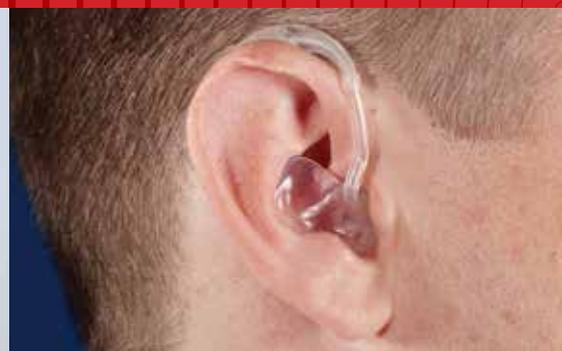


# ReSound Earmoulds

A solution for all your clients needs



ReSound

rediscover hearing





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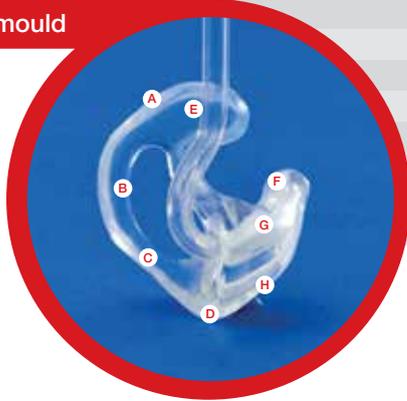
# Terms, ear anatomy and earmould

## Anatomy



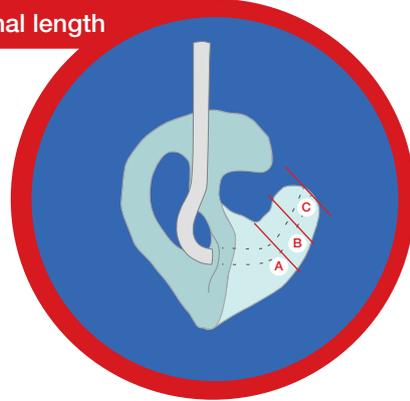
- A Darwin's Tubercle
- B Anti-Helix
- C Concha cymba
- D Concha Bowl
- E Anti-Tragus
- F Helix
- G Lobe
- H Fossa
- I Helix lock
- J Crest of Helix
- K Crus
- L Canal (behind)
- M Tragus

## Earmould



- A Anti-Helix
- B Concha
- C Anti-Tragus
- D Heel
- E Helix
- F Canal
- G Sound Bore
- H Vent

## Canal length



# 5 Steps to a successful earmould fitting

## Step 1 Ear impressions

The first step to a successful earmould fitting is an accurate ear impression. At all times observe Universal Infection Control precautions and procedures. Keep lids on impression materials when not in use, to avoid contamination.

Check the canal for: excessive wax or debris, bacterial or fungal infection, discharge, redness, broken skin or blood, perforation, deformity from surgery, severe stenosis or large exostoses, flaring of canal, excess hair, mobile ear canal, and take appropriate action. Select appropriate otoblock size, and tie knot before placing in the ear.

Mix impression materials as per manufacturer's instruction. Syringe carefully, keeping tip of syringe inserted to avoid bubbles. Fill concha and helix area. When material sets, gently ease from canal. Check canal with otoscope.

Examine impression carefully. Reject and re-do if the canal section is stretched, is not defined to 2nd bend, if there are creases or irregularities, gaps or bubbles.

Mark the canal length required, ensuring the sound bore will be directed to eardrum.

Make sure the impression is dry before packaging.

If a client has an infectious disease, label jar "Treat Impression as Infectious".



