## Specifications

Nominal gain before feedback:
- 15dB w/ Headset microphone
- 18dB w/ Transdermal microphone
- 12dB w/ with Collar or Pencil microphone

Max power output:
- 5W (at 4 ohm speaker load)

Distortion:
- 5% Max at 2W output

Hum & Noise:
- 50dB Min

Audio frequency response:
- ± 3dB 100Hz — 10KHz

Power:
- 9VDC (6 x AA NiMH rechargeable)

Current consumption:
- 1.2A Max.

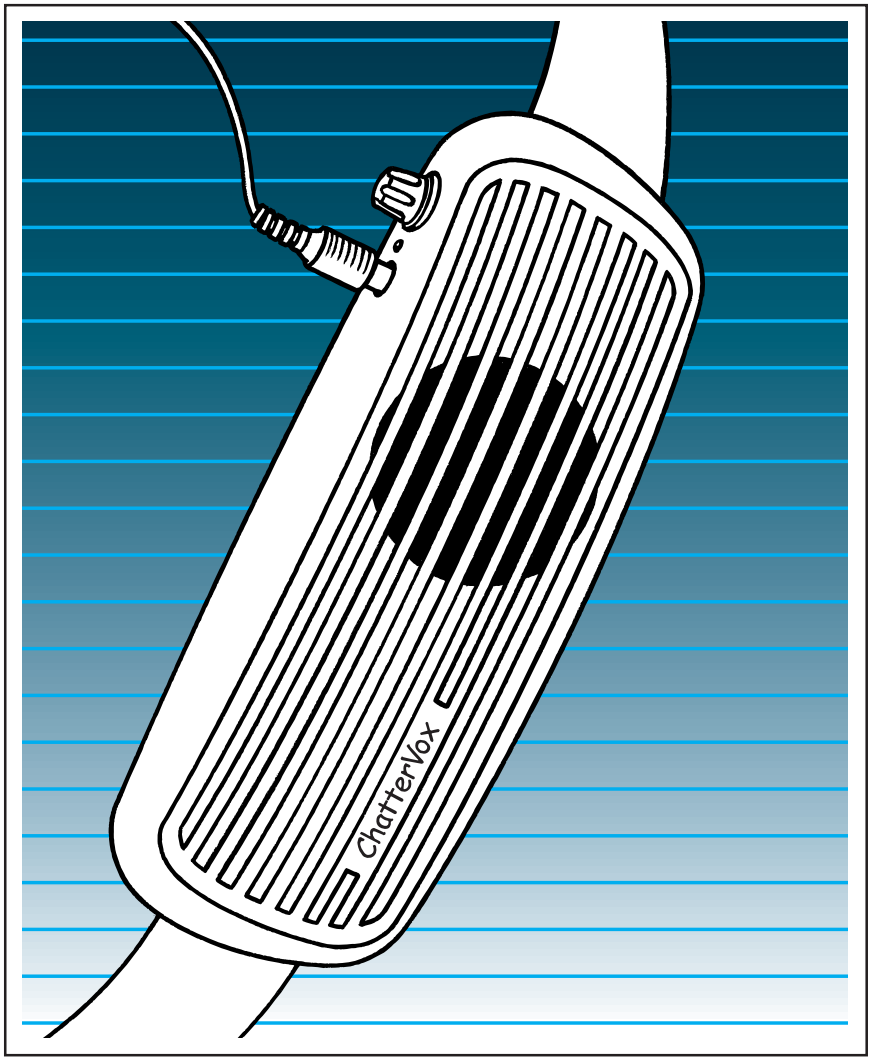
Dimensions:
- 8" W x 2.9" H x 2.5" D

Weight:
- 1lb. 2oz. (including batteries)

