

HEARING AID CARE



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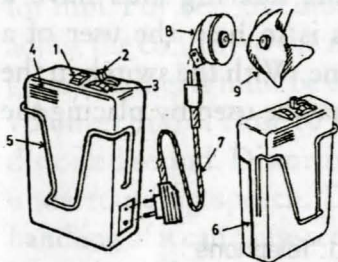
A hearing aid is an electronic device which makes the sound louder to the listener. It is recommended for the use of people with hearing loss. When an adult or child with hearing loss wears a hearing aid which is selected to give optimum benefit, just that quality of making the sound louder can help a lot.

Hearing aids help the adults to hear what they stopped hearing after acquiring a hearing loss. It brings them back to the hearing world.

For children with hearing loss, a hearing aid helps them to hear what they cannot otherwise hear. It enables them to learn to hear speech of those around him and thereby learn to speak. It is of great importance in their speech development. With training and practice, they can get maximum benefit out of their hearing aids. They can wear hearing aids in different places like home, school, playground, cinema, etc.

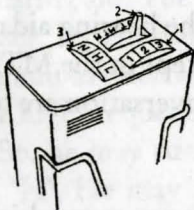
The hearing aid is composed of delicate and small components. Any rough handling or carelessness in its maintenance can disturb the hearing aid characteristics. Power output may be reduced or sound may be distorted. Proper care of the hearing aid can lengthen its life and ensure good performance.

The hearing aid consists of many parts which are discussed below :



1. Tone control switch
2. On - Off switch
3. Volume control switch
4. Microphone
5. Clip
6. Battery Compartment
7. Cord
8. Receiver
9. Ear mould

On-off Switch : On-off switch is a device in hearing aid which makes and breaks the circuit depending on the position it is placed. When the switch is in the 'on'



1. Volume Control
2. On-Off Switch
3. Tone Control Switch

position, it makes the circuit thereby permitting the sound to be amplified. In the 'off' position, the circuit is broken making the hearing aid useless as an amplifier of sounds.

Before switching the hearing aid 'on' see that the volume control is set to the minimum.

When hearing aid is not being used put the switch 'off'. Switch off the hearing aid when you change the spare parts like cord, receiver, earmould and battery.

Tel/Mike Switch : Some hearing aids have a telephone mike switch. This is to help the user of a hearing aid in using a telephone. With the switch in the 'T' position, the telephone may be used by placing the



1. Telephone

2. Hearing Aid

receiver of the telephone near the hearing aid as shown in the Fig. The switch may be kept in the MT position when telephone and normal conversation are to be used simultaneously.

Volume Control : The volume control is a device by means of which the sounds can be made louder or softer. It is similar to a volume control on a radio. Usually the volume control has a series of numbers ranging from 1 to 8. 1 indicate minimum gain while 9 signifies the maximum output. When the volume control is increased from a lower number digit to a higher number the sound becomes louder. If it is decreased from a higher number to a lower number, the sound becomes softer. Thus each individual who wears a hearing aid can make the sound as loud as he wants it to

be, within limits. Through experience, each individual learns what setting of the volume control is most useful for him. For best and most comfortable results, always adjust the control to the minimum loudness needed for good hearing. It must be emphasized that increasing the volume control close to its maximum level produces a distorted sound. Distorting the sound does not help in understanding speech. Dust in the switch or rough handling of it can cause scratchy or frying sound. Always keep the volume control in such a position that the sound is just comfortable to hear.

Tone Control : Tone control is one of the controls of the hearing aid. The tone control gives three options to the user. By choosing one of the three options, the user can amplify certain aspects of the sound. He may want the high frequencies to be emphasised to a greater extent. So, he may turn the tone control to a position marked 'H'. He may want the low frequencies to be amplified to a greater extent in which case the tone control may be used in the 'L' position. When the user does not want amplification especially of the low frequencies or high frequencies, he may keep the tone control in the 'N' position. Set the tone control ($L_1/L_2/H/H_1/H_2$) only to the position which is prescribed by an audiologist as optimum for best performance.

Turn the switches and controls gently. Switches may

be flipped off accidentally if turned in a hurry or with pressure.

Don't meddle with the switches unnecessarily. Control switches may show wear and tear causing intermittent sound, Check the condition of the control by listening to the hearing aid.

