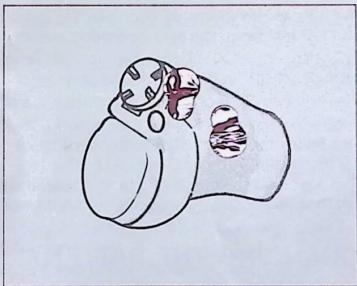


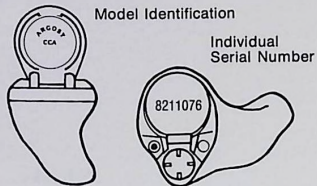
ARGOSY CCA INSTRUCTION BOOKLET

CUSTOM CANAL HEARING AID

MAILER



ARGOSY ELECTRONICS, INC.



IDENTIFICATION

The name and model of your hearing aid are located inside the battery compartment.

The serial number of your hearing aid is imprinted on the outside of the battery door.

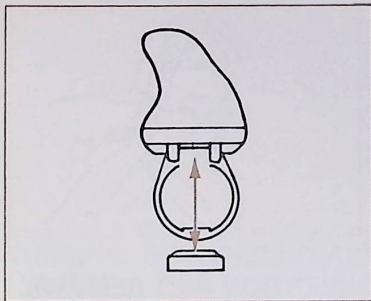
The first two digits of the serial number identify the year of manufacture.

The third and fourth digits identify the week of manufacture.

The last three digits indicate the identifying number assigned your hearing aid that week.

CHANGING THE BATTERY

The ARGOSY CUSTOM CANAL AID (CCA) is designed to be used with a size 312 battery only.

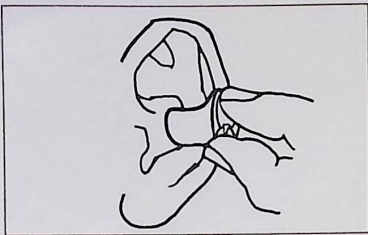


To open battery compartment insert fingernail under lip of battery compartment door and swing out.

To remove spent battery from battery compartment open battery compartment and turn aid upside down (as shown). Battery should fall out.

Return aid to upright position and insert new battery in battery compartment with plus (+) side up.

To close, press battery compartment into hearing aid until firmly seated in place. Make certain battery compartment is completely closed to insure proper battery contact.

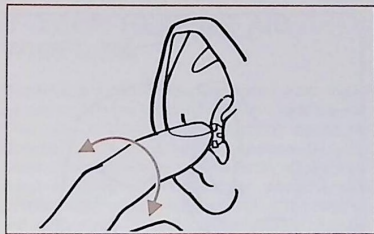


INSERTION AND REMOVAL OF YOUR HEARING AID

INSERTION: To insert your Argosy CCA into your ear, grip the aid with thumb and two fingers. Using a twisting motion work the aid into your ear.

REMOVAL: Place index finger behind aid at back of ear. With an outward prying motion grip aid between thumb and index finger and remove with a forward twisting motion.

If you have difficulty removing the aid with this method open the battery compartment of the aid in your ear. Gently pull on the battery door to remove the aid. **CAUTION:** If you do not use care you may damage the battery compartment.



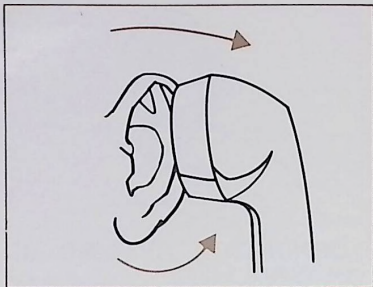
TURNING THE HEARING AID ON/OFF

To turn on: Place your index finger on the volume control and rotate the volume control forward.

To turn off: Place your index finger on the volume control and rotate the volume control backwards. You may hear a click sound as the aid is turned off.

LOUDNESS ADJUSTMENT

The volume control allows you to adjust the loudness of the hearing aid. When adjusting loudness, turn the volume control forward to make sounds louder. To make sounds softer turn the volume control backwards.



USING THE TELEPHONE

With the Argosy CCA you may use the telephone in the normal manner. Hold the telephone receiver to your ear. If a whistling noise (feedback) occurs, tilt the telephone receiver away from the ear until the whistling stops. Also, you may find it helpful to change the loudness setting of the hearing aid before using the telephone. By trying various positions of the telephone receiver you will discover what works best for you.

IF YOUR HEARING AID WHISTLES

Occasionally whistling (feedback) may occur as you adjust the loudness of your hearing aid. This results from amplified sound being re-directed back into the microphone by your hand. The whistling should stop when your hand is removed. If feedback persists with correct loudness setting, consult your hearing aid dispenser for assistance. NOTE: Always make sure that your hearing aid is seated properly in your ear.

CARE OF YOUR HEARING AID

Maintaining a clean hearing aid by periodically wiping the aid clean with a dry tissue or a slightly damp cloth is all that is required for adequate care.

If the hearing aid will not be used for an extended period of time always remove the battery from the hearing aid. Store the hearing aid inside its presentation case in a cool dry location.

Any hearing aid can become defective. Your hearing aid dispenser is experienced in the care and maintenance of hearing aids. You should avail yourself of his services by periodically visiting his office.

NOTICE FOR PROSPECTIVE USERS

Good health practice requires that a person with a hearing loss have a medical evaluation by a licensed physician (preferably a physician who specializes in diseases of the ear) before purchasing a hearing aid. Licensed physicians who specialize in diseases of the ear are often referred to as otolaryngologists, otologists or otorhinolaryngologists. The purpose of medical evaluation is to assure that all medically treatable conditions that may affect hearing are identified and treated before the hearing aid is purchased.

Following the medical evaluation, the physician will give you a written statement that states that your hearing loss has been medically evaluated and that you may be considered a candidate for a hearing aid. The physician will refer you to an audiologist or a hearing aid dispenser, as appropriate, for a hearing aid evaluation.

The audiologist or hearing aid dispenser will conduct a hearing aid evaluation to assess your ability to hear with and without a hearing aid. The hearing aid evaluation will enable the audiologist or dispenser to select and fit a hearing aid to your individual needs.

If you have reservations about your ability to adapt to amplification, you should inquire

about the availability of a trial-rental or purchase-option program. Many hearing aid dispensers now offer programs that permit you to wear a hearing aid for a period of time for a nominal fee after which you may decide if you want to purchase the hearing aid.

Federal law restricts the sale of hearing aids to those individuals who have obtained a medical evaluation from a licensed physician. Federal law permits a fully informed adult to sign a waiver statement declining the medical evaluation for religious or personal beliefs that preclude consultation with a physician. The exercise of such a waiver is not in your best health interest and its use is strongly discouraged.

WARNING TO DISPENSERS

A hearing aid dispenser should advise a prospective hearing aid user to consult promptly with a licensed physician (preferably an ear specialist) before dispensing a hearing aid if the hearing aid dispenser determines through inquiry, actual observation or review of any other available information concerning the prospective user, that the prospective user has any of the following conditions:

1. Visible congenital or traumatic deformity of the ear.

- II. History of active drainage from the ear within the previous 90 days.
 - III. History of sudden or rapidly progressive hearing loss within the previous 90 days.
 - IV. Acute or chronic dizziness.
 - V. Unilateral hearing loss of sudden or recent onset within the previous 90 days.
 - VI. Audiometric air-bone gap equal to or greater than 15 decibels at 500 Hertz (Hz), 1000 Hz and 2000 Hz.
 - VII. Visible evidence of significant cerumen accumulation or a foreign body in the ear canal.
 - VIII. Pain or discomfort in the ear.
-

Special care should be exercised in selecting and fitting a hearing aid whose maximum sound pressure level exceeds 132 decibels because there may be risk of impairing the remaining hearing of the hearing aid user. (This provision is required only for those hearing aids with a maximum sound pressure capability greater than 132 decibels dB).

