



Delay Integration and Output Starting Points Quick Reference Guide V7

*For use with Compass/Callisto v3.7
and Callisto Output/EQ Starting Points v3.7.2*

LEO-M + LYON			
Model	Delay Integration	Output EQ Starting Point	Compensation Delay*
LEO-M	No Delay Integration	LEO-M Narrow & Med Starting Points	8.05ms
LYON	LYON with LEO-M	None (if 4 or Less Under LEO-M)	0ms

LEO-M + LEOPARD			
Model	Delay Integration	Output EQ Starting Point	Compensation Delay*
LEO-M	No Delay Integration	LEO-M Narrow & Med Starting Points	1.95ms
LEOPARD	LYON with LEO-M (ignore the delay warning)	None	0ms

LEO-M + 'Integrated' MILO Family Series (MICA, MILO, M'ELODIE, MINA) + CQ-1 & -2			
Model	Delay Integration	Output EQ Starting Point	Compensation Delay*
LEO-M	LEO-M with MILO Family	LEO-M Narrow & Med Starting Points	0ms
MILO	MILO	MILO Array Starting Point	0ms
MICA	MICA	MICA Nar, Med & Wide Starting Points	0ms
M'elodie	M'elodie	M'elodie Array Starting Point	0ms
MINA	MINA	MINA Nar, Med & Wide Starting Points	<div>⌋</div>
If using MINA with these other products, 1.5ms must be added to all of the other products to compensate for MINA's internal latency			
CQ Speaker	LYON with LEO-M <i>(ignore the delay warning)</i>	CQ with LEO-M <i>(Channel Settings Starting Point)</i>	0ms

LEO-M + Ultra Series (JM-1P, UPQ-1P & -2P, UPA-1P & -2P, UPJ-1P, UPJr, UPM-1P & -2P, UP-4XP & 48VDC versions) + MSL-4 & MSL-6			
Model	Delay Integration	Output EQ Starting Point	Compensation Delay*
LEO-M	No Delay Integration	LEO-M Narrow & Med Starting Points	0ms
Ultra Series Speaker	No Delay Integration	None	0ms
MSL-4 & -6 Speaker	No Delay Integration	None	0ms

LEO-M + CQ-1 & -2			
Model	Delay Integration	Output EQ Starting Point	Compensation Delay*
LEO-M	No Delay Integration	LEO-M Narrow & Med Starting Points	0ms
CQ Speaker	LYON with LEO-M (ignore the delay warning)	CQ with LEO-M (Channel Settings Starting Point)	0ms



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LYON + LEOPARD			
Model	Delay Integration	Output EQ Starting Point	Compensation Delay*
LYON	No Delay Integration	LYON Nar, Med & Wide Starting Points	0ms
LEOPARD	LEOPARD with LYON	None	6.1ms

LYON + 'Integrated' MILO Family Series (MICA, MILO, M'ELODIE, MINA) + CQ-1 & -2			
Model	Delay Integration	Output EQ Starting Point	Compensation Delay*
LYON	LYON with LEO-M	LYON Nar, Med & Wide Starting Points	0ms
MILO	MILO	MILO Array Starting Point	8.05ms
MICA	MICA	MICA Nar, Med & Wide Starting Points	8.05ms
M'elodie	M'elodie	M'elodie Array Starting Point	8.05ms
MINA	MINA	MINA Nar, Med & Wide Starting Points	6.55ms
If using MINA with these other products, 1.5ms must be added to all of the other products to compensate for MINA's internal latency			
CQ Speaker	LYON with LEO-M (<i>ignore the delay warning</i>)	CQ with LYON (<i>Channel Settings Starting Point</i>)	<< In CH Start Point

LYON + Ultra Series (JM-1P, UPQ-1P & -2P, UPA-1P & -2P, UPJ-1P, UPJr, UPM-1P & -2P, UP-4XP & 48VDC versions) + MSL-4 & MSL-6			
Model	Delay Integration	Output EQ Starting Point	Compensation Delay*
LYON	LYON with LEO-M	LYON Nar, Med & Wide Starting Points	0ms
Ultra Series Speaker	No Delay Integration	None	8.05ms
MSL-4 & -6 Speaker	No Delay Integration	None	8.05ms

LYON + CQ-1 & -2			
Model	Delay Integration	Output EQ Starting Point	Compensation Delay*
LYON	No Delay Integration	LYON Nar, Med & Wide Starting Points	0ms
CQ Speaker	No Delay Integration	CQ with LYON (<i>Channel Settings Starting Point</i>)	<< In CH Start Point