### Ear impression accessories

- A Otoform (Impression material)
- B Dry Aid
- C Aural Syringe
- D Measurement Tool
- E Otoblocks
- F Auragel



## Step 2 Material options

The second step to a successful earmould fitting is to choose what material to use. ReSound manufacturers earmoulds in four different materials:

### Hard Acrylic

- Available in clear
- This material does not discolour and can be easily modified
- Available as allergy free if required
- Easy to clean in warm water

### Biopor 25 (extra soft)

- Permanently flexible, tear resistant hypoallergenic high-quality silicon
- Available in clear and tinted (reddish transparent)
- Suitable for clients with a severe-profound hearing loss
- Difficult to modify

### Biopor 40 (soft)

- Permanently flexible, tear resistant hypoallergenic high-quality silicon
- Available in clear, tinted (reddish transparent) and a range of fun colours
- Suitable for clients with a more severe hearing loss
- Difficult to modify

### Biopor 70 (semi-soft)

- Permanently flexible, tear resistant hypoallergenic high-quality silicon
- Available in clear and tinted (reddish transparent)
- Suitable for clients with a more severe hearing loss the firmest of the silicon range suitable for clients with dexterity issues who require a silicon mould.
- Difficult to modify

## Colours available

### Hard Acrylic

-  Clear
-  Cool Red
-  Beige
-  Cool Blue
-  Mocha
-  Violet
-  Magenta
-  Light Green
-  Black
-  Fluro Pink
-  Cobalt Blue

### Biopor 25

-  Clear
-  Tinted
-  Red Transparent
-  Blue Transparent

### Biopor 40

-  Clear
-  Tinted
-  Red
-  Blue
-  Beige
-  Medium Brown
-  Dark Brown
-  Lilac
-  Orange
-  Pink Opaque
-  Yellow
-  Green
-  Black
-  White
-  Fluro Pink

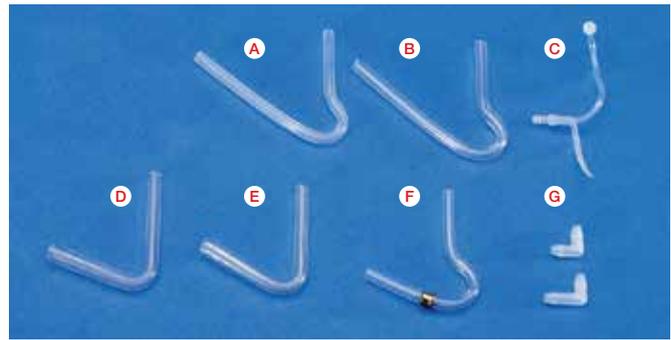
### Biopor 70

-  Clear
-  Tinted
-  Azure

### Step 3 Tubing options

The third step to a successful earmould fitting is to choose which tubing to use. Earmoulds can be connected to a variety of different tubing styles:

- A** Thick tubing
- B** Double walled tubing
- C** Thin tubing
- D** Acoustic horn 3mm
- E** Acoustic horn 4mm
- F** Locked tubing (silicon)
- G** Plastic elbow connections



Standard tubing is available but is only recommended for use on a narrow canal when Thick wall tubing cannot be used.

### Step 4 Venting options

The fourth step to a successful earmould fitting is to choose what size vent to put through the mould.

If occlusion is a concern, you may select a ROC mould. These are hollow shells that are used to maximize the vent effect.

Hearing instruments have extremely efficient feedback management system. Therefore, most mild - severe losses can usually be fitted with large open vent moulds.

Venting options include: SAV, Iros, Open, 4mm, 3mm, 2.5mm, 2mm, 1.5mm, 1mm or none.

### Step 5 Earmould and dome options

The final step to a successful earmould fitting is to choose whether to use an earmould or a disposable dome. Behind-the-ear and Receiver-in-the-ear hearing aids can be connected to either.