WARNING TO CHILDREN

In addition to seeing a physician for a medical evaluation, a child with a hearing loss should be directed to an audiologist for evaluation and rehabilitation since hearing loss may cause problems in language development and educational and social growth of a child. An audiologist is qualified by training and experience to assist in the evaluation and rehabilitation of a child with a hearing loss.

REMEMBER:

1. No hearing instrument can restore normal hearing or prevent or improve a hearing impairment resulting from organic conditions. You must be patient while adjusting to your instrument.
2. In most cases infrequent use of a hearing instrument does not permit a user to attain full benefit from it.
3. The use of a hearing instrument is only part of hearing habilitation and/or re-habilitation and may need to be supplemented by auditory training and instruction in lip reading.

IF A PROBLEM OCCURS

Symptom	Cause	Possible Cure
Dead	Battery dead	Replace battery
	Blocked earmold	Clear earmold blockage
	Instrument defective	Consult your dispenser
Not Loud Enough	Battery low	Replace battery
	Earmold plugged	Remove and clean
	When was hearing last checked?	Consult your dispenser
Intermittent, (goes on and off)	Battery defective	Replace battery
	Component problems	Consult your dispenser
Not Clear, Distorted	Low batteries	Replace batteries
	Instrument defective	Consult your dispenser

Repair and service for your hearing aid may be obtained through your hearing aid dispenser. If you do not know where to obtain qualified service write to the address listed on the back cover of this instruction booklet and we will advise you of the nearest service available in your area.

ARGOSY ELECTRONICS ONE YEAR "LIMITED WARRANTY"

Issued by
ARGOSY ELECTRONICS, INC.
P.O. Box 35065 • Edina, MN 55435

This "Limited Warranty" as defined in the Consumer Product Warranty and Federal Trade Commission Improvement Act, gives you specific legal rights. You may also have other rights that vary from state to state.

SERVICE LABOR: For period of one year from the date of original consumer purchase, ARGOSY ELECTRONICS will service your hearing aid, at no charge, when required as a result of defective parts or workmanship.

PARTS: Defective parts will be replaced, at no charge, with new or rebuilt equivalent for one year from the date of original consumer purchase. Any replacement parts are warranted for the remaining portion of the original warranty period.

WARRANTY EFFECTIVE DATE: The date of original consumer purchase is your warranty effective date. Your dated bill of sale should be kept as evidence of purchase date.

ARGOSY ELECTRONICS, INC.
P.O. Box 35065 • Edina, MN 55435

**how to get the
most out of
your hearing aid**

**joan m. armbruster
maurice h. miller**



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JOAN M. ARMBRUSTER, M.PHIL.
159 EAST 69th STREET
NEW YORK CITY, NEW YORK 10021**

**WARNING: KEEP BATTERIES
AWAY FROM CHILDREN**

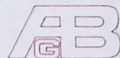
how to get the most out of your hearing aid

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introduction

This booklet has been designed especially for you,
the hearing aid user. The information should prove
of great value to you, both in your initial adjustment
to your hearing aid and for future reference. We
have tried to summarize the major concepts you will
need to master in order to realize maximum benefit
from your instrument. If you have any questions
about your hearing aid, you should call your
audiologist or hearing aid dispenser.

If properly used, this manual may save you
much discomfort, expense, and frustration.
Welcome to the world of better hearing!

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1

components of a hearing aid

The hearing aid is a miniature electronic amplifier system composed of three essential parts. A small *microphone* picks up the sound that is around you in the form of acoustic energy and changes it into electrical energy. This energy is sent to the *amplifier* which increases the power of the electrical energy. This amplified electrical energy is changed by a tiny loudspeaker, or *receiver*, back into acoustic energy. The receiver is connected to an earmold that fits into the ear canal and conducts the amplified sound down the ear canal to the eardrum. A battery supplies the necessary electrical current.

Every aid has a *volume control* on the outside of the case that can be turned to control the amplification of incoming sounds. Some aids also

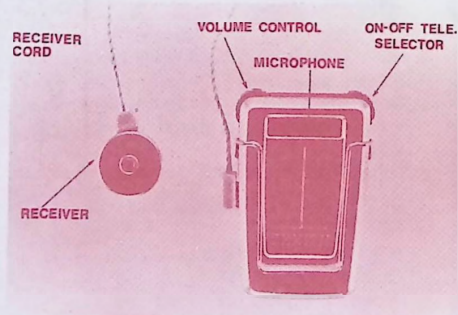


figure a. components of a body hearing aid.

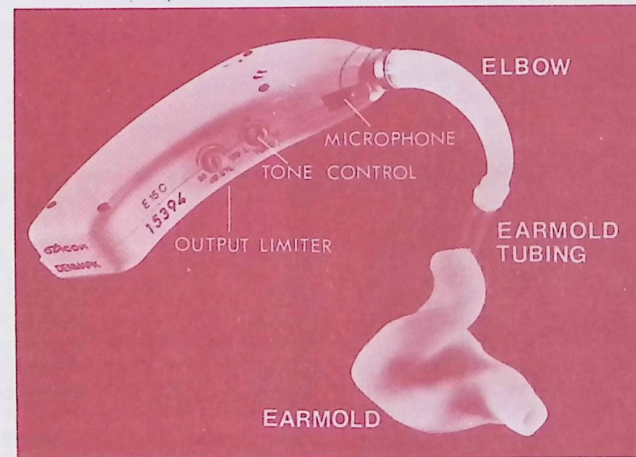


figure b. components of a behind-the-ear hearing aid.

have an *external tone control* which is used to stress a certain range of frequencies or pitches for incoming sounds. Other aids have *internal tone controls* which have been preset for the user.

Sometimes a *telephone switch* is also present to make speech on the telephone more intelligible. Figures a and b show components of body-mounted and behind-the-ear aids.

2

types of hearing aids

body

The body aid is carried in a pocket, pinned to clothing, or worn in a special carrier called a harness. An external cord conducts the amplified sound from the aid to an external receiver which snaps directly onto the earmold. This cord may be Y-shaped so that the cord can attach one body aid to two receivers, one for each ear.

The body aid is the most powerful of all types of hearing aids. It is used for persons who have severe hearing losses, or for persons whose limited control of their fingers makes it difficult to turn the small controls on other kinds of aids. A body aid is shown in Figure c.

body bone conduction

A bone conduction vibrator replaces the standard receiver and is placed behind the ear. The fluid of the inner ear is moved directly, and the middle ear is bypassed. Both cochleas (inner ears) are stimulated by a bone conduction aid. It is used primarily with a conductive or middle ear hearing loss when standard types of aids cannot be used (i.e., when the outer ear or ear canal is malformed or when there is chronic drainage from the ears).

behind-the-ear

As the name implies, this aid is worn behind the ear. The receiver is inside the hearing aid case. The

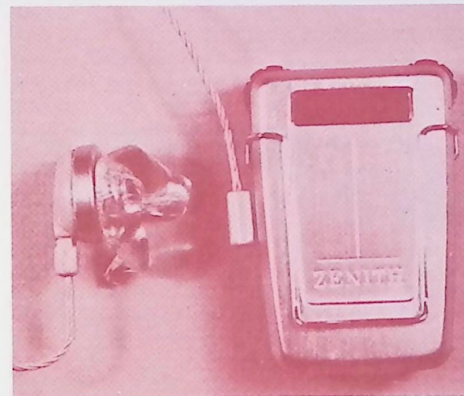


figure c. body hearing aid.