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LEOPARD + 'Integrated' MILO Family Series (MICA, MILO, M'ELODIE, MINA) + CQ-1 & -2			
Model	Delay Integration	Output EQ Starting Point	Compensation Delay*
LEOPARD	LYON with LEO-M <i>(ignore the delay warning)</i>	None	0ms
MILO	MILO	MILO Array Starting Point	1.95ms
MICA	MICA	MICA Nar, Med & Wide Starting Points	1.95ms
M'elodie	M'elodie	M'elodie Array Starting Point	1.95ms
MINA	MINA	MINA Nar, Med & Wide Starting Points	0.45ms
If using MINA with these other products, 1.5ms must be added to all of the other products to compensate for MINA's internal latency			
CQ Speaker	LYON with LEO-M <i>(ignore the delay warning)</i>	CQ with LEOPARD <i>(Channel Settings Starting Point)</i>	<< In CH Start Point

LEOPARD + Ultra Series (JM-1P, UPQ-1P & -2P, UPA-1P & -2P, UPJ-1P, UPJr, UPM-1P & -2P, UP-4XP & 48VDC versions) + MSL-4 & MSL-6			
Model	Delay Integration	Output EQ Starting Point	Compensation Delay*
LEOPARD	LYON with LEO-M <i>(ignore the delay warning)</i>	None	0ms
Ultra Series Speaker	No Delay Integration	None	1.95ms
MSL-4 & -6 Speaker	No Delay Integration	None	1.95ms

LEOPARD + CQ-1 & -2			
Model	Delay Integration	Output EQ Starting Point	Compensation Delay*
LEOPARD	No Delay Integration	None	0ms
CQ Speaker	No Delay Integration	CQ with LEOPARD <i>(Channel Settings Starting Point)</i>	<< In CH Start Point



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CQ-1 & -2 + Ultra Series (JM-1P, UPQ-1P & -2P, UPA-1P & -2P, UPJ-1P, UPJr, UPM-1P & -2P, UP-4XP & 48VDC versions) + MSL-4 & MSL-6			
<i>Model</i>	<i>Delay Integration</i>	<i>Output EQ Starting Point</i>	<i>Compensation Delay*</i>
CQ Speaker	LYON with LEO-M (<i>ignore the delay warning</i>)	CQ with LEO-M (<i>Channel Settings Starting Point</i>)	0ms
Ultra Series Speaker	No Delay Integration	None	0ms
MSL-4 & -6 Speaker	No Delay Integration	None	0ms

900-LFC or 1100-LFC with LEO/LYON/LEOPARD			
<i>Model</i>	<i>Delay Integration</i>	<i>Output EQ Starting Point</i>	<i>Compensation Delay*</i>
900-LFC or 1100-LFC	No Delay Integration	None	0ms

700-HP with 1100-LFC			
<i>Model</i>	<i>Delay Integration</i>	<i>Output Channel Settings Starting Point</i>	<i>Compensation Delay*</i>
1100-LFC	No Delay Integration	None	0ms
700-HP	No Delay Integration	700HP to match 1100-LFC	0ms

Gradient Cardioid LFC Stacks: Cabinet orientation from top to bottom is Forward-Rear-Forward			
<i>Model</i>	<i>Output Channel Settings Starting Point</i>	<i>Polarity</i>	<i>Delay*</i>
1100-LFC Forward Facing	1100-LFC Grad Cardioid Forward Facing	Normal	0ms
1100-LFC Rear Facing	1100-LFC Grad Cardioid Rear Facing	Reversed	5.2ms
900-LFC Forward Facing	900-LFC Grad Cardioid Forward Facing	Normal	0ms
900-LFC Rear Facing	900-LFC Grad Cardioid Rear Facing	Reversed	3.8ms

NOTES:

- 'Delay Integration' changes the phase response of a speaker to match another product/product line without changing the frequency response

- 'Output EQ Starting Points' correct for low-mid frequency gain in arrays using minimum phase EQ filters

- Output EQ Starting Point files have the extension *.galileoOutputEqualization

- 'Channel Settings Starting Points' contain all Output Processing (EQ filters, Crossover filters, Delay, Level and Polarity) for a Callisto Output Channel and are used to match a speaker's magnitude and phase response to another speaker's

- Output Channel Settings Starting Point files have the extension: *.galileoOutputChannel

- High Pass Filters are not usually necessary on Meyer Sound speakers. Use caution when inserting High Pass and Low Pass filters as some filters drastically change the phase response of a speaker, possibly resulting in unwanted cancellation when summed with other speakers. The use of High Pass and/or Low Pass Filters in the Channel Setting Starting Points are required to match both frequency and phase response of the target speaker.

Internal latency:

LYON=8.05ms

LEOPARD=1.95 ms

MINA=1.5ms

Compass Voicing U-Shaping Breakpoints for LEOPARD:

65 Hz (24dB/Oct), 160 Hz (24dB/Oct), 1500 Hz (12dB/oct), 8000 Hz (12dB/Oct)

*The Delay for Front Fills, Out Fills, Delays, Subs etc. will depend on their relationship/position to the mains.