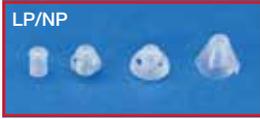
<p><b>Normal power (NP) and Low power (LP) receivers</b></p>  <p><b>Can be connected to:</b></p> <ul style="list-style-type: none"> <li>• 5mm open dome</li> <li>• 7mm open dome</li> <li>• 10mm open dome</li> <li>• Tulip dome</li> <li>• Custom mould</li> </ul>	<p><b>High power (HP) receivers</b></p>  <p><b>Can be connected to:</b></p> <ul style="list-style-type: none"> <li>• Double 5mm dome</li> <li>• Double 7mm dome</li> <li>• Double 10mm dome</li> <li>• Custom mould</li> </ul>	<p><b>High power 2 (HP2) receivers</b></p>  <p><b>Can be connected to:</b></p> <ul style="list-style-type: none"> <li>• 5mm dome</li> <li>• 7mm dome</li> <li>• 10mm dome</li> <li>• Tulip dome</li> <li>• No custom mould option available</li> </ul>
<p><b>S-Type receivers</b></p>  <p><b>Can be connected to:</b></p> <ul style="list-style-type: none"> <li>• 5mm dome</li> <li>• 7mm dome</li> <li>• 10mm dome</li> <li>• Tulip dome</li> <li>• Silicon custom mould</li> </ul>	<p><b>BTE hearing aids fitted with thick wall tube</b></p>  <p><b>Can be connected to:</b></p> <ul style="list-style-type: none"> <li>• Custom mould</li> <li>• ROC mould</li> </ul>	<p><b>BTE hearing aids fitted with thin tubes</b></p>  <p><b>Can be connected to:</b></p> <ul style="list-style-type: none"> <li>• 5mm dome</li> <li>• 7mm dome</li> <li>• 10mm dome</li> <li>• Tulip dome</li> <li>• Custom mould</li> <li>• ROC mould</li> </ul>

# Kit Boxes

Kit boxes contain a variety of consumable items that will assist you to achieve the best fitting possible. Plus they will provide you with flexibility during the fitting process.

Receiver-in-the-ear (RIE) Kit	Thin tube Kit
 <p><b>Contents includes:</b>                  Normal Power receiver                  Domes                  Measuring tools                  Wax protection filters                  Retention/sports locks</p>	 <p><b>Contents includes:</b>                  Different length tubes                  Domes                  Measuring tool                  Cleaning wires                  Retention/sports locks</p>

**Note:** You can also order items contained in these kit boxes individually if preferred.

 <p><b>Low Power Receiver (RIE)</b></p>	 <p>LP/NP</p>	 <p><b>Thin tube/dome pack</b></p>
 <p><b>Normal Power Receiver (RIE)</b></p>	 <p>HP</p>	
 <p><b>High Power Receiver (RIE)</b></p>	 <p><b>HF3 Filter</b></p>	
 <p><b>High Power 2 Receiver (RIE)</b></p>		
 <p><b>S-Type Receiver (RIE)</b></p>		

# ROC Moulds for BTE's

**ROC moulds** are hollow shells that are used to maximize the vent effect. The ROC mould is available in clear acrylic only, and can be attached to both thick and thin tubing.

ROC mould			
	Feature	Advantage	Benefit
	Tube requires manual adjustment	Provides greater control of tube length (0, 1, 2, 3)	Allows you to personalise the fit to suit your patient's needs

**The ROC 2 moulds** are also hollow shells. They are available in clear acrylic only, and can be attached to thin tubing only. No additional cutting or gluing is needed.

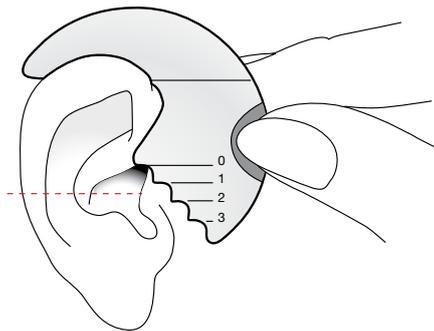
ROC 2 mould			
	Feature	Advantage	Benefit
	Direct insertion of thin tube into ROC2 mould	Use of standard thin tube lengths	Convenient; faster adjustments

# Power and length options for receivers

Receivers are available in 3 power options

Low & normal power	High power	High power 2
Receivers can be covered with a dome or a custom mould.	Receivers can be covered with a double dome or a custom mould.	Receivers can be covered with a double dome.
 <ul style="list-style-type: none"> <li>A 5mm</li> <li>B 7mm</li> <li>C 10mm</li> <li>D Tulip dome</li> </ul>	 <ul style="list-style-type: none"> <li>A HP dome tool</li> <li>B 5mm</li> <li>C 7mm</li> <li>D 10mm</li> </ul>	 <ul style="list-style-type: none"> <li>A 5mm</li> <li>B 7mm</li> <li>C 10mm</li> </ul>

Receivers are available in 5 length options



Receivers are available in 5 length options: 0,1,2,3,4. Size 4 being the lowest part of the tool.

