Hybrid Installation Guide

Hybrid

42, 52, 53, 62, 63

Hybrid Integra

42, 52, 62

Components

MW4MKII, MW5MKII, MW6MKII, MT300, CDM700, MXR240.4, MXR250int, MXR300.4

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 Hybrid speakers for years to come.
If you have any questions, please contact your Morel dealer or Morel support at
www.morelhifi.com

Hybrid Components

Hybrid 4", 5.25", 6.5" Woofer


X2

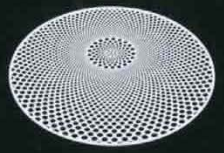
X2


X8


X8


(4")
X2


(5.25")
X2


(6.5")
X2

Hybrid 4", 5.25", 6.5" Integra

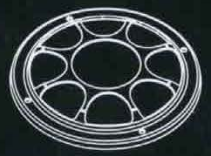

X2

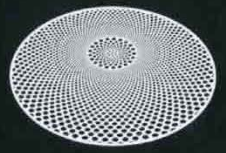
X2


X8


X8

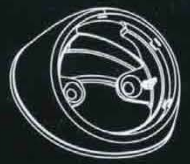

(4")
X2


(5.25")
X2


(6.5")
X2

MT300 Tweeter

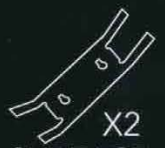

X2


X2

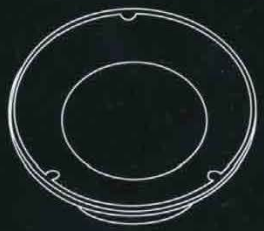

X2


X4 X2


X2


X2
SURFACE
OPTIONS

CDM700 Midrange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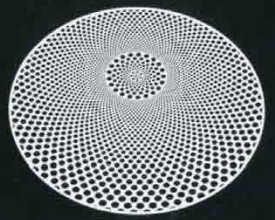
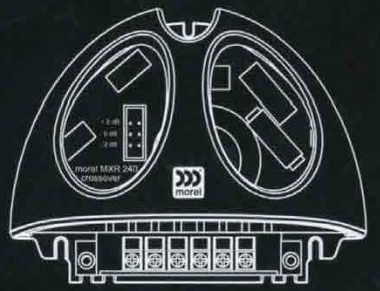

X2

X6


X8

MXR240.4/250int/300.4



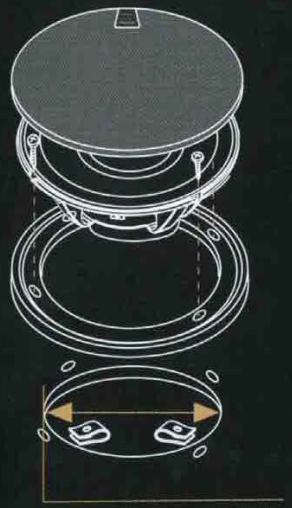
X2

X6

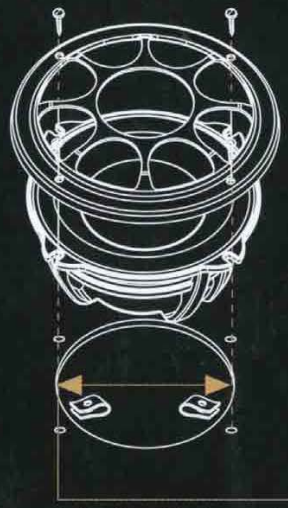

X6

Hybrid Woofer/Integra, Tweeter, Crossover mounting

Unit 4", 5.25", 6.5"



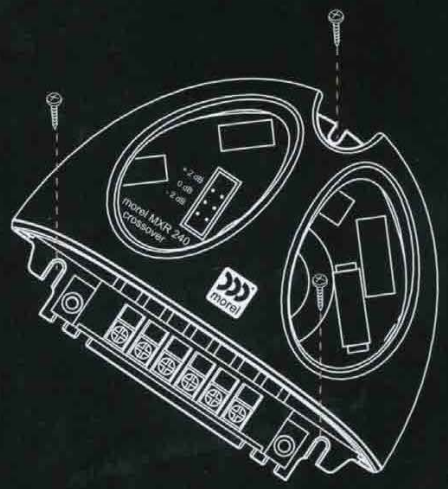
4": ø 95mm (3.74")