ChatterVox is designed and manufactured by

**ENHANCED LISTENING TECHNOLOGIES, CORP.**

# ChatterVox™




## PORTABLE VOICE AMPLIFICATION SYSTEM

Operating Instructions

# ChatterVox™

**Portable Voice Amplification System**

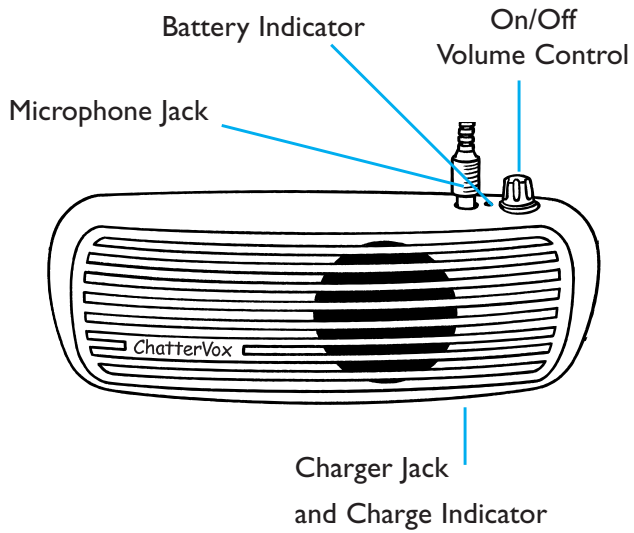
Model 100

Congratulations on your purchase of ChatterVox. This compact "waist pack" style personal amplifier was conceived and designed for a friend of the developer whose voice is impaired as a result of Parkinson's Disease.

It is intended to elevate vocal output of people with temporary or permanent voice impairments to a level that is comfortable and effective for everyday communication while reducing vocal stress and strain.

ChatterVox can boost vocal output by as much as 15db using its headset style microphone. Even greater boost can be achieved for esophageal speakers and users of complimentary prosthetic devices such as Servox™ by employing ChatterVox's unique "transdermal" neck microphone.

The unit is provided with an environmentally friendly, high capacity Nickel Metal-Hydride rechargeable power system that can provide more than 14 hours of continuous use and be recharged overnight.




# For more information contact:

**United States:**
connections unlimited, inc.
542 13th Street
West Palm Beach, FL 33401

**800/286-3481**
**www.connectionsunltd.com**

**Canada:**
ALDS
220-4611 No. 6 Road
Richmond, B.C. V6V 2L3

**866/845-2537**
**www.ALDS.com**

**Australia:**
Phoenix Hearing Instruments
47 Prospect Street
Brisbane, 4006

**617/385-4622**
**www.PhoenixHearing.com.AU**

**Denmark / Finland/ Norway / Sweden:**
Scandex Import
Opalvej 10
DK-2730 Herlev
Denmark

**45 44530530**
**www.chattervox.se**

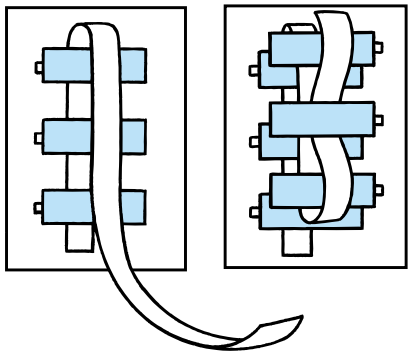
*or*

Censorsgatan 12C
S-21150 Malmo
Sweden

**46 40123432**
**www.chattervox.dk**

**3.** Gently lift the red battery ribbon to loosen and remove the center top cell.

**4.** Continue lifting the red battery ribbon to remove the remaining five battery cells.



*Installing new batteries:*

**1.** Lace the red battery ribbon across the bottom of the battery compartment.

**2.** Install the outer two cells first with negative contact toward the springs.

**3.** Insert the center cell of the bottom row with negative contact toward spring.

**4.** Lace red battery ribbon across top of first battery row.

**5.** Install outer cells of top row with battery positive contact toward springs and red battery ribbon under one cell.

**6.** Install center cell of top row with battery positive contact toward spring and red battery ribbon under cell.

**7.** Insert anchor tabs of battery cover into case.

**8.** Lower cover down into case and press locking tab to left to latch cover.

*NOTE: Only original ChatterVox batteries are to be charged in the unit. Attempting to charge disposable or non-approved batteries may cause leakage and damage to the unit and will void the product warranty.*

### Battery Replacement

All 6 batteries must be replaced at the same time. Mixing old and new batteries can lead to battery failure.