When deciding on the most appropriate length, position the measuring tool above the ear (as shown).

Choose the length that matches the centre of the ear canal. (This tool is also used to select the length of the thin tube).

# Receiver-in-the ear (RIE) mould options

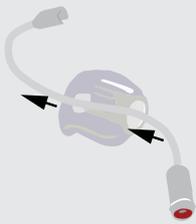
Receivers can be covered with a custom mould for a more secure fit, easier insertion or to control feedback. There are two designs, one suited for smaller ear canals, and one for larger canals.

**RIE 1 Small canals** can be fitted with a traditional RIE Mould in hard acrylic, where the LP / NP receiver or HP is pushed into the mould from the canal side.

RIE 1 – Receiver-in-the ear mould with silicon sleeve			
	Feature	Advantage	Benefit
	Original RIE mould.	Fits smaller canals as the receiver sits further back in the moulds allowing larger venting.	Fits a larger range of ear canals, Less feedback.
	Includes silicon sleeve around receiver.	Provides a more robust complete seal.	Improved hearing instrument output.
		Allows for up to 20dB of additional stable gain for HP receiver.	

Note: Retaining ring is to be removed from the LP/NP receiver.

**RIE 2 larger canals** can be fitted with a RIE 2 mould in hard acrylic (not for HP), where the LP / NP receiver (plus retaining ring) is pulled through the mould from the ear drum side.

RIE 2 – Receiver-in-the-ear mould for larger canals			
	Feature	Advantage	Benefit
	Mould retains receiver from the front.	Receiver is easier to remove.	Minimise receiver damage.
	Receiver & tube can now be rotated 360 degrees when inserting.	Ability to adjust position of receiver & tube when inserting.	Better fit for the patient, improved cosmetics.
	Receiver sits deeper into the mould.	Receiver sits further into the canal maximising acoustic performance.	Better sound quality.
		Receiver contained within mould - not protruding.	

## Earmould styles for Receiver-in-the-ear BTE's

Receivers can be attached to a variety of different earmould styles

Canal with Mini Option		
Cosmetic		
Fits deeply in the canal		
Not suitable for small, narrow, bendy, short canals		
Needs deep placement to avoid retention problems		
Management requires nimble fingers to correctly insert		
Mini option requires a long canal		
		Mini Option
Canal lock		
Cosmetic		
Fits neatly into canal		
Not suitable for small, narrow bendy canals		
Lock extends into concha bowl		
Good for retention		
Management requires nimble fingers to correctly insert and place lock		
Half shell		
Fits neatly into canal		
Half fills concha bowl		
Good retention for small narrow or short canals		
Good choice for less nimble fingers		
3/4 Skeleton		
Fits neatly into canal		
Fills outer rim of Concha bowl and helix (optional helix lock not shown)		
Suitable for small, narrow, bendy, short canals		
Good retention		
Good for secure and comfortable fit		
Good choice for less nimble fingers		

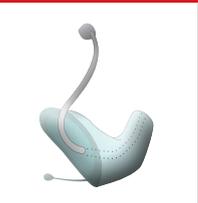
# Thin Tubes

Note: Thin Tubes can be attached to a variety of different earmould styles. If occlusion is a concern, choose a hollow style ROC mould.