5.25": ø 120mm (4.72")

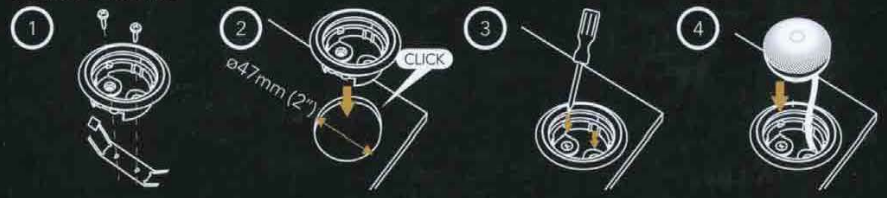
6.5": ø141mm (5.55")

Crossover mounting



MT300 Tweeter

Flush Mount



Surface Mount

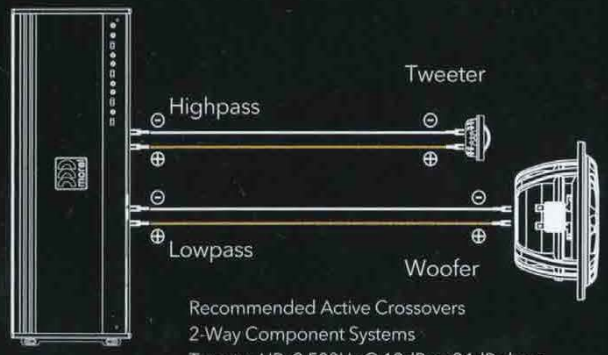
CDM700 Midrange

Use the screw clips in any combination, with or without the plastic frame. These clips can be used either way up or down depending on installation requirements.