amplified sound goes from the hearing aid to the earmold by way of a small piece of plastic tubing. This type of aid is by far the most frequently used. It can help provide amplification for a great variety of hearing impairments. A behind-the-ear aid is shown in Figure d.

eyeglass

In this type, the microphone, amplifier, and receiver are placed in the temple portion of a pair of glasses, and so the aid is not conspicuous. It is most likely to be used by persons who will be in need of their

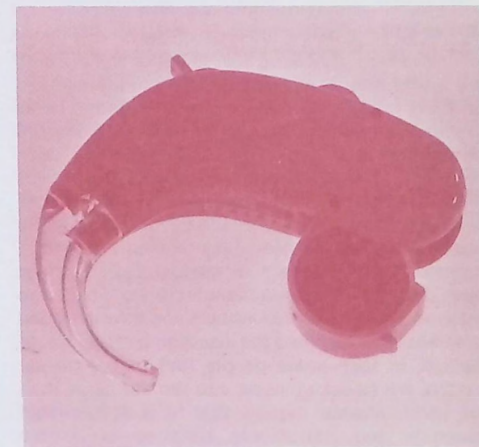


figure d. behind-the-ear hearing aid.

eyeglasses and hearing aid at the same time. The hearing aid components of eyeglass hearing aids are comparable to those found in behind-the-ear hearing aids. An eyeglass hearing aid is shown in Figure e.

in-the-ear

With this type of hearing aid, all of the components are inside a very small aid attached to the earmold or are actually built into the earmold. As the name implies, everything is worn in the ear. Recent developments with this type of aid make it suitable for many of those with mild or moderate losses. Many people feel that the in-the-ear aid is less conspicuous than other types and therefore more cosmetically acceptable. Many problems related to a person's possible lack of manual dexterity have been overcome by some manufacturers. They have extended volume control wheels and have provided raised nubs to facilitate the insertion and removal of the aid. In fact, some people find that in-the-ear models are easier to insert into the ear canal than the behind-the-ear models that have soft, pliable earmolds and instruments attached to flexible tubing.

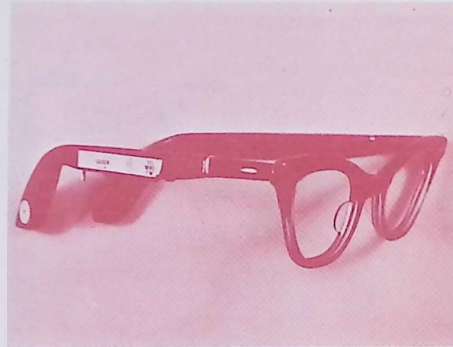


figure e. eyeglass hearing aid.

An area of remaining difficulty appears to be the battery itself and the durability and stability of some models. Since the instrument is so small, very tiny batteries are utilized. These tiny cells are often difficult to manipulate by people with limited dexterity. Another problem that sometimes occurs is the stem of the volume control wheel breaks off. This can be prevented by *not* inserting your finger-

nails under the volume wheel, but rather rotating the wheel by moving your fingertip on the wheel's flat surface. Access to the wax-clogged openings in the aid may also present a problem. While some manufacturers supply a special tool for wax removal, others require a visit to the dispenser to correct this condition.

Care of the instrument is essentially the same as for any other type of aid. The ear canal portion of the unit should be cleaned daily with a soft tissue or slightly water dampened cloth.

Your audiologist will help determine if an in-the-ear aid would be suitable for your use. Two types of in-the-ear aids are shown in Figure f.

CROS

(Contralateral Routing of Signals): This is a special type of amplification device frequently used when a person has one good ear and one very poor ear or when both ears have a sharply sloping high frequency hearing loss. With the CROS aid, the microphone component is worn on one side of the head and the sound is routed to the receiver-earmold portion of the aid on the other side. This configuration may be

built into eyeglasses or behind-the-ear models.* The advantages of this type of amplification for some hearing-impaired persons include better hearing in groups of people, better identification of where sound is coming from, and better hearing of speech from the side with greater hearing loss. CROS aids are usually designed to improve the hearing for one ear and to take advantage of sound pickup on the side of the poorly functioning ear. BICROS aids are designed for hearing impaired persons with a hearing loss involving both ears, but with one ear too poor to benefit from amplification. This type of amplification device has a microphone on each side of the head with sound being directed to only one ear, usually the ear with more ability to discriminate sounds.

*Also into in-the-ear aids

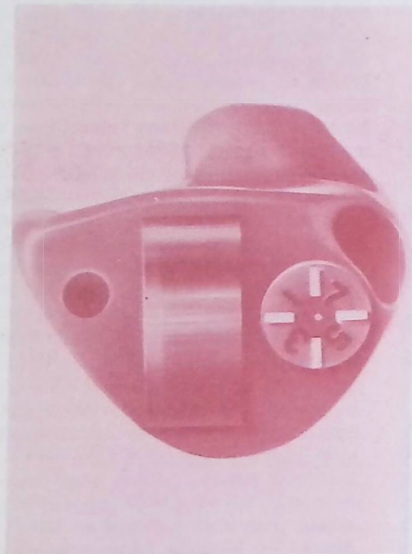
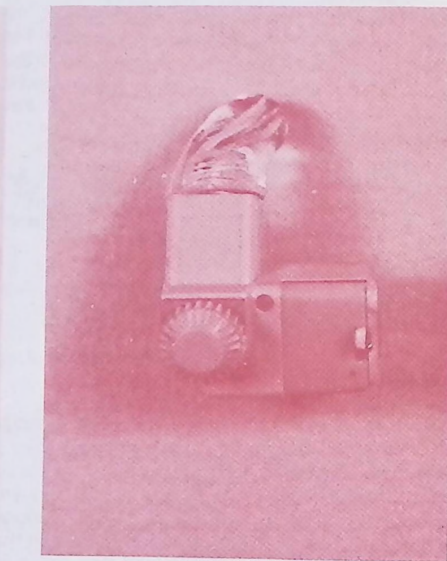


figure f. two types of in-the-ear hearing aids.



3

how to wear the hearing aid

battery

Insert the battery into the battery compartment. Be sure the battery's positive (+) and negative (–) terminals are in their appropriate locations. If the battery is improperly inserted, the hearing aid will not work, and may cause damage. Do not force the battery into the battery case. Placement of the battery in a behind-the-ear aid and in a body aid is shown in Figures g and h, respectively.

connection of aid to earmold

With a behind-the-ear aid, connect the hearing aid to the plastic earmold tubing.

With a body aid, connect the hearing aid cord

to the hearing aid and external receiver. Snap the receiver onto the earmold.

how to insert your earmold

1. Make sure the earmold is clean and dry before inserting it. (See Chapter 6 for cleaning procedures for earmolds.)
2. Hold the earmold in an upright position with the hole in the mold pointing toward the ear canal. (You may want to practice this in front of a mirror.)
3. Insert the lower part of the earmold in the ear canal and at the same time, pull the top of the



figure g. battery compartment in a behind-the-ear hearing aid.

- outer ear gently up and back. Then start rotating the tip of the mold backward.
4. Tuck rotated tip of the mold forward and behind

12



figure h. battery compartment in a body hearing aid.

- the upper ridge in the ear. Move the aid (behind-the-ear aid) upward and in place behind the ear.
5. Gently push in the earmold to make sure it is securely in place.
 6. Make sure that the plastic tubing that connects the earmold to the hearing aid has not become twisted or kinked, thereby obstructing the sound and preventing it from reaching your ear. A pic-

ture of an earmold used with a body aid is shown in Figure i, and one of the types of earmolds frequently used with behind-the-ear aids is shown in Figure j.