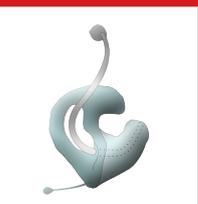
Canal with mini option		
Cosmetic		
Fits deeply in the canal		
Not suitable for small, narrow, bendy, short canals		
Needs deep placement to avoid retention problems		
Management requires nimble fingers to correctly insert		

Mini Option

Canal lock		
Cosmetic		
Fits neatly into canal		
Not suitable for small, narrow bendy canals		
Lock extends into concha bowl		
Good for retention		
Management requires nimble fingers to correctly insert and place lock		

Half shell		
Fits neatly into canal		
Half fills concha bowl		
Good retention for small, narrow or short canals		
Good choice for less nimble fingers		
May not suit hairy ears		

3/4 Skeleton		
Fits neatly into canal		
Fills outer rim of concha bowl		
Suitable for small, narrow, bendy, short canals, hairy ears		
Good retention, comfortable fit		
Good choice for less nimble fingers		

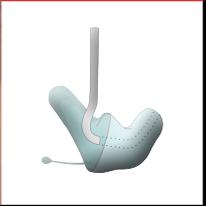
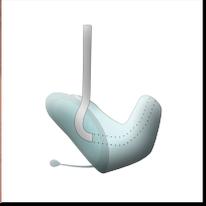
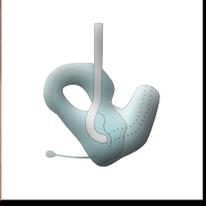
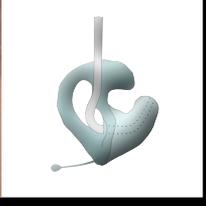
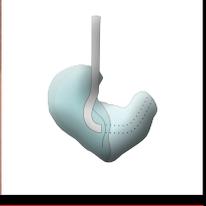
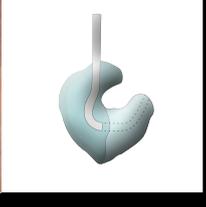
Skeleton		
Fits neatly into canal		
Fills outer rim of concha bowl and helix		
Suitable for small, narrow, bendy, short canals, hairy ears		
Good retention, comfortable fit		

3/4 Carved Shell, 3/4 Ultra Carved Shell		
Fits neatly into canal		
Carved concha region		
Lightweight and easy to insert		
No Helix lock		
Suitable for most ears		
May be too heavy for thin tube		

Carved Shell, Ultra-Carved Shell		
Fits neatly into canal		
Entire concha area sculpted away		
Lightweight		
Very secure with <i>additional</i> helix lock (not shown)		
May be too heavy for Thin Tube		

# Thick tubes

Note: Thick tubes can be attached to a variety of different earmould styles. If occlusion is a concern, choose a hollow style ROC mould.

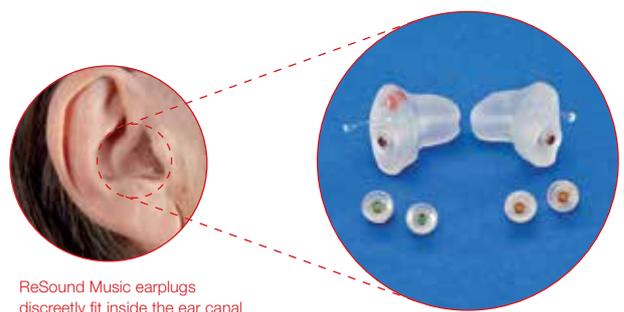
Canal with Mini Option		
Cosmetic		 Mini Option
Fits deeply in the canal		
Not suitable for small, narrow, bendy, short canals		
Needs deep placement to avoid retention problems		
Management requires nimble fingers to correctly insert		
Thick tube may pull mould out		
Canal lock		
Cosmetic		
Fits neatly into canal		
Not suitable for small, narrow bendy canals		
Lock extends into concha bowl		
Good for retention		
Management requires nimble fingers to correctly insert and place lock		
Half shell		
Fits neatly into canal		
Half fills concha bowl		
Good retention for small, narrow or short canals		
Good choice for less nimble fingers		
May not suit hairy ears, bat ears		
Thick tube may pull mould out		
3/4 Skeleton		
Suitable for small, narrow, bendy, short canals, hairy ears, bat ears		
Good retention, comfortable fit		
Good choice for less nimble fingers		
Skeleton		
Fits neatly into canal		
Fills outer rim of concha bowl and helix		
Suitable for small, narrow, bendy, short canals, hairy ears		
Good retention		
3/4 Carved Shell, 3/4 Ultra Carved Shell		
Fits neatly into canal		
Carved concha region		
Lightweight		
Easy to insert		
No Helix		
Suitable for most ears		
Carved Shell, Ultra-Carved Shell		
Fits neatly into canal		
Entire Concha area sculpted away		
Lightweight		
Very secure with <i>additional</i> helix lock (not shown)		
Default option has no Helix Lock (Helix Lock needs to be specifically requested)		

# Protect your ears with ReSound Musician hearsavers

When music is an important part of your life and you need a better way to listen while you are in a noisy place, we have just the solution you need.