2-WAY System

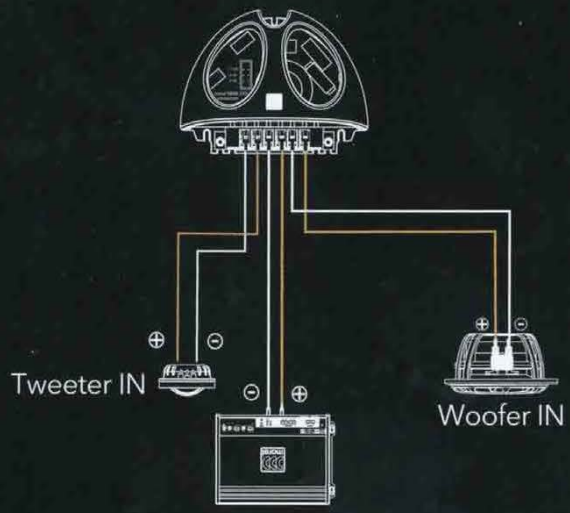
2-WAY System Wiring

ACTIVE SET UP

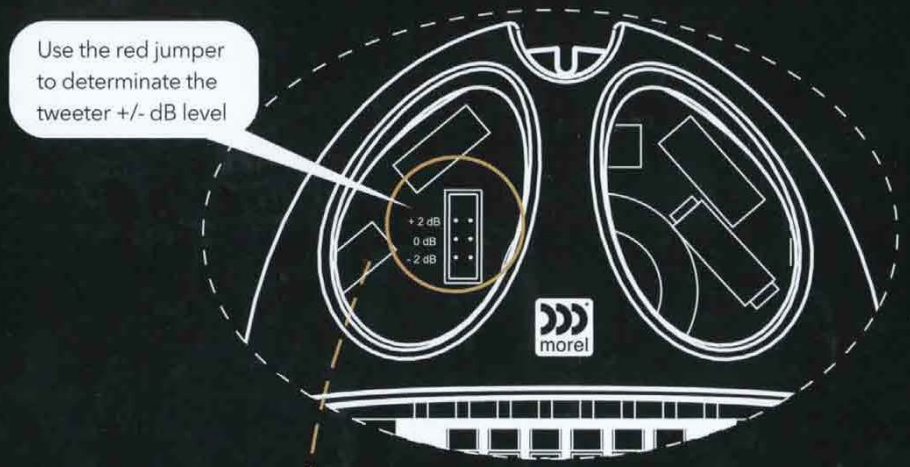


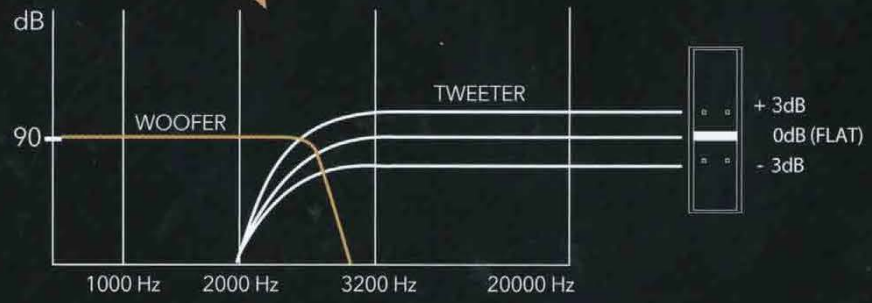
Recommended Active Crossovers
2-Way Component Systems
Tweeter HP: 2,500Hz @ 12dB or 24dB slope
Woofer LP: 2,500Hz @ 12dB or 24dB slope

PASSIVE SET UP



2-WAY System Alignment

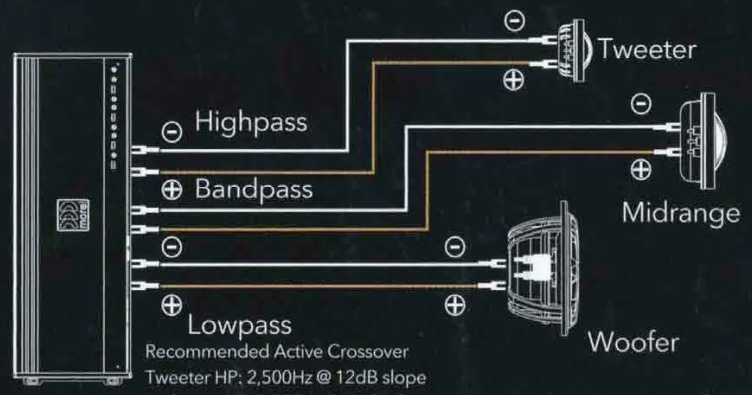




3-WAY System

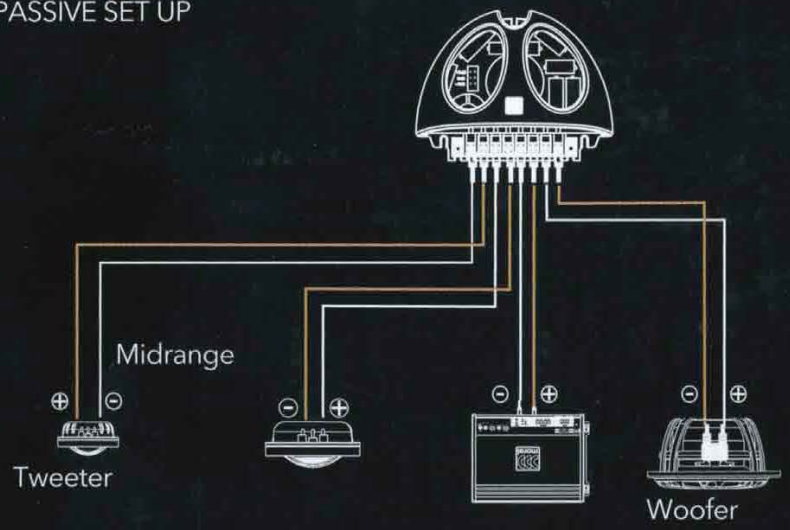
3-WAY System Wiring

ACTIVE SET UP (Outputs must be filtered)