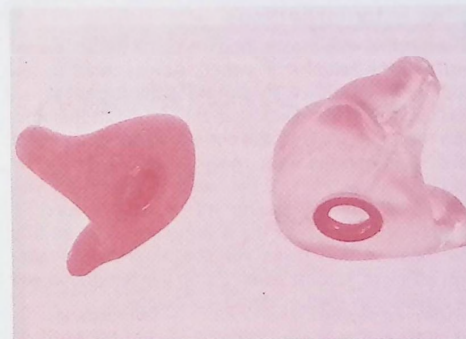


figure i. earmolds commonly used with a body hearing aid.

volume control

The audiologist may mark the recommended volume control setting with a small dot of nail

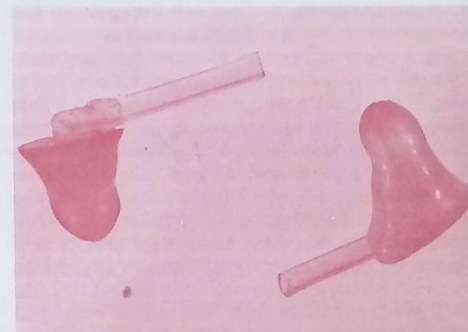


figure j. a type of earmold often used with a behind-the-ear hearing aid.

polish. This is to help you begin your listening at a comfortable level. Turn the aid on and listen to your own speech or the speech of others at the recommended volume setting. Turn the volume all the way down. Then, while talking aloud to yourself, or having someone else talk to you at a normal conversational level, attempt to set the volume control yourself. If you set the wheel too high (loud),

13

everything may sound harsh and distorted. If you set it too low (soft), you will find that you are still having to strain to hear. Try to set your volume control to a constant position for most listening situations, although you may have to vary it from time to time. You will learn with experience how to adjust the volume control so that you are able to hear most of what is going on in a particular listening situation. It is not a good habit to constantly readjust the volume control setting during a specific listening situation (i.e., as the voice of one speaker rises and falls). The volume control adjustment of a behind-the-ear aid is initially more difficult to manipulate than with a body aid. The primary reason is that you can't see the control when the aid is worn. You should, however, begin to know where to set the volume control by the loudness level of sound around you. Practice setting your volume control with these sound stimuli:

1. The loudness of your own voice
2. Someone else speaking to you in a normal conversational voice
3. A radio at a set intensity level (a normal loudness level).

Eventually, you will get used to setting the volume control by the feel of the dial and the approximate amount of rotation (i.e., one-half on, three-quarters on).

other external settings

Check other external settings such as the tone control and the telephone switch. Adjust them to the settings recommended by the audiologist. When you use the telephone, move the switch to the position marked "T". This will cut out all sounds except telephone conversation, making it much easier for you to hear voices. You will need to experiment with the telephone by moving its receiver around to various positions near the hearing aid until you find the location that gives you the most comfortable and efficient volume level. Using the telephone will be covered in greater detail in Chapter 4.

4

getting accustomed to your hearing aid

a gradual beginning

It is wise to start by wearing your hearing aid gradually. Try to wear the hearing aid as long as you comfortably can. Until you have adjusted to the hearing aid, the foreign amplification of sounds or minor irritation of the ear canal may cause fatigue or discomfort. If this happens, simply remove the aid, take a short break, and then try again later. If after a period of time, your earmold does not feel better, or it causes pain and irritation, contact your audiologist or the hearing aid dispenser. He may be able to buff the mold so that it feels more comfortable.

quiet situations first

Begin by wearing your hearing aid in relatively quiet environments.

1. Read aloud to yourself. Learn to adjust to the sound of your own voice. Wear your hearing aid even though you are alone in the house.
2. Listen to the environmental sounds around you — the hum of the refrigerator, the tick of a clock, birds chirping, dogs barking, etc. Investigate every sound that you hear. It is necessary that you learn to reenter the world of sound. Get used to the various sounds in the environment so that

they do not distract you when you are listening to conversations. Some of these environmental sounds you may enjoy listening to again, others you may not. Remember, these are sounds people with normal hearing hear every day. Learning to extract the desired speech sounds and to disregard the interfering background sounds is an important part of getting accustomed to using the hearing aid. You will master this skill with time and patience.

3. Have someone with normal hearing adjust the television and radio to a normal volume. Get accustomed to listening at that level while you set the volume control of your hearing aid to a comfortable level.
4. Seek out situations in which you can engage family members or friends in a one-to-one conversational communication setting. Sit near the speaker. Watch the speaker carefully. Lip read and listen. Do not let people around you shout at you. Encourage your relatives and friends to speak in a clear, natural voice. They should not exaggerate their lip movements.
5. Gradually seek out situations in which you can converse and listen to more than one person. Concentrate on each person as he speaks and be

sure to sit within six feet of members of a group. Try to pick out and understand each of the different speakers' voices. It may take some time before you can participate in cross-conversation. As your hearing decreased over the years, you may have avoided carrying on conversations with several people and tried to be involved only in one-to-one situations. Besides having voices coming from different directions, the hearing-impaired individual also experiences difficulty with the speed of group conversation. Because the rate of speaking is much more rapid in a group, the hearing impaired person is forced to hear and understand rapidly, in addition to having to shift attention from one speaker to another.

aided ear toward the sound

Usually you will want to position yourself so that your aided ear is directed toward the sound source. Remember that the head-shadow effect (speech sounds are softer at the ear farther from the sound source) caused by your head is a factor that must be contended with if you wear an ear-level instrument.

different listening situations

These recommendations are not all inclusive, but they may be of assistance in helping you adjust

when using your hearing aid in difficult, challenging listening situations. Try these only after you have successfully completed listening in quiet situations.

1. *Religious services.* Listening in churches and synagogues can be extremely difficult. The levels of noise can change from whispered prayers to reverberating organ music. You will find that acoustics can differ from one part of the church or synagogue to another and from one house of worship to another. Clergymen's voices are as varied as the voices of other people. Certain voices are more intelligible than others. Throughout the service you may notice fluctuations in the quality of the speakers' voices. Prayers are frequently offered at a quiet level which is often difficult to hear, even for normal-hearing individuals. In houses of worship in which amplifying systems are used, you may find it advantageous to position yourself close to one of the loudspeakers.

When attending religious services, try to sit in the first ten rows so that the clergyman's face is directly in front of you. Background sounds may be distracting if you are too far from the

pulpit. Increase the volume of your hearing aid until you can hear the minister, priest, or rabbi comfortably during the sermon. Do not attempt to adjust your hearing aid to understand all of the whispered or softly spoken words, or the music may become annoyingly loud, and you will be continuously adjusting the volume control.

2. *The radio or television.* Many individuals who have a severe hearing loss, or who have a problem hearing speech distinctly, find speech more intelligible when they use a set of earphones directly connected to the TV set or radio. The earphones help eliminate the distracting background environmental sounds. Check with the TV manufacturer and with your audiologist or hearing aid dealer to determine the appropriate equipment for your needs.

A number of hearing aid offices offer a special system in which a wire runs from the TV set to a loop around your favorite chair, or to an inductance plate. The listener simply switches the hearing aid to the "telephone" position and is able to pick up the TV sound without being bothered by environmental noises. That is, provided your hearing aid is equipped with a "T" position. This arrangement may require installa-

tion by an electronics technician. Consult your audiologist for information about these devices.

3. *At the movies and theater.* If possible, hearing aid users should avoid sitting under a balcony, since sound waves often become distorted in this situation. If you have difficulty, try attending a show which is not fully sold out and experiment sitting in different locations in the theater. Try to avoid sitting near youngsters as they are likely to laugh, talk, and move around frequently. Avoid sitting back in corners where you have poor visibility and possibly poor acoustics. Sit near enough to the screen to take advantage of visual clues. If you have trouble at first, do not become discouraged.

