

MICROSONIC®

CUSTOM EARMOLDS SELECTION GUIDE



Custom earmold is an essential component of any hearing aid device to obtain 100% of desired acoustic performance. Nevertheless, selecting the optimum earmold configuration can be difficult. The following information intends to help you selecting appropriate earmold style, material, and acoustic options. Please refer to Microsonic Custom Earmold Manual for further reading.





OCCLUDING vs. NON-OCCLUDING (OPEN)

Occluding earmolds are recommended for most severe to profound hearing loss and for all power BTE hearing aids. Although, some earmold styles are recommended by default for certain types of loss, keep in mind that every case is different.










Non-occluding earmolds feature a small outside diameter canal portion to allow amplified sound to pass around the earmold as well as go through the tubing. They offer the patient a more pleasing sound by providing an “overlay” of amplification on the natural hearing.

Non-occluded earmolds are also recommended for patients who have a chronic drainage problem, since aeration of the ear canal is allowed.










MICROSONIC CUSTOM BTE EARMOLD STYLES

DESCRIPTIVE PICTURE	STYLE NUMBER	STYLE NAME	SPECIAL NOTES
	#1	REGULAR	Occluding All Materials EXCEPT Platinum Cure Silicones (M25,M35,M45, SlikFit™) Used with external receiver that snaps into earmold
	#1A	REGULAR W/TUBING	Occluding All Materials Used with head-worn instruments
	#2	SKELETON	Occluding All Materials Open space in concha for appearance
	#2A #2B	¾ SKELETON ½ SKELETON	Occluding All Materials Recommended Skeleton style for dexterity issues
	#3	SEMI-SKELETON	Occluding All Materials Recommended for ears with flat concha rim to avoid earmold sticking out from ear








MICROSONIC CUSTOM BTE EARMOLD STYLES

DESCRIPTIVE PICTURE	STYLE NUMBER	STYLE NAME	SPECIAL NOTES
	#4	CANAL	Occluding All Materials Fills only the canal portion of the ear Helix and concha areas are removed Suitable when retention is not an issue
	#5	CANAL-LOK	Occluding All Materials Similar to canal style, easier to insert and remove
	#5A	CANAL-LOK W/HELIX	Occluding All Materials Recommended for ears with flat concha rim to avoid earmold sticking out from ear. Provides additional retention without sacrificing the cosmetic advantages of the Canal-Lok style
	#5L	CANAL-LONG LOK	Occluding All Materials Provides <u>additional</u> retention without sacrificing the cosmetic advantages of the Canal-Lok style
	#6	SHELL	Occluding All Materials Deeply shelled out in the concha area Used when acoustic seal is an essential factor
	#6A	MICRO-SHELL	Occluding All Materials Shallowed Concha Shell with improved appearance and comfort
	#7	CANAL-SHELL (Half-Shell)	Occluding All Materials Performs as Shell style Ideal for dexterity issues (easy insertion & removal)
	#7A	¾ SHELL	
	#16	CROS A (no vent)	Non-Occluding Hard material only Designed for CROS and many IROS fittings Canal-Lok style with longer lok Long Canal Significantly reduction in frequencies below 1000 Hz
	#17	CROS B (no vent)	Non-Occluding Hard material only Designed for CROS and many IROS fittings. Shorter canal. Significantly reduction in frequencies below 1000 Hz

MICROSONIC CUSTOM BTE EARMOLD STYLES

DESCRIPTIVE PICTURE	STYLE NUMBER	STYLE NAME	SPECIAL NOTES
	#18	CROS C (no vent)	Non-Occluding All Materials Recommended for attaching the offside microphone or transmitter in a BTE CROS or BICROS fitting
	#21A	ADVANCED DESIGN FREE FIELD (with SAV)	Non-Occluding All Materials Minimum occlusion Seals canal entrance while leaving the canal itself unoccluded Eliminates feedback
	#21B	ADVANCED DESIGN FREE FIELD (with SAV)	Non-Occluding All Materials Moderate occlusion Seals canal entrance while leaving the canal itself unoccluded Eliminates feedback
	#21C	ADVANCED DESIGN FREE FIELD (with SAV)	Non-Occluding All Materials Moderate occlusion Seals canal entrance while leaving the canal itself unoccluded Eliminates feedback
	#41A	CANAL-LOK ADV. DESIGN FREE FIELD (with SAV)	Non-Occluding All Materials Acoustically identical to #21A
	#41B	CANAL-LOK ADV. DESIGN FREE FIELD (with SAV)	Non-Occluding All Materials Acoustically identical to #21B
	#41C	CANAL-LOK ADV. DESIGN FREE FIELD (with SAV)	Non-Occluding All Materials Acoustically identical to #21C
	#34	HOLLOW CANAL	Soft Materials For severe hearing losses with excessive mandibular action
	#OF2	OPEN-FIT SKELETON (w/IROS) (w/slim tube or RIC)	Non-Occluding Available in all materials. Provides largest vent possible. For maximum comfort with own voice. SAV is optional