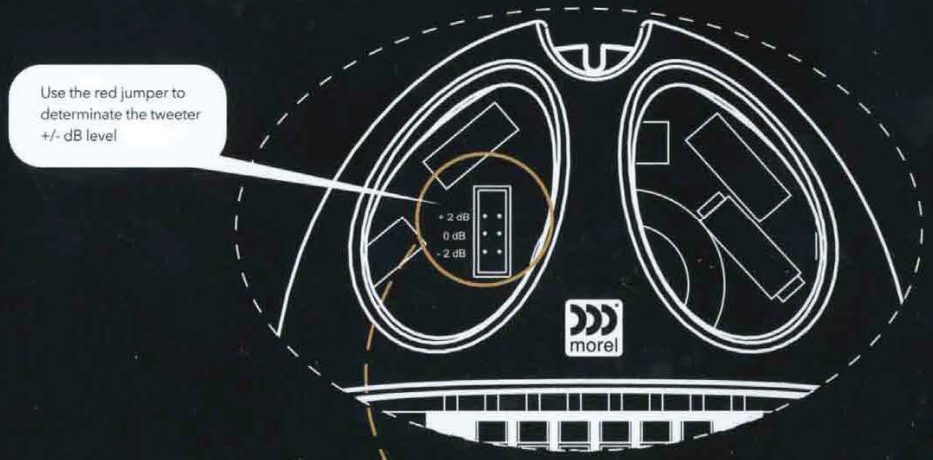


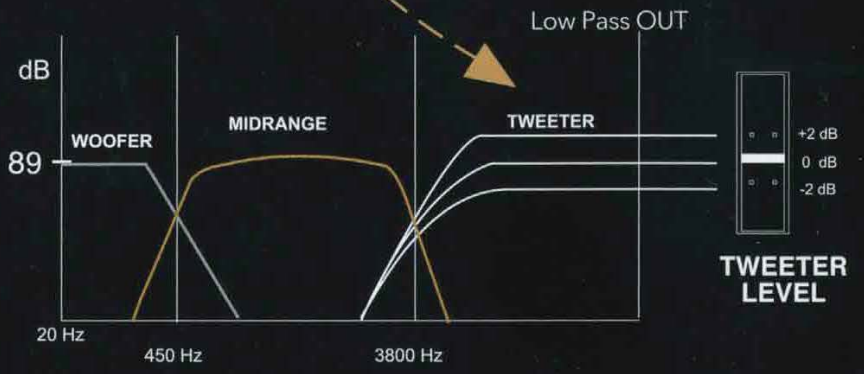
Recommended Active Crossover
Tweeter HP: 2,500Hz @ 12dB slope
Midrange LP: 2,500Hz @ 12dB slope
Midrange HP: 500Hz @ 12dB slope
Woofer LP: 500Hz @ 12dB slope