Most of the suggestions for movies apply when attending the theater. If however, you are still experiencing difficulty, you may find the theater more enjoyable by attending less frequently and paying more for better (closer) seats when you do attend. Valuable information can be obtained from the speakers' lips and faces when sitting closer to the stage.

4. *Parties and restaurants.* For many hearing aid users, these are two of the most difficult listening

situations, primarily because of the constant background disturbances. Increasing the volume of the hearing aid usually does not help, because you will also increase the amount of background noise being received. Amplified background noise tends to mask and drown out the speech you are trying to hear. In many restaurants and cocktail party situations, the user is forced to deal with an extremely unfavorable level-to-noise ratio. When the unwanted noise is much louder than the desired speech, the best procedure to follow is to sit or stand in as strategic a location as possible and to reduce the distance between you and the speaker. Be aware that you may not be able to hear or understand everyone in some of these situations. Often normal hearing individuals do not hear well under these conditions. When you go to a party, move around and converse with different groups. When at a restaurant try sitting near a corner and not in the middle of the room or near the kitchen entrance. *Expect to rely on visual cues.*

5. *Telephoning.* There are several alternatives available to the hearing-impaired person.
 - a. Use the unaided ear if there is sufficient hearing present. Under these conditions, the

hearing aid should be turned off and can be left in the aided ear.

- b. Arrange for the telephone company to install an amplifier on your telephone. This is an inconspicuous button on the face of the telephone which may be turned to low, medium, or high volume. For many hearing-impaired persons, it provides accurate, natural and satisfactory results. It allows you to place the receiver of the telephone directly to your ear, and to listen as you normally would. You can control the volume to suit your own needs. Feel free to discuss this arrangement with your audiologist.

- c. Use the telephone switch on your hearing aid, if it is equipped with one. The volume of the hearing aid may have to be increased when using the telephone position.

Some hearing-impaired individuals find that they are not able to use the "T" position with some of the newer telephones. If you are having trouble with the "T" position of your aid, talk to your audiologist.

If you are bothered by a hum when using the telephone switch of your hearing aid, try to avoid being near any operating electrical devices. The intensity of the hum may be reduced by moving

away from the electrical source (i.e., T.V., electric motors, fluorescent lights).

- d. Utilize a pocket-sized battery operated telephone amplifier which can be carried by the user and clipped to the telephone receiver. A thumb wheel serves as a volume control.

If you are having trouble hearing the telephone ring, you can ask your local telephone office to change the ring to one which is either louder or a different pitch, or a buzzer type with most of the sound in the portion of the frequency range where you have better hearing.

general comments

The following points have been mentioned before but they are worth repeating:

1. Your hearing aid will not restore your hearing to normal. Remember, it is a miniature electronic device for amplifying sounds, both wanted and unwanted.
2. Adapting to your hearing aid may take some time. Maximum benefit may not be obtained with your hearing aid until you have had it for six months or so. Be patient! If you are having trouble, don't give up. Consult your audiologist for assistance.

3. Proficiency in hearing aid use will largely depend upon *you*. While it is true that adapting to the aid will take some time, a hearing aid that is not being worn isn't helping anyone. It is important not to "save" the hearing aid for special occasions. Some individuals try to wear the hearing aid only when they have difficulty hearing conversation. The hearing aid should be used as often as possible, even when you are alone. The more you wear it, the better you will be able to adjust to amplified sound (both speech and interfering background noises).
4. Your hearing aid was evaluated at a tone control and volume setting which was found to give relatively good performance. Remember, this evaluation was performed in the quiet testing environment of an audiology center. You may, however, find that a different setting gives you better performance. Once you find that setting, keep it. Don't always vary the volume level. Sometimes certain sounds may sound a bit loud, but keep in mind that normal hearing people also have to listen to loud sounds.
5. Practice your skill at sound localization. Try to find out where the sound is coming from. Prac-

tice identifying the direction of the source of the sound. Having this skill may one day save your life when crossing the street or in other crucial situations.

6. Wear your hearing aid in as many difficult listening situations as you possibly can. Move gradually from easy to difficult listening situations. Learn what you cannot do with your hearing aid. If you find yourself encountering too many difficult listening situations, it might be advisable for you to enroll in a class on communication strategies for the hearing impaired. Should you ever feel this is desirable or necessary, contact your audiologist.
7. Do not strain to catch every word. The importance of listening carefully and of concentrating on what is being said cannot be overemphasized, but do not worry if you miss an occasional word. Normal hearing persons miss individual words or parts of sentences and unconsciously "fill in" with the thought expressed. Keep your eyes on the lips and face of the speaker. Speech reading is a very great help, particularly in noisy situations as a supplement to the hearing aid.

ongoing practice

These activities should begin as soon as you get your aid and should be continued during the entire hearing aid adjustment period.

1. Increase your tolerance for loud sounds. At first, hearing aid users tend to set the volume control at a level too low for efficient listening. Louder sounds need not cause discomfort. By a very simple procedure, you may, over a period of time, increase your tolerance for sound. While you are listening to one speaker, or to your radio or television in your own home, gradually turn up the volume control of your hearing aid until the sound is very loud. When the loudness is uncomfortable, very slowly turn the volume down to a more comfortable level. After a period of practice you will find that your comfort level has increased considerably.
2. Practice learning to discriminate different speech sounds. Prepare a list of words which differ in only one sound. For example:

food — mood	ball — all
see — she	feel — peel
would — good	gown — down

Have a helper pronounce these words slowly and distinctly, first in a sentence and then the word itself. Watch the lip movements closely while you carefully listen to the difference in the words. Then try to identify the words by listening alone.

5

common complaints of hearing aid users

"all the sounds i hear seem loud and sharp."

It may seem to you that all the noises in the world are drowning out the conversation of your friends and family and are making you miserable. Airplane engines, bus motors, automobile horns, footsteps, crackling paper, and your own voice may all sound extremely loud to you with the aid. But, remember you are entering a world of sounds that you have not been hearing normally for many years. You will have to train yourself to accept these rediscovered sounds that normal hearing persons have learned to push into the background.

"i can hear you, but i can't understand you."

Even when you learn to ignore background noises, and pick out the sounds you want to hear, you may still find it difficult to understand all of the conversation you hear. Many hearing-impaired individuals are unable to discriminate what was said to them even when the message is loud enough. This distortion of sound may be the fault of the hearing aid, or it may be due to the hearing loss itself. A hearing aid is a miniature electronic device which reproduces sounds with less than perfect fidelity. Therefore, it is unable to provide for its user completely normal hearing. This problem may also be compounded when the hearing-impaired person is

trying to communicate in a noisy environment. In some situations, even normal hearing persons have problems telling apart various words which have similar sounds as *tin*, *kin*, *shin*, and *chin*. These problems are also intensified in noisy backgrounds. You may have more trouble than other people do in discriminating such words. Auditory training and speech reading with an audiologist may be useful in overcoming this problem. This should be discussed with your audiologist.

"my own voice sounds strange."

There are a number of reasons for this:

1. You may have become used to speaking louder than is necessary in order to hear your own voice because of the type of hearing problem you have.
2. Since a hearing aid makes all sounds louder, it also makes your own voice louder.
3. With a hearing aid, you are experiencing your own voice through an electronic instrument, which is not the same as hearing it naturally. It is similar to hearing your own voice played back through a tape recorder.

"the hearing aid whistles."