We offer a variety of hearing protection plugs for all musicians and music lovers which help protect your hearing without distorting the music.

Below are the sound levels of different musical instruments, safe levels of exposure to noise during a week's time frame and our recommendation for acoustic filters within each sound exposure bracket.



## Sound Levels of Music

	Normal piano practice	60-70dB
	Fortissimo Singer 3'	70dB
	Chamber music, small auditorium	75-85dB
	Violin	82-92dB
	MP3 player / ipod on 5/10	94dB
	Piano fortissimo / Flute	84-103dB
	Piccolo / French horn	90-106dB
	Tympani and Bass drum	106dB
	Cello	85-111dB
	Oboe	95-112dB
	Clarinet / Trombone	85-114dB
	Symphonic music peak	120-137dB
	Amplifier rock, 4-6'	120dB
	Rock music peak	150dB



## Recommended acoustic filter

## Safe weekly sound exposure

### Minus 10 decibels

Ideal for vocalists, guitarists and people who attend regular chamber music concerts in small rooms.



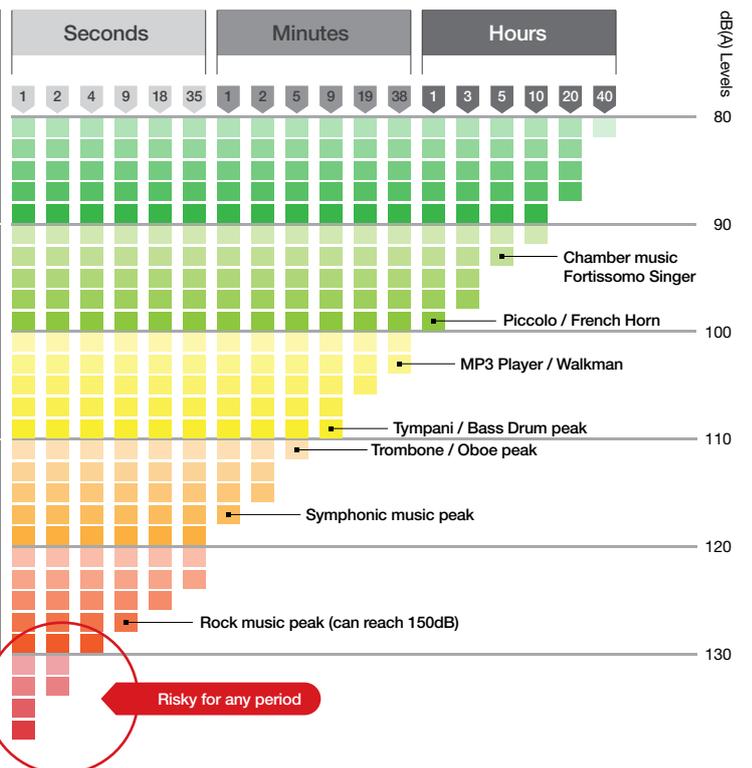
### Minus 15 decibels

Ideal for classical musicians, guitarists, bass players and concert goers.



### Minus 25 decibels

Ideal for drummers, percussionists, rock musicians and regular concert goers.



