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# Advanced “Trimmer” Digital BTEs



*Belton* turn™

 *Belton*™

Introducing Beltone TURN

# The ease of a trimmer product. The benefits of digital sound.

## **Small and attractive**

Beltone TURN is a very attractive trimmer-based hearing solution – in every sense. It lets you provide your patients with a high-quality digital hearing instrument.

Your patients will enjoy natural sound housed in reliable, quality hardware. Plus, you'll be able to fit many different types of hearing losses, ranging from moderate to profound.

## **Advanced technology. Easy to use.**

Beltone TURN gives you digital features, so you can provide all the essentials of a top-quality hearing solution.

Beltone TURN also offers a manual volume control and simple “one-touch” switching between programs.

These features guarantee your patients great sound quality, comfortable listening and ease-of-use.

## **Simple to fit anytime, anywhere**

Just turn the trimmers and you'll have access to the benefits of the digital world.

TURN BTE products have up to three trimmers to choose from, making the fitting easy and flexible.



Small and attractive

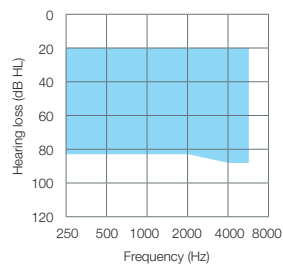
# Take the right TURN

Beltone TURN comes in 3 different BTE options. Beltone TURN is ideal for both new and experienced hearing instrument users, as well as for first time digital users.

The trimmer selections available for Beltone TURN (depending on the model) are:

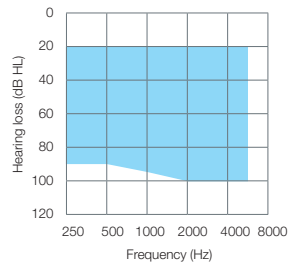
- Maximum Power Output (P)
- Low Frequency Cut (L)
- High Frequency Cut (H)

## BTE TURN 75 (TN1T75)



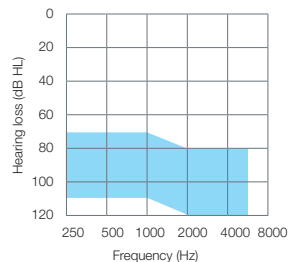
Max output (2cc)	126
Peak gain (2cc)	54
Push button	Yes 1-Basic 2-Noise Reduction
Analog VC	Yes
Colors	1
Trimmer	L
Telecoil	No

## PBTE TURN 85 (TN3T85)



Max output (2cc)	133
Peak gain (2cc)	65
Push button	Yes 1-Basic 2-Noise Reduction 3-Telecoil
Analog VC	Yes
Colors	3
Trimmer	P, L, H
Telecoil	Yes

## SPBTE TURN 95 (TN3T95)


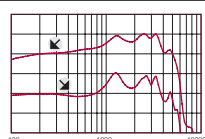

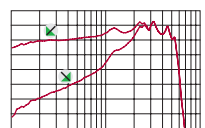

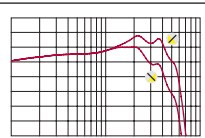


Max output (2cc)	141
Peak gain (2cc)	81
Push button	Yes 1-Basic 2-Noise Reduction 3-Telecoil 4-DAI
Analog VC	Yes
Colors	3
Trimmer	P, L, H
Telecoil	Yes
Direct Audio Input	Yes

Simple to fit anytime, anywhere

# TURN the trimmers to fit anyone, anywhere - all you need is a screwdriver

You don't need cables or computers to fit Beltone TURN. All you need is a screwdriver. And, with that screwdriver, you can quickly adjust the trimmers to give your patients the best hearing solution. To make it even easier for you, each trimmer has a unique color, so you always know which trimmer is the right one to turn to make the changes you want.





 <p><b>MPO Control</b> Output varies up to -24 dB</p>	<p>&gt; P</p>	<p>Controls the maximum output sound level of the instrument. The maximum output sound level can be increased by turning the trimmer counter-clockwise.</p>	
 <p><b>Low Frequency Cut</b> Variable up to -30 dB at 500 Hz</p>	<p>&gt; L</p>	<p>Controls the low frequency amplification of the instrument. The control is active in the frequency area between 100 Hz - 3000 Hz. Low frequency sounds will be less amplified by turning the trimmer clockwise, and provide less low frequency gain.</p>	
 <p><b>High Frequency Cut</b> Output varies up to -20 dB at 4000 Hz</p>	<p>&gt; H</p>	<p>This control reduces the amplification in the high frequencies. This trimmer can be used for feedback control. High frequency sounds will be less amplified by turning the trimmer clockwise.</p>	