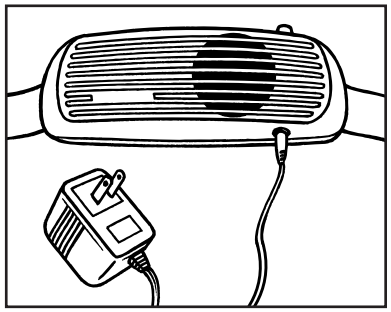
# Operation

### Charging ChatterVox for first use:

Your new ChatterVox is shipped with six Nickel Metal-Hydride rechargeable batteries installed. They must receive a deep cycle (24 hour) charge before being placed into regular service. Short term testing when you first get the unit is OK, but give the batteries a deep charge as soon as possible to maximize their performance.

**1.** Insert the battery charger mini-plug into the charging port located on the bottom of the ChatterVox amplifier.

**2.** Plug the AC adapter into a working power outlet (beware of the upper outlet. In many rooms this outlet is controlled by a wall switch.)



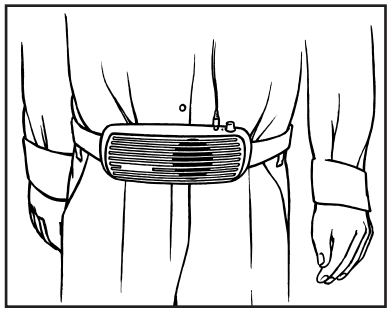
**3.** Charge the ChatterVox amplifier for 24 hours (first charge). Thereafter it will be sufficient to charge the unit overnight (minimum 8 hours, optimum 12-14 hours).

### Wearing the ChatterVox Amplifier

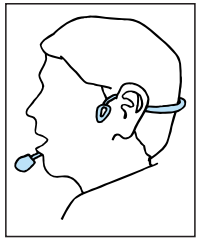
The unit is normally worn at the front of the waist much like a “waist pack” that would hold your wallet. The woven nylon waist band is adjustable to 42". Larger waist dimensions can be accommodated by requesting a free 12" belt extension from your supplier.

Try to wear the ChatterVox in such a fashion that the speaker grill faces outward or downward to reduce the likelihood of acoustic feedback (squealing).

**IMPORTANT: Carefully note the path of the nylon belt through its clips. In the event the belt is disassembled, it is imperative that the belt be correctly reinstalled. Failing to do so could result in the belt loosening and the amplifier dropping to the floor suddenly.**

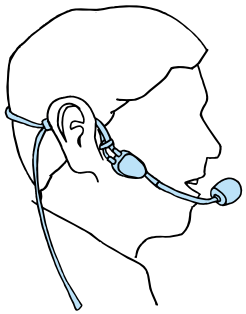


## Wearing the Headset Microphone



Whether your musical tastes tend toward Pop or Country, you've likely seen microphones of this type used by famous artists.

1. Fit the headset around the back of the head and rest it on top of the ears with the microphone boom on the right.
2. Pivot the microphone boom down, approximately ¼" below the level of the lower lip.



3. Bend the boom to position it close to the face ½"-¾" from the mouth.
4. Turn the microphone capsule (end) so the flattened side faces the mouth. (You can feel this flattened side through the foam windscreen).
5. **With the amplifier turned off,** insert the 3.5 mm microphone plug into the jack on top of the amplifier body adjacent to volume control & pilot light.
6. Turn amplifier on by turning the volume control knob clockwise.
7. Gradually increase the amplifier volume to an appropriate boost level. Generally this is found at approximately the 9-10 o'clock position.
8. **When you perceive your voice is loud enough, reduce the volume slightly.** This is done because you are standing behind the speaker and your voice is actually considerably louder than you perceive.

## Wearing the Collar Microphone (CM200)

An integral element in the successful design of the ChatterVox is its microphone assortment. High quality, directional microphone capsules help ChatterVox achieve a high gain before feedback ratio. This is relatively easy to achieve with both the headset and transdermal microphone designs. It is significantly more difficult to achieve for users who cannot (or will not) wear one of these primary designs. For those individuals we have designed a very high performance "Collar" style microphone. There is only one compromise in using this style of microphone. Wide movements of the head from left to right will cause effective output to vary significantly. We suggest that collar mic users avoid dramatic,

3. Be wary as you approach hard reflective surfaces that can bounce the speaker's sound back into the microphone (i.e. teachers approaching a blackboard). Feedback from reflective surfaces can be overcome by aiming the system down slightly towards the floor or sliding the ChatterVox amplifier around the waist and toward the listener(s).