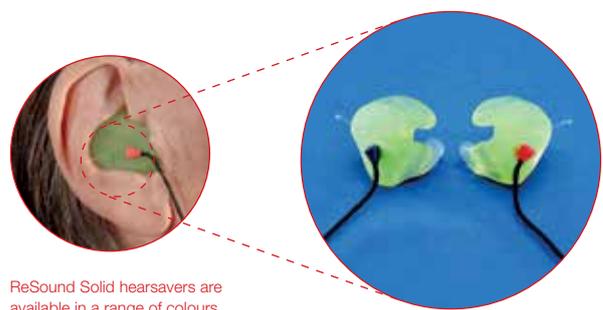
# Protect your ears with ReSound Solid hearsavers

ReSound solid hearsavers are suitable for industrial workers, builders and construction workers, military and aircraft operators, for loud concert goers and as sleep plugs.

Solid hearsavers are designed to eliminate outside noises by reducing sound by up to 40dB. It is important that hearing protection is carefully selected for each individual, based on the intensity level, duration and type of noise exposure.

Exposure to excessive noise from industrial machinery, heavy construction equipment and vehicles, power tools, aircraft, gun fire, motor cycle and auto race tracks can cause hearing loss depending on the intensity and duration of noise.

Below are the sound levels of environmental noises and safe levels of exposure to noise during a week's time frame.



ReSound Solid hearsavers are available in a range of colours

## Environmental noise

 	Weakest sound heard	0dB
	Whisper (Quiet library)	30dB
	Normal conversation	60-70dB
	Telephone dial tone	80dB
	City traffic (Inside car)	85dB
 	Train whistle, Truck traffic	90dB
	Subway train	95dB
	Level at which sustained exposure may result in hearing loss	90-95dB
	Lawn mower	107dB
	Motorcycle	100dB
	Power saw	110dB
 	Sandblasting, Loud rock concert	115dB
	Pain begins	125dB
	Pneumatic Riveter	125dB
	Jet engine, Gun blast	140dB
	Death of hearing tissue	180dB

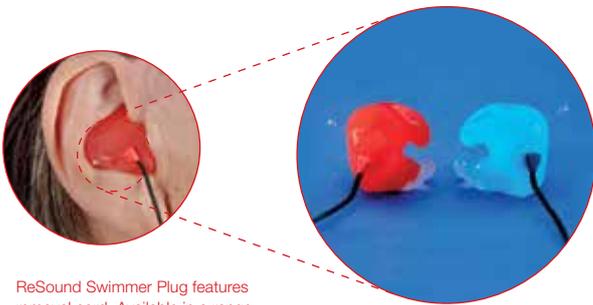


### Safe weekly sound exposure



# Protect your ears with ReSound Water protectors

ReSound Water protectors are earmoulds that are designed to protect the ears from water and infection and do not interfere with hearing and balance.



ReSound Swimmer Plug features removal cord. Available in a range of colours

## Surfer's Ear

A condition of the ear canal where the bony lining under the skin develops a number of lumps (exostoses). These cause a partial or complete blockage of the ear canal. Water and debris can get trapped behind the narrowing and result in infection. It is best to keep your ears warm and dry when surfing by wearing earplugs but a surf hood in the winter will provide good protection too.



## Otitis Externa (Swimmer's ear or ear ache)

An inflammation, irritation or infection of the outer ear and ear canal. Keeping the ear dry when exposed to water such as when swimming, taking a shower or playing water based sports is essential during medical treatment and as a preventative measure once the condition resolves.



## Perforated Eardrum

A hole in the eardrum can be caused by trauma or disease. The hole exposes the middle and inner ear to damage or additional infection. The doctor will likely advise the patient to keep the ear clean and dry while healing, and a water protection earmould may be suitable.



## Grommets and Ventilation Tubes

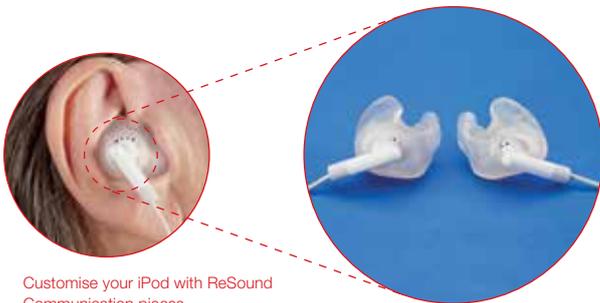
A grommet is a tiny tube inserted into the eardrum to allow air to enter into the middle ear. Jumping and diving into the water is best avoided unless earplugs are used. Grommets cause no discomfort while in place. The healing ability of the eardrum is so great that it usually pushes the tube out in 6-12 months, leaving the eardrum intact.