MICROSONIC CUSTOM BTE EARMOLD STYLES

DESCRIPTIVE PICTURE	STYLE NUMBER	STYLE NAME	SPECIAL NOTES
	#OF4	OPEN-FIT CANAL (w/IROS) (w/slim tube or RIC)	Non-Occluding Available in all materials. Provides largest vent possible. For maximum comfort with own voice. SAV is optional
	#OF5	OPEN-FIT CANAL-LOK (w/IROS) (w/slim tube or RIC)	Non-Occluding Available in all materials. Provides largest vent possible. For maximum comfort with own voice. SAV is optional
	#OF7	OPEN-FIT CANAL-SHELL (w/IROS) (w/slim tube or RIC)	Non-Occluding Available in all materials. Provides largest vent possible. For maximum comfort with own voice. SAV is optional
	#OF21	OPEN-FIT ADV DESIGN FREE FIELD (w/SAV) (w/slim tube or RIC)	Non-Occluding Available in all materials for use with slim tubes or RIC.
	#SL2	SLIM-FIT SKELETON (specify vent size) (specify receiver model)	Occluding Recommended for RIC . Soft materials ONLY
	#SL4	SLIM-FIT CANAL (specify vent size) (specify receiver model)	Occluding Recommended for RIC . Soft materials ONLY
	#SL5	SLIM-FIT CANAL-LOK (specify vent size) (specify receiver model)	Occluding Recommended for RIC . Soft materials ONLY

CLASSICAL MODIFICATION AND EFFECT CHART

	Modification	Effect on Low Frequencies <750 Hz	Effect on Frequencies 750 - 1500 Hz	Effect on Frequencies 1500 - 3000 Hz	Effect on High Frequencies >3000 Hz
TUBING DIAMETER	Larger I.D. Tubing & Horn Tubing	Negligible	Moves peak to higher frequency	Increases height of peak and moves to higher frequency	Increases
	Smaller I.D. Tubing	May reduce below 1,000 Hz	Moves peak to lower frequency	Reduces height of peak and moves to lower frequency	Large reduction
TUBING LENGTH	Longer Tubing	Increases	Moves peak to lower frequency	Moves peak to lower frequency	Negligible
	Shorter Tubing	Slightly decreases	Moves peak to higher frequency	Moves peak to higher frequency	Negligible
LENGTH OF EARMOLD CANAL	Longer canal	Increases level of response curve			
	Shorter canal	Decreases level of response curve			
BORE DIAMETER	Larger diameter bore through earmold canal*	Negligible	Moves peak to higher frequency	Moves peak to higher frequency	Increases
	Smaller diameter through earmold canal*	Negligible	Moves peak to lower frequency	Moves peak to lower frequency	Decreases
BORE LENGTH	Longer bore through earmold canal*	Slightly increases	Moves peak to lower frequency	Moves peak to lower frequency	Decreases
	Shorter bore through earmold canal	Slightly decreases	Moves peak to higher frequency	Moves peak to higher frequency	Increases
VENTING	Small Vent (.031"/0.8mm)**	Negligible	Negligible	Negligible	Negligible
	Medium Vent (.064"/1.6mm)**	Decreases	Increases peak height	Negligible	Negligible
	Large Vent (.094"/2.4mm)**	Decreases	Increases peak height	Negligible	Negligible
NON-OCCLUDING MOLD	Non-Occluding Mold	Eliminates	Moves peak to higher frequency and increases height	Increases peak height	Negligible
OPEN VENT MOLD	Open-Vented (High Frequency) Mold	Decreases	Reduces peak height	Reduces peak height	Negligible
FILTER INSERTS	Filter Insert at Hearing Aid Nub	Negligible	Reduces peak height	Reduces peak height	Negligible
	Filter Insert at Earmold Tip	Slightly decreases	Large reduction	Large reduction	Decreases

NOTE: Because of wide variation in earphone types and internal acoustical systems in hearing aids, this chart must be considered as a guide for average conditions.