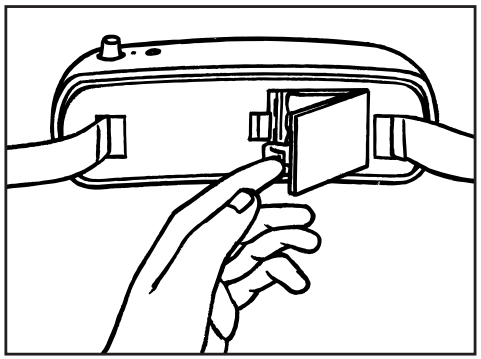
## About ChatterVox Batteries

The Nickel Metal-Hydride batteries of your new ChatterVox have a life expectancy of approximately two years. Actual life will vary significantly depending upon your usage and charging habits. There may be times, however, when you need back-up power to get through a period of use (i.e. you forget to recharge). ChatterVox was intentionally designed to accommodate standard AA battery cells for just such occasions. However, when the time comes to replace the original rechargeable cells, we suggest you order them from your dealer. ChatterVox's batteries are industrial quality cells like those used to power cellular phones.

## Changing ChatterVox Batteries

In the event you find it necessary to change the batteries of your ChatterVox, either for temporary use with disposable AA batteries or to install a new set of Nickel Metal-Hydride cells, follow these steps:

*Removing existing batteries:*



1. Locate the battery compartment on the right rear side of the amplifier.
2. Press (do not pry) the cover locking tab to the right and lift to remove the battery cover.

2. Loop one end of the lanyard cord over one leg of the mounting yoke and secure to the yoke with its slip ring.

3. Loop the lanyard cord around the back of your neck and hook the other end of the lanyard cord to the second leg of the mounting yoke. We suggest you again use the slip ring to secure the lanyard cord to the leg.

4. Position the microphone now hanging on your chest at a level approximately 6" below your mouth. This is approximately equal to the height of your closed fist with thumb extended. Use the black slip ring on the lanyard cord to secure this position.

5. Turn the amplifier on by turing the volume control clockwise.

6. Gradually increase the amplifier volume while speaking at a consistent volume level.

7. **When you perceive your voice is loud enough, reduce the volume slightly.** This is done because you are standing behind the speaker and your voice is actually considerably louder than you perceive.

## A Word About FEEDBACK

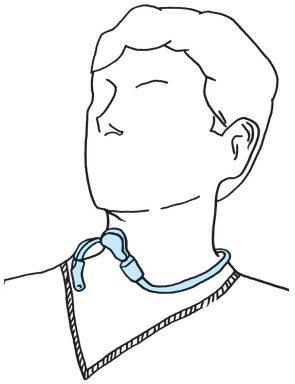
Your new ChatterVox is, in the end, a "Public Address or PA System". It has a microphone, an amplifier and a speaker. As such, it obeys the same laws of sound physics and acoustics that rule the performance of the sound system at Carnegie Hall. If you violate these laws, the system will "Feedback" (squeal). Feedback occurs when the sound from the speaker is picked up by the microphone and a regenerative cycle begins.

The basic rules to avoid or minimize potential for Feedback are as follows:

1. Use only the minimum amplification necessary to make communication possible.

2. Do not point the speaker located on the front of the ChatterVox amplifier toward the microphone.

theatrical head movements while speaking.



1. Form the snake-like collar mic around the back of your neck bringing the microphone capsule to a clock position of 11am (from the left) or 1pm (from the right) relative to the mouth.

2. To stabilize the collar mic it is possible to form the microphone body over your shoulder or wear it under a shirt or coat collar.

3. Turn approximately 2-3" of the collar mic body upward toward the corner of your mouth.

4. Position the microphone capsule labeled FRONT) approximately 1-2" from the corner of the mouth to avoid breath blasts during speaking from falling directly on the microphone capsule. *Breath blasts are what cause the dreaded "Popping P's" and other vocal distortions that are disturbing to listeners.*

5. **With the amplifier turned off,** insert the 3.5mm microphone plug into the jack on top of the amplifier body adjacent to the volume control and pilot light.

