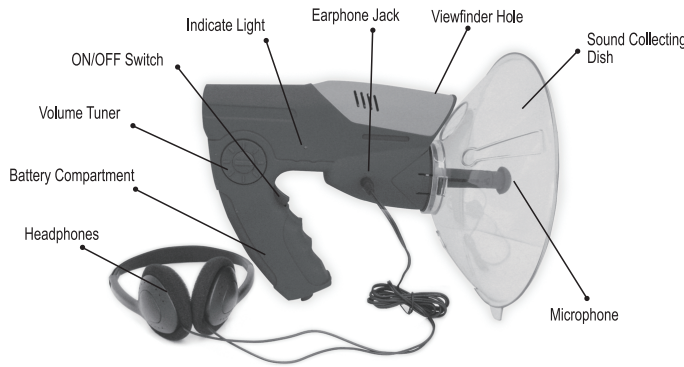




80-L0800
JUNIOR ELECTRONIC
LISTENING DISH

Instructions
and
Owner’s Manual



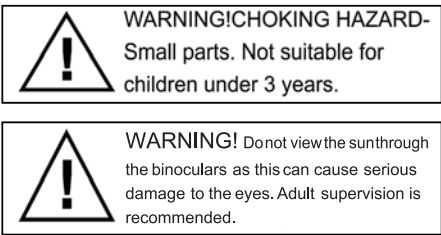
CARE INSTRUCTIONS

- Wipe the body with a damp cloth; then dry with a clean, soft cotton cloth.
- This device is not waterproof. Do not submerge in water or use outdoors in the rain.

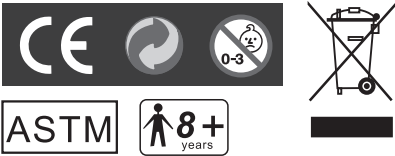
ASSEMBLY

1. Remove the components from the box.
2. Carefully push the sound collecting dish over the microphone as in the picture above. Near the center hole are two tabs that fit into two slots on the L0800 body. Insert the two tabs into the two slots. Turn the sound collecting dish to lock it in place. The viewfinder hole should be in line with the viewfinder.

Please retain this manual for future reference as it contains important information.



Made In China



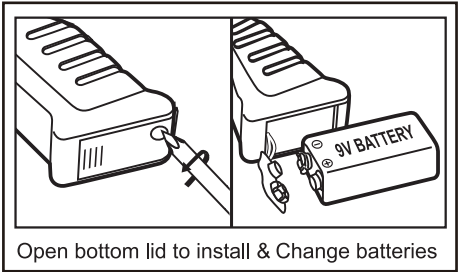
SOURCES

Information about sound was excerpted from the website of the School for Champions at www.school-for-champions.com.

All the written material in the website (www.school-for-champions.com) is protected under international copyright laws.

Information on animal hearing was derived from two publications:

- Fay, R.R., *Hearing in Vertebrates: A Psychophysics Databook*, Hill-Fay Associates, 1988
- Warfield, D, *The study of hearing in animals*, in *Methods of Animal Experimentation*, ed., W. Gay, Academic Press, 1973



Battery Safety Information

This unit uses one 9 volt battery. Always use fresh battery. Do not mix old and new battery. Do not mix battery of different types. Remove exhausted battery and dispose of them properly. If this toy will not be used for an extended term please remove the battery. Do not try to recharge a non-rechargeable battery. Do not take a battery apart. Do not short-circuit the terminals. Do not dispose of battery in fire – they may explode.

HUMAN HEARING

We think that our unassisted hearing ability is quite good. We can hear sounds ranging from a soft whisper to a thunderclap. We can hear the low growl of a lion to the high-pitched chirping of a baby bird.

Yet it may surprise you to learn that human hearing is actually very poor when compared to that of other animals.

To compare our hearing with that of other creatures we should first understand what sound is.

Sound is anything you hear. Every sound is really air vibrating, or moving back and forth quickly. Sound travels from a vibrating object through **compression waves**. The more the waves are compressed, or squeezed together, the louder the sound. Sound waves must travel through a medium. That is why sound is absent in outer space, which contains no material for a vibrating object to compress and expand.

Sound is also described by its frequency, or the number of its vibrations per second. The more rapidly an object vibrates, the higher will be the **frequency**. Frequency is measured in **hertz (Hz)**, a unit named for German scientist Heinrich Hertz. One hertz means one vibration per second. As the frequency of sound waves increases, the wavelength decreases. Wavelength is the distance between any point on one wave and the corresponding point on the next one. We hear frequency as pitch – low, medium, or high—depending on the number of vibrations per second. High-pitched sounds have higher frequencies than low-pitched sounds.

Sound is measured by its **intensity**. Intensity, also called sound level, is the amount of energy flowing in a sound wave, which is measured in units called **decibels** (abbreviated as dB). Intensity depends on the **amplitude** of the vibrations producing the waves. Amplitude is the distance that a vibrating

BATTERY INSERTION

This unit is powered by one 9 volt alkaline battery.

1. Using a Phillips head (+) screwdriver, remove the battery compartment cover retaining screw. Remove the battery compartment cover.
2. Insert one fresh 9 volt battery ensuring that proper polarity is observed by aligning the (+) and (-) ends of the battery with the (+) and (-) markings in the battery compartment.
3. Replace the battery compartment cover and tighten the retaining screw.

USING THE LISTENING FUNCTION

1. Plug the headphone into the headphone jack.
2. Slide the Power switch to the ON position.
3. Aim the unit at the desired subject.
4. Squeeze the Listening ON/OFF switch to activate the unit and you will hear amplified sound.

Note: Even though this device is equipped with an automatic volume limiter to keep sounds at a safe level, you should never listen to loud noises at a close distance.

RECORDING SOUNDS

If you have a tape recorder or digital recorder that has a monitor function; that is if the recorder’s earphone jack let’s you hear sounds as they are being recorded, you can listen to your subject while you are recording by plugging a patch cord into the L0800’s earphone jack and the recorder’s LINE IN or MIC jack, and plugging the headphones into the recorder’s EARPHONE jack. Set the recorder to RECORD. You will then be able to record as long as you hold in the L0800’s Listening ON/OFF switch.

object moves from its position of rest as it vibrates. The larger the amplitude of vibration is, the more intense the sound will be.

The **loudness** of a sound refers to how strong the sound seems to us when it strikes our ears. At a given frequency, the more intense a sound is, the louder it seems. However, equally intense sounds of different frequencies are not equally loud. This is because the ear has a low sensitivity to sounds near the upper and lower limits of the range of frequencies we can hear.

A person with very good hearing ability can hear low-pitch sounds with frequencies of about 20 hertz, and very high-pitch sound of over 20,000 hertz. As we age we lose some of our high-pitch hearing ability, especially if we have been exposed to very loud noise levels. Many older rock musicians have severe high frequency hearing loss resulting from long term exposure to very loud noise levels experienced during stage performances.

The following chart shows how the frequency range of human hearing compares to that of many other creatures.