This may be the result of several problems. The most common cause is a loosely fitting earmold. The amplified sound from the hearing aid coming into the ear canal leaks out, goes back into the microphone of the hearing aid and causes whistling. The squealing or whistling is called *feedback* and is discussed in detail in Chapter 8, "Troubleshooting." Occasionally, external feedback will occur because of damage to the plastic tubing of an ear level hearing aid. With a body-type hearing aid, feedback may occur when the mold is not snapped securely onto the external receiver. With an open mold or a tube in the ear canal you may experience feedback if you turn up the volume too loud. You may also get feedback if you are standing near a hard reflecting surface (leaning against a wall) or if you bring your hand up near your hearing aid to adjust it or to fix your hair. This does not mean that the aid itself is not functioning properly. These are conditions that are easily remedied.

Internal feedback is associated with a defect in the aid itself and should be reported to your audiologist. Before contacting the audiologist, try the suggestions in the troubleshooting section to

correct external feedback. If these suggestions are not successful, one of the components of your hearing aid may need repair. This should be discussed with your audiologist.

“i get wind noise when outdoors, or driving a car with the windows open.”

Wind causes a problem for all microphones. You may have noticed that microphones used in outdoor T.V. interviews have covers to reduce wind noise. A hearing aid has a microphone, and when wind hits it, noise is created and amplified. In certain hearing aids, this noise may be reduced with a wind screen.

“clothing noise bothers me.”

This complaint is common among those who wear hearing aids on their body and is not easily remedied. Starched or crisp fabrics rubbing up against the hearing aid create an annoying sound to the wearer. Obtaining a properly fitting harness to hold the aid may help.

A harness should have a lining of soft material where it comes in direct contact with the hearing

aid. The microphone opening of the hearing aid should not be covered by the harness or by articles of clothing. If clothing noise bothers you, consult your audiologist for additional suggestions, such as alternate locations for the hearing aid.

“i have a feeling of fullness in my ear when i wear my hearing aid.”

This situation sometimes occurs when air becomes trapped between the earmold and the eardrum. If this problem persists, contact your audiologist, or the hearing aid dispenser who may drill a small hole in the earmold. This often relieves the feeling of fullness.

“i’ve heard a lot about noise-induced hearing loss. sometimes loud sounds occur before i have a chance to turn my aid down.”

Do not be unnecessarily concerned. All hearing aids are built with a limited output level beyond which sounds cannot be made louder. The maximum level of your hearing aid was set to provide a safe level of amplification.

6

helpful hints for hearing aid care

Listed below you will find some helpful hints, which if followed, will help you in your hearing aid maintenance program.

earmold

A dirty or plugged earmold can cut down the efficiency of the hearing aid by preventing sound from reaching the ear, and can be the source of repeated ear infections. If you have an ear level hearing aid, remove both the earmold and tubing from the hearing aid. When removing the tubing, do not grasp the instrument case. Instead, hold the plastic nubbin elbow assembly itself. If you have a body hearing aid, unsnap the earmold from the receiver. The ear-

mold should be cleaned regularly with warm water and soap. Do not place the earmold in boiling water and do not clean the earmold with alcohol or any caustic substance. Such procedures can cause permanent damage to the earmold, necessitating its early replacement. An earmold plugged with wax or an earmold filled with water can be cleaned by passing a pipe cleaner through the opening in the mold. After you have washed your earmold, dry it thoroughly while it is still detached from the hearing aid. Wipe the outside and blow through the tubing until it is completely dry. If after a period of using the earmold, it becomes loose in your ear and the hearing aid occasionally whistles, it may be time for a new earmold.

tubing (ear level aids)

The tubing connecting the hearing aid to the ear-mold should be checked regularly for any cracks or splits. The cracked tubing should be replaced by your hearing aid dispenser.

cord (body aids)

Keep the cord free from any twists, knots, or snarls. Twists and knots weaken the wiring inside the cord. Eventually, the wiring may split, breaking the electrical connection and rendering the hearing aid inoperative. Do not wind any excess cord under the garment clip of the hearing aid. Always keep a replacement cord with you. To avoid loosening the connections, do not unnecessarily disconnect or wiggle the cord. When you do have to pull it out, hold onto the little connector and pull it straight out. Do not move the end back and forth in the socket or pull on the pliable area of the cord.

battery

1. Different types of hearing aids use different types of batteries. Always use the proper type of bat-

tery in your hearing aid. Consult your owner's manual to be sure you are using the proper type.

2. If you own a battery tester, check the voltage of the battery each morning before you insert it in the aid. After wearing the aid all day, check the battery voltage again. If the voltage drops appreciably, replace the battery. Be sure you know the average life and nominal voltage of your batteries and keep extra ones on hand. Purchase batteries from suppliers who "sell" large amounts of batteries so that those you purchase are fresh. Unfortunately, there is no requirement at the present time that batteries be dated. If batteries are kept more than six months, they may lose some of their energy.
3. If, at any time, you have to turn your hearing aid volume control full on to get sufficient amplification, this may mean you need to replace the battery with a new one. Using some aids at full volume puts additional stress and demand on your battery and shortens battery life. It may also produce distortion in your hearing aid.
4. Don't rotate your batteries. Use one battery until it is worn out, then discard it and replace it with a fresh battery. Don't save your old, worn batteries as spares.

5. Keep a spare battery with you at all times, but not in a metal box or in a pocket with coins. The metals of the battery and coins may react unfavorably together and cause drainage of the battery's energy.
6. Store the extra batteries in a cool, dry place. The crisper of your refrigerator is an excellent place to store extra batteries. When you take a battery from your refrigerator, it may take about an hour to warm up and to return to its optimal condition. Keep batteries separated in a box because the metals of the batteries may react together and cause drainage.
7. Remove the battery from a body aid whenever the aid is not in use. For ear level aids, pull the battery case out to break its contact. This procedure will prevent battery drain which may occur even when the volume control is turned off. This will also prevent any potential accumulation of excessive moisture and eliminate extended contact with metal which may cause the battery to corrode.
8. Discard any battery that appears to be leaking.
9. The contacts on the battery should be cleaned often. This can be done by rubbing the battery contact with a rubber eraser. You can also scrape

away corrosion with a knife. Also, wipe off the points where the contacts fit into the hearing aid. This is important, especially in humid weather.

bone conduction receiver

Find the spot behind your ear which is most sensitive to sound. Place the bone conduction receiver there with a firm pressure. The headband should be adjusted to the shape of your head for comfort and ease in wearing.

the hearing aid itself

1. Wipe off the microphone and receiver each night with a soft cloth to remove moisture or perspiration. In this way, corrosion of these parts will be retarded.
2. Avoid jarring the hearing aid and/or external receiver (body aid). It is a delicate piece of electronic equipment. Treat it as such. Dropping the aid, or severely jarring it, can result in a trip to the repair shop.
3. Do not tamper with the inner components of your hearing aid. Most hearing aids have two small openings in the case (the microphone where the

sound enters and the receiver which sends the amplified sound to your ear). If it appears that something is blocking one of these openings, take your hearing aid to your hearing aid dealer who will check it for you and have it repaired if necessary. If you tamper with the circuit of the hearing aid, you may lose your manufacturer's warranty.

4. Do not allow excessive amounts of dust to get into the microphone. If you work in dusty surroundings, tape a cheesecloth screen over the grill of the microphone.
5. Do not get your hearing aid wet. If the aid gets wet, you may help keep the damage to a minimum by immediately disconnecting the batteries, draining out all the water possible and drying the aid in front of an electric fan. Do not use heat for drying it.
6. Do not apply hair spray while wearing your hearing aid. Spray in the microphone can cause irreparable and costly damage.
7. Dogs are sometimes attracted by the scent of the materials used in the manufacture of hearing aids and they sometimes bite into the aid causing severe and expensive damage. It is therefore extremely important that when you are not wear-

ing your hearing aid, you keep it in a safe place, out of your dog's reach.