6. Turn the amplifier on by turning the volume control clockwise.

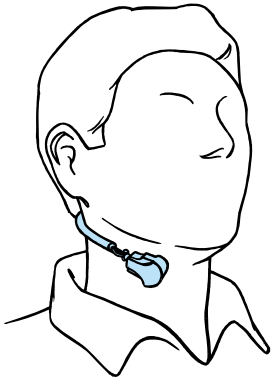
7. Gradually increase the amplifier volume to approximately the 11 o'clock position while speaking at a consistent volume level.

8. **When you perceive your voice is loud enough, reduce the volume slightly.** This is done because you are standing behind the speaker and your voice is actually considerably louder than you perceive.

## Wearing the "Transdermal" Neck Microphone

*NOTE: Due to its extremely high sensitivity, this microphone is not appropriate for applications amplifying normal voice. It is designed to permit individuals with severe voice impairment to benefit from ChatterVox amplification.*

Placement of the Transdermal microphone is a bit of an art. Each individual has a point on their neck where the clearest and most intelligible sound is present. It is necessary to locate this "Soft" or "Sweet" spot by trial and error. It is most often located in the fleshy area off-axis from the normal position of the larynx.



1. Place the Transdermal microphone around the neck (from either left or right).

2. **With the amplifier turned off,** insert the 3.5 mm microphone plug into the jack on top of the amplifier body adjacent to the volume control and pilot light.

3. Turn the amplifier on by turning the volume control knob clockwise.

4. Gradually increase the amplifier volume to approximately the 12 o'clock position while speaking at a consistent volume level.

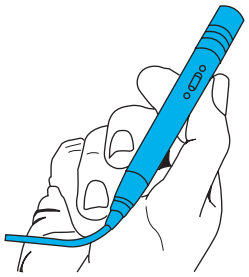
5. Move the microphone capsule to various locations on the neck to identify the position that provides the most intelligible sound. (Don't expect a booming voice, our goal here is intelligible speech with minimal vocal stress and strain).

6. Having identified your vocal "Soft-spot", adjust the ChatterVox volume control to the most comfortable and useful level.

## Using the ChatterVox pencil microphone (MM100).

There are times when it is simply not practical to use the headset, collar or transdermal microphones. For those times and application we have developed a miniature pencil microphone that can be handheld or worn as a lavaliere microphone. Typical applications for handheld use are for prosthetic users (Parkinson's patients and others) during meals. Typical lavaliere applications include presenters (School teachers, etc.) as a viable alternative to the headset and collar mic styles for comfort and flexibility. The "pencil" microphone is packaged with a flexible stand, which doubles as the lavaliere holder. NOTE: due to its extremely sensitive microphone capsule the pencil microphone should always be used with the included windscreen. We have also included a convenient mute switch in this microphone design to facilitate use at meals, in presentation and a quick feedback intervention tool.

## Handheld use



1. **With the amplifier turned off,** insert the 3.5mm microphone plug into the jack on top of the amplifier body adjacent to the volume control and pilot light.

2. **Make certain the microphone capsule is not facing into the loudspeaker.** Preferably it will be located behind or greater than 90 degrees off axis from the loudspeaker.

3. Turn the amplifier on by turing the volume control clockwise.

4. Gradually increase the amplifier volume level or move the microphone farther from the loudspeaker.

5. If feedback should begin either reduce the volume level or move the microphone farther from the loudspeaker.

6. **When you perceive your voice is loud enough, reduce the volume slightly.** This is done because you are standing behind the speaker and your voice is actually considerably louder than you perceive.

We have been asked on many occasions to provide a lapel microphone for ChatterVox. To date we have been unsuccessful in developing or locating a lapel microphone that provides acceptable performance with the ChatterVox system on a consistent basis. The critical nature of microphone placement to the overall success of ChatterVox leads us to advise against the use of such microphones with the product. We firmly believe this is a bad technology marriage and will lead to unsatisfactory performance that would reflect badly on an otherwise excellent product. For that reason we specifically state that **lapel microphones are not approved** for use with the ChatterVox system.

## Lavaliere use

1. Remove the windscreen and install the spring steel mounting yoke on the microphone. This is accomplished by gently pressing the arms of the yoke together to enlarge the hole sufficiently to slide onto the microphone body. Then reinstall the windscreen.