**How to fit TURN:**  
In order to set the trimmers to your patient's hearing loss, follow the below steps:

- Using the audiogram, note the threshold values for the respective ear.
- Calculate the average for the 2 values  

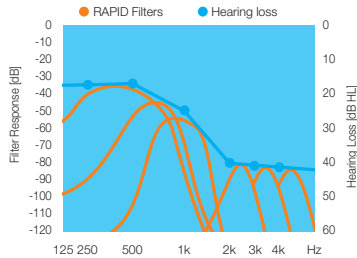
$$P, H = \frac{\text{threshold 2000Hz} + \text{threshold 4000Hz}}{2}$$

$$L = \frac{\text{threshold 250Hz} + \text{threshold 1000Hz}}{2}$$
- Select the appropriate hearing aid model on the left side of the chart below. Choose the corresponding trimmer (P, L or H) and follow the row until you find the square containing the value you just calculated in step 2.
- Note the trimmer position at the top of the column. Turn the trimmer on the hearing instrument accordingly.

Trimmer position					
<b>BTE TURN 75</b>	L	65-80	60-65	45-60	20-45
<b>PBTE TURN 85</b>	P	95-100	80-95	60-80	50-60
	L	80-95	75-80	60-75	45-60
	H	85-100	75-85	60-75	45-60
<b>SPBTE TURN 95</b>	P	90-120	80-90	80	
	L	105-110	95-105	80-95	70-80
	H	95-120	85-95	80-85	

Advanced technology. Easy to use.

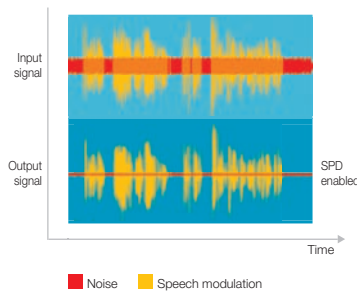
# Take a look inside



## Digital signal processor:

A combination of frequency and time domain signal processing allows for:

- Accurate frequency response shaping
- Very low processing delay
- Excellent sound quality
- Multi-channel processing

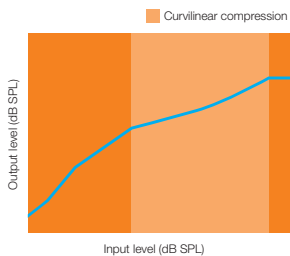


## Noise reduction – Speech Pattern Detection:

Speech usually has a higher degree of modulation than environmental or background noise. Speech Pattern Detection continuously analyzes modulation in all channels.

When a drop in modulation is detected, the system activates a compressor that reduces gain for low-modulated noise. Meanwhile, high-modulation speech is still being detected and amplified in order to allow your patient to understand speech in noisy situations. The benefits are:

- Minimized disturbance from background noise
- More comfort with less listening effort
- Preserved speech signal when speech modulation is present



## Curvilinear WDRC compression:

With curvilinear WDRC - Wide Dynamic Range Compression - you can make sure that your patient can hear both soft and louder sounds comfortably and naturally. Curvilinear WDRC ensures that louder sounds are amplified less than softer sounds.

In combination with a proven set of attack and release times, curvilinear WDRC provides a more natural loudness growth. Beltone TURN also provides a manual volume control, which gives your patient complete control over the loudness level. Benefits are:

- Natural sound experience
- Optimal use of the hearing range
- Control of loudness level

# Fine-tuning guide

Every patient has their own preference about how they want their amplification set. With the Beltone TURN trimmers, you can fine-tune the sound, so your patients get what they prefer.

The trimmer can be turned clockwise or counter-clockwise to regulate the settings.

**Most common complaints:**

**Solution:**

Complaint of too loud	>	Turn MPO clockwise
Complaint of 'boomy' bass sound	>	Turn low frequency trimmer clockwise
Complaint of 'tinny' sound	>	Turn high frequency trimmer and MPO clockwise



Complaint	Specifies	MPO Control	Low Frequency Cut	High Frequency Cut	Volume Control
<b>Too soft</b>	Cannot hear high-pitched sounds (telephone ringing).			↻	Up
	The Beltone TURN is too soft compared to user's previous instrument.	↻			Up
	The user has a middle ear problem and finds Beltone TURN has too little amplification.	↻			Up
<b>Too loud</b>	Sounds in general are too loud.	↻			Down
	High-pitched sounds (dishes rattling, paper crinkling) are too loud.			↻	
<b>Speech</b>	Own voice is boomy, dull or hollow.		↻		
	Voices are too sharp.			↻	
	Speech in noise is difficult to understand.			↻	
<b>Feedback</b>	Feedback occurs when used in quiet environments.			↻	Down
	Feedback squeal occurs often during use.			↻	Down
Other ways to prevent feedback: Decrease ear mold ventilation or tighten ear mold fit.					

*Belton* turn™