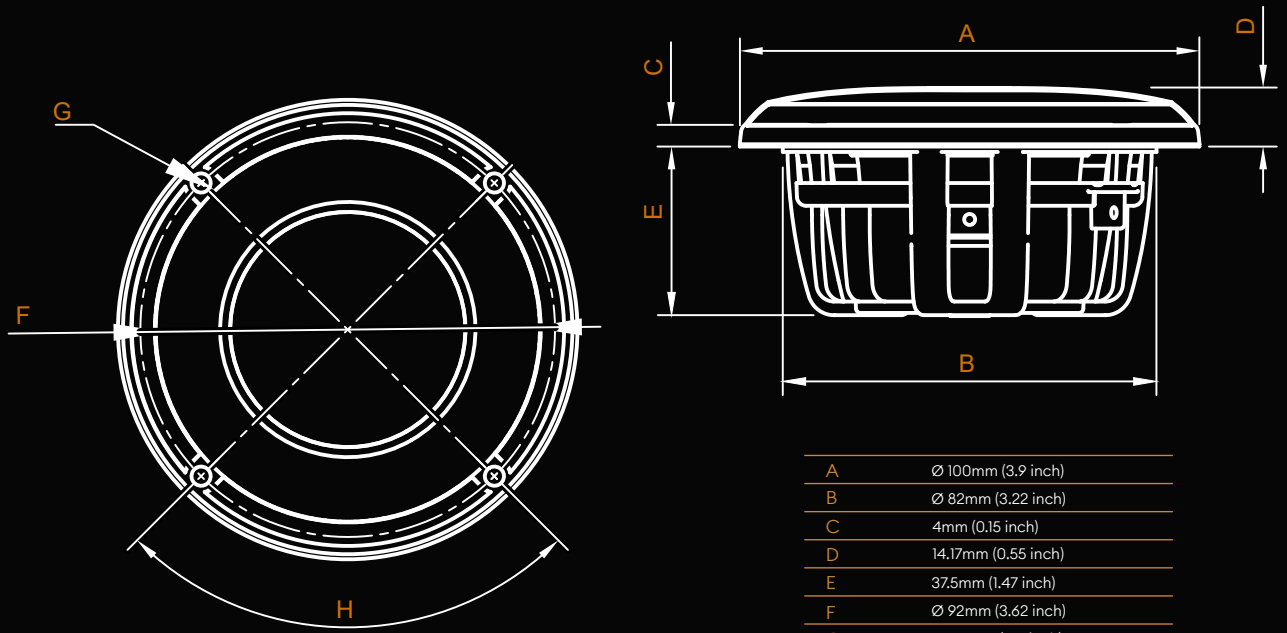




A	Ø 165mm (6.5 inch)
B	Ø 192mm (7.55 inch)
C	5.2mm (0.2 inch)
D	29.5mm (1.16 inch)
E	60.2mm (2.37 inch)
F	Ø 152mm (5.98 inch)
G	Ø 4.2mm (0.17inch)
H	90°

Dimensions

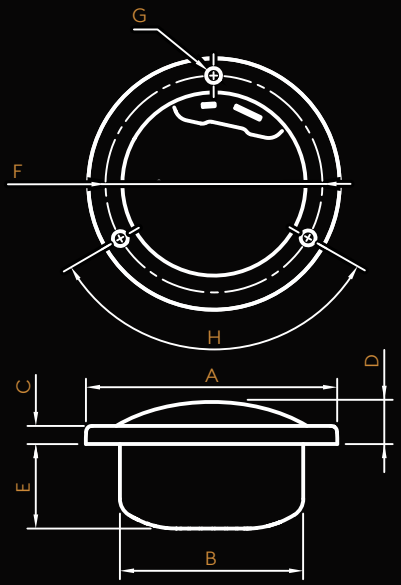
ECN MM3 Midrange



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

Alto TweeterECN



A	Ø 62.44mm (2.4582677 inch)
B	Ø 45.5 (1.79 inch)
C	4.5mm (0.177 inch)
D	14mm (0.55 inch)
E	21mm (0.82 inch)
F	27mm (1.06 inch)
G	3.7mm (0.14 inch)
H	90°

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.ft³)	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	ECN ALTO
Nominal Impedance (ohm)	4
Power Handling Wrms	180
Max. Trans. Pwr Handling Wrms (10ms)	500
Sensitivity (2.83 V/1M) dB	91.5
Frequency Response Hz	1400-25000
FS Hz	800
Voice Coil Diameter mm (inch)	28 (1.125)
Voice Coil Former	Aluminium
Voice Coil Wire	Hexatech™ aluminium
DC Resistance ohm	4
Magnet System	Double Neodymium rear chamber with copper sleeve
Dome Type	Acuflex™ hand coated soft dome
Dome Material	Silk
Unit Diameter mm (inch)	62.5 (2.4)
Mounting Depth mm (inch)	21.00 (0.82)
Mounting Cutout mm (inch)	45.6 (1.8)
Net Weight Kg (lb)	0.1 (0.22)

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

Reccomended 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

Systems: 62A, 92A

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

Reccomended Crossover Range/Minimum Slope
Tweeter highpass: 2,000-3.500Hz/24dB
Woofer lowpass: 2,000-3.500Hz/24dB
*Woofer highpass: 50~100Hz/24dB

* When used with an active subwoofer system.

Wishing you many years of sound enjoyment!

Morel, Ness Ziona, 70400 Israel.
Tel: +972-8-9301161
Fax: +972-8-9301312
E-mail: info@morelhifi.com

Morel America, Chandler, AZ, USA
Toll free number:1-877-667-3511
Fax: 1-718-721-1560
E-mail: info@morelamerica.com

www.morelhifi.com

V2