8. Do not leave your hearing aid in the glove compartment of a car in the summertime, near radiators in winter or in a steamy bathroom. Do not expose your instrument to temperatures above 120°F.
9. Do not wear your hearing aid under a hair dryer, infrared lamp, sun lamp, short wave diathermy instrument (medical instrument which produces heat through electric currents), or in a sauna.
10. If your behind-the-ear aid taps against your eyeglass frame when you are walking, glue a soft piece of material on the hearing aid or eyeglass frame at the point of contact.

7

conclusion

All hearing-impaired individuals should have a periodic ear, nose, and throat examination by an otologist and complete hearing tests by an audiologist. Hearing aid users sometimes feel that their hearing aids are malfunctioning when actually their hearing has changed. Their present aid is no longer appropriate for their needs. If you notice a change in your hearing, contact your audiologist immediately for an appointment. If you develop a medical condition of your ears, nose, or throat, contact your otologist immediately.

Some individuals believe that one hearing aid will last a lifetime. This is not true. A variety of factors determine the life expectancy of an aid. The average length of time which an aid can be ex-

pected to perform efficiently is approximately three to five years. While some hearing aid users have received over ten years of service from their hearing aids, others have found it necessary to purchase a replacement in less than two years. Some models seem to stand up much better under continued use than others. Like any other machine or appliance, the life span of a hearing aid may be extended by proper care and maintenance. When your hearing aid begins to break down frequently and is in constant need of repair, it is probably time to consider the purchase of a new instrument.

It is best remembered that your audiologist will be ready to assist you with any problems you may have. Be sure to contact him for assistance.

8

troubleshooting your hearing aid

It is possible that minor problems may crop up from time to time. If you take care of your hearing aid, as suggested above, you should have little difficulty. Many problems, however, can be easily solved. Refer to the numbered items associated with each symptom as explained below in the section, "First Aid for Hearing Aids." If these tests don't correct

the problem, the trouble is probably internal in the receiver, microphone, or amplifier, and the aid should be professionally serviced. Your audiologist will help you determine if this is necessary.

Your audiologist or hearing aid dispenser should make a loaned instrument available if your aid must be returned to the factory for service.

FIRST AID FOR HEARING AIDS

<i>Symptom</i>	<i>Items to Look At in Following List</i>
Hearing aid dead	1,2,3,4,5,6,7,8,13,14,15,26
Working but weak	1,3,4,5,6,7,8,9,12,15,19,21,22,23
Works sometimes, or fades	1,3,4,5,9,14,15,20
Whistles continuously or occasionally	1,4,6,8,9,10,11,12,13,14,16,17,19,20,24
Sounds noisy, raspy, shrill	1,3,4,5,8,9,10,11,14,16,22
Sounds hollow, mushy, muffled	1,7,12,14,15,22
Other kinds of bad quality	1,7,9,13,14,16,20,22
Noise when the wearer moves	12,18

CHECKLIST FOR HEARING AID PROBLEMS

Cause	Test	Remedy
1. Dead, rundown or wrong type of battery.	Check battery number and voltage. Check with new battery.	Replace battery.
2. Battery reversed in battery holder so that (+) terminal is where (-) terminal should be.	Examine position of the battery case terminals.	Insert battery correctly.

CHECKLIST FOR HEARING AID PROBLEMS

Cause	Test	Remedy
3. Poor contacts at receiver-cord plugs (body aid) due to dirty pins or springs.	With hearing aid turned on, wiggle plugs in receptacles, withdraw, and reinsert each plug.	Rub accessible contacts briskly with pencil eraser, wipe with clean cloth slightly moistened with Energine or a similar cleaning fluid. Inaccessible contacts can usually be cleaned with a broom straw moistened with cleaning fluid.
4. Break or near-break inside receiver cord (body aid).	While listening, run fingers along entire length and wiggle cord at terminals.	If sound cuts on and off replace cord with new one.
5. Plugs not fully or firmly inserted into receptacles (body aid).	While listening, withdraw and firmly reinsert each plug.	If this does not help, replace cord with new one or consult dispenser.
6. Earmold too small, not an adequate fit, or not properly seated in ear.	With fingers, press earmold firmly into the ear and twist back and forth slightly to make sure that it is properly positioned.	If feedback continues when pressure is released, your mold may need to be replaced. If this is comfortable without producing feedback, leave in this position. Earmolds need to be replaced periodically, particularly with young children.

CHECKLIST FOR HEARING AID PROBLEMS

Cause	Test	Remedy
7. Earmold plugged with wax or drop of water after cleaning. Tubing blocked with drop of water.	Remove earmold, examine visually, and blow through it to determine whether passage is open.	If wax is obstructing, wash earmold in lukewarm water using a pipe cleaner or long bristle brush to reach down into the canal. Rinse with clear water and dry. A dry pipe cleaner may be used to dry out the canal. Blowing through the canal will also remove surplus water.
8. Loose receiver cap (body aid).	Examine; shake gently.	If the cap is the screw type, turn tight with fingers. If cap is cemented on, crimped, or the internal type and has come loose, see your audiologist to determine follow-up steps.
9. Battery leakage or corroded battery contacts.	Examine battery and battery holder for evidence of leakage in the form of powder or corrosion.	Discard the battery and wipe the holder terminals carefully with a cloth dampened with water to remove loose powder. Then clean with pencil eraser.

CHECKLIST FOR HEARING AID PROBLEMS

Cause	Test	Remedy
10. Receiver close to wall or other sound-reflecting surfaces.	See comments under <i>Remedy</i> .	Avoid wearing the hearing aid near a wall or other hard surface. Such surfaces tend to reflect sound from the receiver so that it is more readily picked up by the microphone thus causing whistling or feedback.
11. Microphone worn too close to receiver (body aid).	Try moving instrument to provide wider separation between it and the receiver, or obtain better earmold seal.	Avoid wearing microphone and receiver on same side of body or close together. Do not turn down volume control to eliminate feedback.
12. Microphone facing the body (body aid).	See comments under <i>Remedy</i> .	Turn microphone around.
13. Telephone-mike switch in wrong position or midway between settings.	Visually inspect external switches.	Place switch in desired position.
14. Faulty receiver.	Examine receiver for possible breaks or cracks if the receiver is external.	Replace with a new receiver. For ear-level instruments, see your audiologist for further consultation.

CHECKLIST FOR HEARING AID PROBLEMS

Cause	Test	Remedy
15. Tubing collapsed, twisted or kinked (behind-the-ear aid).	Check to see if tube bends and moves when the head is stationary. Check to see if tubing is twisted or kinked.	Shorten, replace, or untwist the tubing.
16. Volume control turned too high.	Inspect volume control rotation.	Reduce volume until speech sound is clearer. Do not reduce volume control to eliminate feedback, but obtain new mold.
17. Air leak between earmold and receiver.	Check ring retainer of earmold and plastic seal washer for body aids. Check receiver nozzle and tubing earmold connector for behind-the-ear aids. Seal the end of the earmold with your finger and turn the volume to the highest setting.	Replace defective part. If squealing persists in the sealed earmold procedure, see your audiologist for further consultation.
18. Clothing noise from loose clothing clip (body aid).	Inspect clip and aid placement.	Tighten or replace clip. Obtain hearing aid harness.
19. Cracked or split tubing (behind-the-ear aid).	Check tubing for cracks and splits.	Replace tubing. See your hearing aid dealer for assistance.