# Communication & Personal Listening Ear pieces

ReSound can make a comfortable, personalised ear piece to suit most communication equipment.



Customise your iPod with ReSound  
Communication pieces

Most ear pieces provided for communication and personal listening equipment are a great start. However, a big quality leap occurs when moving from universal fit products, to a custom made mould.

Customised ear pieces are made from an impression of the client's ear canal and concha area, and are unique to that individual's ear. The earbuds from devices such as iPods, mobile telephones, security radios, in-ear monitors, MP3 players are embedded into the mould, ensuring a secure fit and great sound quality.

Customised ear pieces are great for all sorts of activities and professional applications:

- Jogging or walking whilst listening to music or news programs
- In-ear monitors for musicians or sound engineers
- Skyping friends or family
- Listening to iPod or MP3 player
- Using the mobile phone
- Security guard communication
- News presenters
- Theatre performers

A custom fit in-ear monitor will provide between 25 and 34 decibels of noise reduction. Custom in-ear monitors come in a variety of colours.

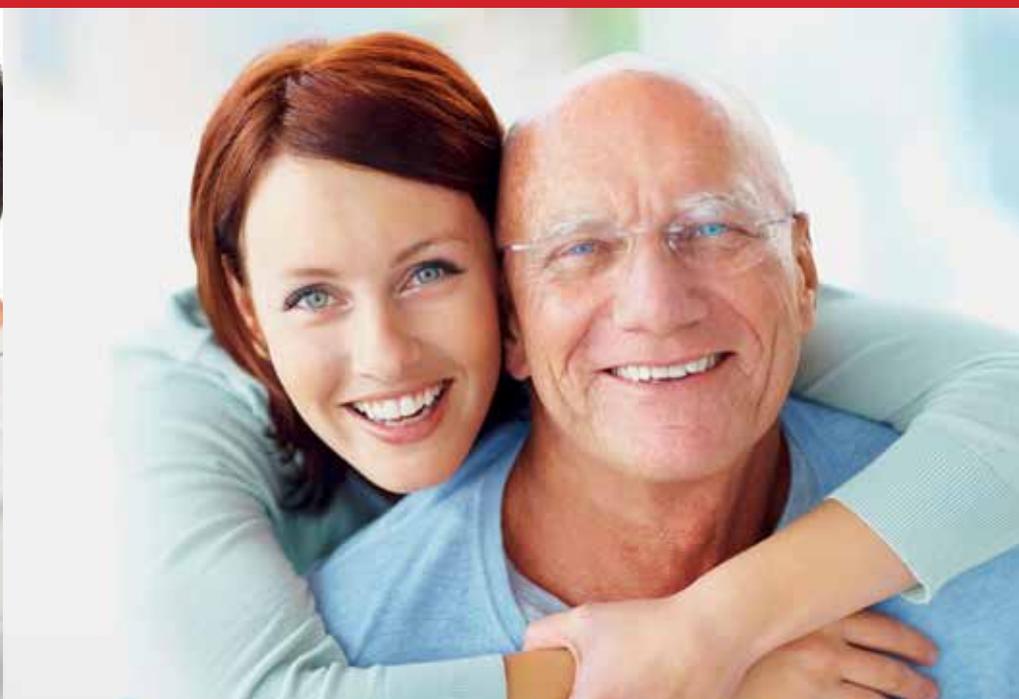
When ordering communication ear pieces, make sure you take an accurate ear impression. Send this to us with a description or photo of the earbud connector you are using. If the earbud is a non-uniform shape, we may require further information to complete the order. In this case we will call you directly.





ReSound provides excellent sound by offering innovative hearing solutions that combine original thinking and design with solid technology – all based on deep audiological insight and a profound understanding of users.

For more information visit us at: [www.gnresound.com](http://www.gnresound.com)



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**ReSound**

rediscover hearing