PASSIVE SET UP



3-WAY System Alignment

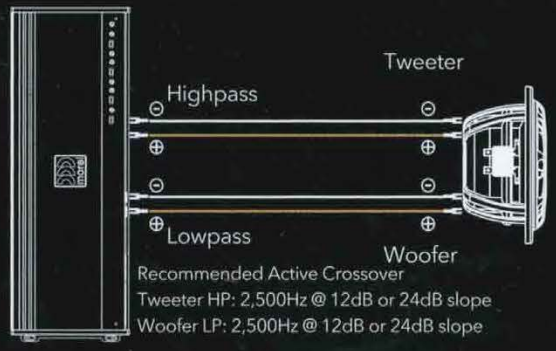




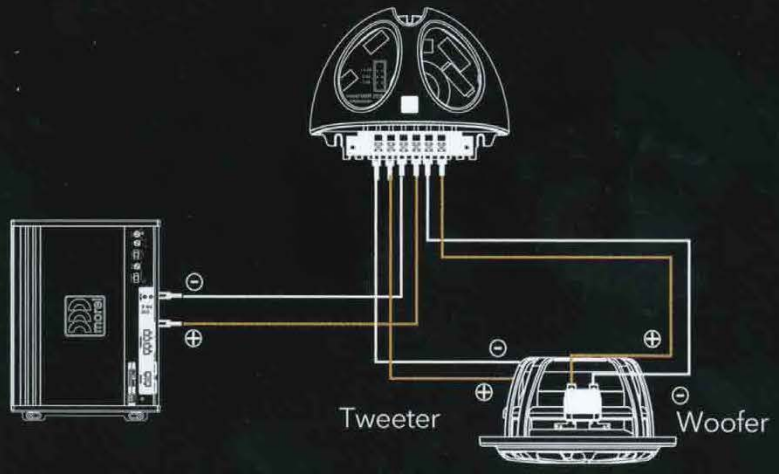
Integra System

Hybrid Integra System Wiring

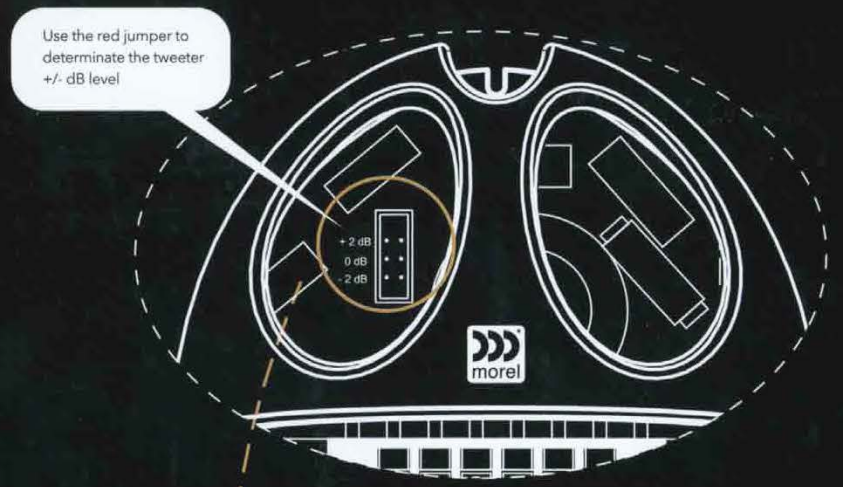
ACTIVE SET UP

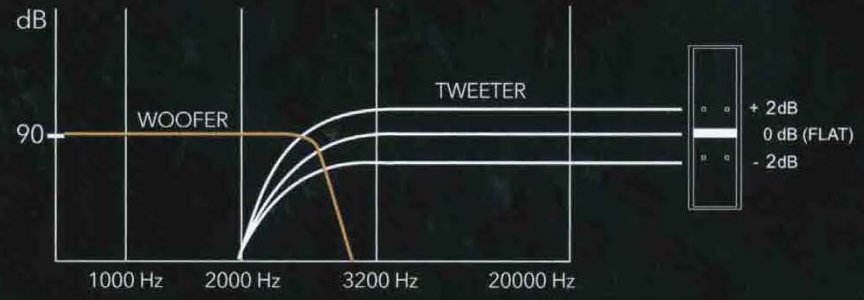


PASSIVE SET UP



Hybrid Integra System Alignment





Specifications

DRIVER UNIT	HYBRID MW4MKII	HYBRID MW5MKII	HYBRID MW6MKII	HYBRID INTEGRA 42	HYBRID INTEGRA 52	HYBRID INTEGRA 62
Nominal Impedance (Ohms)	4	4	4	4	4	4
Power Handling Wrms	100	120	140	80	90	100
Max. Trans.Pwr Handling Wrms	300	500	600	250	250	300
Sensitivity (2.83V/1M)	89 dB	90dB	91 dB	89dB	90dB	91dB
Frequency Response Hz	50-4200	45-3000	35-3000	80-5000	70-3800	65-3300
Resonant Freq. Fs Hz	82	56	45	92	82	75
Voice Coil Diameter mm (inch)	54 (2.1)	54 (2.1)	54 (2.1)	54 (2.10)	54 (2.1)	54 (2.1)
Voice Coil Height mm (inch)	10.50 (0.41)	10.50 (0.41)	11 (0.47)	-	-	12
Voice Coil Type/ Former	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
Voice Coil Wire	Hexatech™ aluminum	Hexatech™ aluminum	Hexatech™ aluminum	Hexatech™ aluminum	Hexatech™ aluminum	Hexatech™ aluminum
DC Resistance (Ohms)	3.2	3	3	3	3.3	3.3
Voice Coil Induct. @1 kHz (MH)	0.21	0.21	0.22	0.17	0.26	0.31
Magnet System	Hybrid rear vented	Hybrid rear vented	Hybrid rear vented	Neodymium	Neodymium	Neodymium
HE-Magnetic Gap Height mm (inch)	4 (0.16)	4 (0.16)	4 (0.16)	4 (0.16)	5 (0.20)	5 (0.20)
B-Flux Density (T.M.)	0.83	0.83	0.83	0.9	0.9	0.85
BL Product/BXL	4.16	4.2	4.2	3.97	5.16	4.65
Max. Linear Ex./Xmax mm (inch)	7±3.5 (0.28±0.14)	7±3.5 (0.28 ± 0.14)	7±3.5 (0.28±0.14)	4±2 (0.16±0.08)	5.50±2.75 (0.22±0.11)	7±3.5 (0.28±0.14)
Suspension Compliance CMS - mm/N	0.57	0.78	1.1	0.66	0.6	0.42
Electrical Q Factor QES	0.63	0.59	0.56	0.45	0.39	0.67
QTS	0.46	0.45	0.44	0.36	0.32	0.54
QMS	1.74	1.8	2.08	1.72	1.85	2.86
Mech.Resistance RMS - Ohm/meter	1.98	1.96	1.5	1.44	1.7	1.52
Moving Mass MMS - gr/ ounce	6.8	9.9	11	4.4	6.11	8.12
Equiv. Can Air Load VAS - L (cu.ft)	3.17 (0.11)	8.87 (0.31)	21 (0.74)	1.40 (0.04)	2.72 (0.37)	3.80 (0.13)
Effective Piston Area SD sq.cm (sq. inch)	64 (9.92)	90 (13.95)	119 (18.45)	39 (6.04)	57 (8.83)	80 (37.8)