CHECKLIST FOR HEARING AID PROBLEMS

Cause	Test	Remedy
20. Lint or fine particles of dust interfering with proper electrical contacts.	Move all switches gently back and forth while listening to the aid.	Consult your audiologist for advice. The hearing aid may need to be cleaned.
21. Battery may need to warm up if hearing aid is exposed to extremely cold weather.	Let aid and battery warm up indoors.	Allow aid and battery to warm up indoors. Remove any condensation on aid.
22. Incorrect tone control setting.	Visually inspect external switches.	Place switch in recommended position.
23. Insufficient pressure of bone conduction receiver on mastoid bone.	Press bone vibrator against mastoid.	Replace headband.
24. Tubing too short, may be pulling earmold out of canal.	Check earmold and tubing with fingers. See if earmold is inserted snugly.	Replace tubing.
25. Wax in the ear canal or earmold or fluid behind the eardrum.	Inspect earmold.	Clean earmold. Consult otologist periodically if you build up excessive wax deposits or have frequent ear infections.
26. Dirt in microphone opening.	Inspect microphone opening.	See dealer to have dirt removed.



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MAKING THE MOST OF THE 30-DAY TRIAL
A Hearing Rehabilitation Schedule

(Note: This schedule has been adapted from an article by John F. Unton, M.Ed., a research audiologist at Stankey Laboratories, Inc. It was published in the September, 1983 edition of THE HEARING JOURNAL.)

The following program is suggested as a minimum rehabilitation wearing schedule for both new and experienced hearing aid users. The schedule serves as an essential rehabilitation structure for both the dispenser and the user of a new hearing aid, and it provides many valuable opportunities for dispenser and user to chart their progress and to address problems before they get out of hand.

TO THE PATIENT

You have just been fitted with a high quality electronic hearing system. Prior to this fitting, your hearing was tested by an audiologist using tests that were designed to furnish the dispenser with the information needed to determine the most appropriate hearing system for you. To obtain the most satisfaction from your new hearing system, it is imperative that you, as a new user, learn to use your instrument to its fullest capabilities. The booklets you received with your system will help you greatly in this endeavor.

It is important to understand fully that no one else can do this for you. Your hearing aid professional can give you instructions and counsel as needed, but it is you who must put forth every effort to become accustomed to amplification.

WEEK 1

Wear your hearing system at least 3 hours a day for the first week. Wear it only in your home and under the most favorable conditions. Listen to a familiar voice or read aloud so that you can hear the sounds of speech. You may find yourself encountering new sounds that have been occurring around you but that, quite possibly, you haven't heard in years or perhaps have heard only in a subdued manner. Listen each day, and learn to identify these seemingly new but familiar sounds. It will require determination on your part to wear your hearing system and gradually become accustomed to hearing sounds more acutely.

Do not attempt to wear your hearing system in large groups or meetings or outdoors during the first week. If, as you progress, you find you can use your hearing system for more than a minimum of 3 hours, feel free to do so. This is merely a sign that you are adapting to amplified sound more rapidly than is typically done.

WEEK 2

Wear your system at least 5 hours a day. Toward the end of the second week, be somewhat more venturesome in experimenting with your hearing system. Try wearing it in small groups composed of three or four people. Wear your hearing system outside to become familiar with outdoor sounds. (This should be saved for the third week for New York City residents. Noisy, busy street traffic maybe a difficult adjustment.) Listen to the sound of the wind in the trees, to the twittering of birds, and to all the other sounds of nature that you may have been missing for far too long a time.

WEEK 3

At this stage of your rehabilitation, it is important to wear your hearing system at least 8 hours a day - even if you are alone - since you will wish to maintain an awareness of what is happening around you. Many everyday sounds such as doorbells and phones are those that you may be unable to hear without your hearing system. Listen to different people speaking in noisy places. Listen on a telephone with a hearing aid telephone switch or the hearing aid microphone.

WEEK 4

Wear your hearing system all day - from awakening until retiring. Listen for, and learn to respond to, alarm systems. Listen to, and locate, the direction of a sound with your hearing system. By the end of the fourth week, you should be well on your way to using your hearing system as if it were an integral part of you, and actually missing it when you do not wear it.

YOU ARE THE KEY PERSON

It must be emphasized that the people who are most satisfied with their hearing systems, and who derive the most benefit from their use, are those persons who accept their need for electronic correction and wear their instruments at all times. The intermittent user seldom experiences the full range of benefits that the constant user does. Your careful adherence to the schedule outlined here will determine to a very great degree your satisfaction with your new hearing system.

Remember, you and you alone can perform this part of your hearing rehabilitation. You will find your professional hearing dispenser willing to assist with counsel and minor adjustments that may be needed after fitting. Call on him when necessary, but your determined effort to learn how to hear again is a major factor in getting the most from your hearing system.

If you follow this schedule, you may feel that you have mastered your system and are deriving maximum benefit from it, and that may be the case. However, most users report that they continue to derive additional benefits from their hearing systems even after three, six, or as many as eight months.

Remember, by using your hearing system, the only thing you have to lose is your hearing impairment.

Questions and Answers on Hearing Aid Batteries.

What different types of hearing aid batteries are available?

Hearing Aid button batteries fall into the following categories of chemical systems:

Mercury	(1.4 volt)
Silver	(1.5 volt)
Zinc Air	(1.4 volt)

Battery requirements vary by type of hearing aid. Mercury and zinc air batteries are used in most hearing aid models. The additional power of a silver hearing aid battery is frequently required for severe hearing losses. Zinc air batteries have the higher rated capacities—thus the longest service lives.

What is the life of a hearing aid battery?

The capacity (service life) of a hearing aid battery is directly related to the physical size of the battery, the amount of power required to operate the aid and the degree of an individual's hearing loss.

What may cause hearing aid batteries to short out?

Such a condition may occur when the top and side of the battery come in contact with other metal objects such as another battery, coins or keys. For this reason, it is advisable for consumers to keep all batteries in their package until ready for actual use.

Should batteries be refrigerated?

It is not recommended since refrigeration affords no particular advantage. Normal storage in a cool, dry location will assure optimum power output and maximum service life.

What makes a zinc air hearing aid battery different?

Zinc air batteries use the oxygen in the air around us for part of its energy source. Since a zinc air battery can hold nearly twice as much power-producing ingredients as mercury or silver batteries—they yield nearly twice the life.

What is the reason for the pull tab protector on zinc air hearing aid batteries?

This unique tab seals off the air supply to the air-activated battery—virtually eliminating pre-use power loss. Removal of this tab activates the battery for use in a hearing aid.

Do zinc air hearing aid batteries need special storage?

No, not at all. The protective pull tab prevents oxygen from entering the cell, and without oxygen no chemical reaction can take place.

Are DURACELL® batteries interchangeable with other hearing aid batteries?

Yes! Long-lasting DURACELL® batteries are completely interchangeable with the following battery brands:

DURACELL	Eveready	Ray-O-Vac	Activair
RM13H	E13E	R13	—
RM312H	E312E	R312	—
RM675H	E675E	R675	—
MP675H	EP675E	RP675	—
RM41H	E41E	R41	—
DA13	AC13E	R13ZA, 13A	13HP, 13HPX
DA675	AC675E	R675ZA, 675A	675HP, 675HPX
DA312	AC312E	R312ZA, 312A	312HP, 312HPX
DA41	AC41E	R41ZA, 41A	41HP
MS76H	S76E-6	RS76G	—
MS13H	S13E-6	RS13G	—
MS312H	S312E-6	RS312G	—
MS41H	S41E-6	RS41G	—

What is the shelf life of a hearing aid battery?

Typically, a mercury or silver battery will lose approximately 5% of its capacity a year when stored at room temperature. A sealed zinc air battery will lose approximately 2% of its capacity per year.

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