* Applies to earmolds for conventional earphones

** Vents of short lengths are more effective in reducing low frequency response. Gain must be limited with larger size vents to avoid feedback.

MICROSONIC® Earmold Materials

ACRYLIC MATERIAL	
Acrylic	▶ Hard ▶ Hypoallergenic ▶ Ideal for soft/thin skin
Super Alerite	▶ Hard ▶ Hypoallergenic ▶ Heat-cure ▶ Ideal for soft/thin skin ▶ Recommended for severe skin problems
VINYL MATERIALS	
Synth-A-Flex	▶ Super soft (Shore A 35) ▶ Modifiable ▶ Comfortable ▶ Not for long-term use (up to 1 year)
Vinylflex	▶ Hard ▶ Flexes with body heat ▶ Hypoallergenic
SILICONE MATERIALS	
M25	▶ Platinum cure ▶ Super soft (Shore A 25) ▶ Hypoallergenic ▶ Antibacterial ▶ Superior comfort ▶ Recommended for adults/pediatrics ▶ Tolerance for growth ▶ Multi-colors
M35 (also known as M2000) <i>DEFAULT SILICONE MATERIAL</i>	▶ Platinum cure ▶ Soft (Shore A 35) ▶ Hypoallergenic ▶ Antibacterial ▶ Recommended for adults/pediatrics, power BTE ▶ Multi-colors
M45	▶ Platinum cure ▶ Semi-soft (Shore A 45) ▶ Hypoallergenic ▶ Antibacterial ▶ Recommended for adults/pediatrics, power BTE ▶ Multi-colors
SlikFit™	▶ Platinum cure ▶ Soft (Shore A 35) ▶ Hypoallergenic ▶ Antibacterial ▶ Recommended for adults/pediatrics, power BTE ▶ Silky Matte ▶ Easy insertion ▶ Multi-colors
Medi-Sil	▶ Heat cure ▶ Semi-soft (Shore A 50) ▶ Hypoallergenic ▶ Recommended for adults/seniors, power BTE ▶ Recommended for sensitive skins ▶ Silky Texture
Medi-Sil Clear	▶ Same as Medi-Sil. ▶ Recommended for severe allergic cases
Medi-Sil Plus	▶ Sh. A 50 concha with Sh. A 30 canal ▶ Recommended for sensitive skins, senior citizens, power BTE ▶ Silky Texture
COMBINATION MATERIALS (Canal Additives)	
Super Alerite Body w/Silky Silicone Canal	▶ Hard body with flexible Medi-Sil Canal ▶ Heat cure materials ▶ Recommended for soft/thin skin and severe allergic cases ▶ Ideal for individuals w/dexterity issues <u>and</u> excessive mandibular movement.
Acrylic Body w/Synth-A-Flex Canal	▶ Hard body with super soft Canal

OTHER MATERIALS

Polyethylene	<ul style="list-style-type: none"> ▶ Hard ▶ Hypoallergenic ▶ Recommended for most severe allergic cases ▶ Opaque pink only
Neon-Lite™	<ul style="list-style-type: none"> ▶ Default swim plug material ▶ Floating ▶ Semi-soft (Shore A 45) ▶ Platinum Cure Silicone ▶ Multi-colors (opaque only)
PassGuard™	<ul style="list-style-type: none"> ▶ Hearing Protection ▶ NRR 27 dB, Mean 38 dB, Attenuation up to 47 dB ▶ Perfect for high impact noise ▶ Permits hearing conversation ▶ Semi-soft (Shore A 45) ▶ Platinum Cure Silicone ▶ Hypoallergenic ▶ Multi-colors (opaque only)
SoftGuard™	<ul style="list-style-type: none"> ▶ Hearing Protection ▶ Superior acoustic seal ▶ NRR 26 dB, Mean 40 dB, Attenuation up to 48 dB ▶ Perfect for high impact noise ▶ Permits hearing conversation ▶ Soft (Shore A 30) ▶ Platinum Cure Silicone ▶ Hypoallergenic ▶ Multi-colors (opaque only)