Cone Type	One-piece formed	One-piece formed	One-piece formed	Formed Paper	Formed Paper	Formed Paper
Cone Material	DPC	DPC	DPC	Composite cellular fiber	Composite cellular fiber	Composite cell. fiber
Unit Diameter mm (inch)	104 (4)	135 (5.25)	165 (6.50)	104 (4.0)	135 (5.25)	165 (6.5)
Mounting Depth mm (inch)	50 (21)	60 (2.36)	61 (2.40)	50 (2.1)	60 (2.36)	61 (2.40)
Mounting Cutout mm (inch)	95 (3.74)	120 (4.72)	141 (5.55)	95 (3.74)	120 (4.72)	141 (5.55)
Net Weight Kg (lb)	0.53 (1.1716)	0.60 (1.32)	0.60 (1.32)	0.50 (1.10)	0.60 (1.32)	0.75 (1.65)

TWEETER / MIDRANGE	MT300	CDM700
Nominal Impedance (Ohm)	6	8
Power Handling (WRms)	130	100
Max Transient Power Handling W (10ms)	350	300
Sensitivity (2.83V/1M) dB	93	90
Frequency Response Hz	1600-25000	600-6000
FS Hz	1200	480
Voice Coil Diameter mm (inch)	28 (1.125)	54 (2.125)
Voice Coil Former	Aluminum	Aluminum
Voice Coil Wire	Hexatech™ Aluminium	Hexatech™ Aluminium
DC Resistance Ohm	5.2	3.5
Magnet System	Double Magnet Neodymium	Neodymium Rear Vented
Dome Type	Acuflex™ Hand Coated Soft Dome	Coated Soft Dome
Dome Material	Silk	Silk
Unit Diameter mm (inch)	45.00 (1.8)	88.00 (3.50)
Mounting Depth mm (inch)	20.00 (0.80)	21.00 (0.83)
Mounting Cutout mm (inch)	50.00 (2.00)	75.50 (2.97)
Net Weight Kg(lb)	0.067 (0.134)	0.25 (0.55)

CROSSOVER	MXR240.4	MXR250in	MXR300.4
Crossover Point	W: 2200Hz / 18dB T: 2200Hz / 12dB	2200Hz / 12dB/Oct	W: 500Hz / 12dB M:18dB/ 2200Hz/ 12dB T: 2200Hz / 6dB
Crossover Controls	Tweeter+/- 3dB	Tweeter+/- 2dB	Tweeter+/- 2dB
Wiring Options	N/A	N/A	N/A

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

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Verifying your Genuine Morel Product

In light of counterfeit products that have appeared in some markets, Morel enables you to verify the authenticity of your purchase.

1. Remove the verification slip from the nylon bag that contains your Installation Guide.

2. Place it over the verification sticker found on the bottom of each Genuine Morel product.

3. The word "Genuine" should become visible.

4. If not, we recommend that you return the product to your point of purchase.