Microphone : The microphone is an important part of the hearing aid. The microphone converts the acoustical energy that is present in the sounds into electrical energy. This electrical energy later, after amplification, is converted into acoustical energy by the receiver. Between the microphone and the receiver, various stages of amplification are gone through.

The microphone, which is the grid area on the hearing aid, should not be covered by cloth. It should be free from dust and water. Small insects can enter the microphone and damage the inner parts of the hearing aid. So, when the hearing aid is not in use, put it in a box securely.

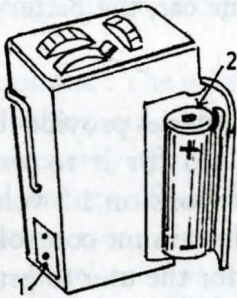
The microphone should not be exposed to hot temperature, X-ray, etc. It should not be dropped or jammed. Take care that your child does not put anything inside the aid through microphone for fun. Take care while eating such that food particles are not dropped in.

Batteries for hearing aid : Without a battery, the hearing aid will not work. Further, the hearing aids will work best when they are used with the type of battery for which the hearing aid was designed. For most hearing aids, the battery used is similar in shape to the ones used with flash lights, only for some of the hearing aids such as the ones worn behind the ear, the battery shape is round and flat.

It is important that the batteries provide the voltage required for the hearing aid for it to work well. Generally, the hearing aids work on 1.5 volts. As the battery voltage decreases, the volume control has to be increased correspondingly for the user to get requisite amplification. But as mentioned earlier, increasing the volume control beyond a certain level, gives a distorted sound. Once $2/3$ of the full range of volume control is reached and if the sound is inaudible or weak, use a fresh battery. Don't use worn out batteries as they damage other parts of the hearing aid. When the batteries give voltage of less than 1.2 volts, it is time to use new batteries. Having a voltmeter will be useful in checking the batteries and in determining when the new ones may be required. Always keep spare batteries to ensure continued use of the hearing aid for optimum benefit.

Each battery has a positive (+) and a negative (-) terminal. The battery compartment of hearing aids has corresponding marks (+ & -). The battery is to be placed

such that the (+) sign on the battery and the (+) sign in the compartment are together and the (-) sign on the battery is along the (-) sign on the compartment. The hearing aid will not work if the battery is not placed properly with its terminals, in the compartment.



1. Socket for Plugging Receiver Cord
2. Battery

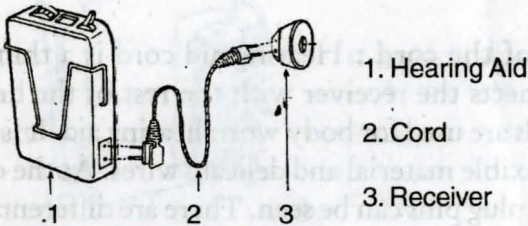
When a new battery is to be placed, the on-off switch must be in the 'off' position. The battery must be removed from the hearing aid if it is not being used for long periods. If not, the battery will drain since it would be left in contact with the metal. Dampness may cause them to corrode. The battery terminal connections in the hearing aid may corrode causing a scratch or hissing or frying sound. Clean the battery terminals with a pencil eraser or scrape away corrosion with a knife edge. Also clean corrosion from contact surfaces in battery compartment. When not in use, the batteries must be stored in a cool and dry place.

For continuous use of the hearing aid, it is recommended that the user keep spare batteries. Do not carry spare batteries loose in your pocket or purse; contact with coins, keys or metal objects could shorten useful battery life. Some batteries have excessive plastic covering which can be removed carefully with a knife or blade so that the battery makes good contact with the terminals in the compartment.

Care of the cord : Hearing aid cord is a thin wire that connects the receiver with the rest of the hearing aid. Cords are used for body worn hearing aid. It is made of soft flexible material and delicate wires. At the end of the cord, plug pins can be seen. There are different types of cords. They are 2 pin, 3 pin, single cord, S cord Y cord or V cord, depending upon whether a single receiver or two receivers being used. Twisting, knotting, coiling it causes breakage. Breakage results in sound being conducted to the ear intermittently or not at all. So the user must be careful not to pull or twist the cord. Breakage often occurs at the plugs.

In order to check the breakage in the cord, roll the flexible cord gently between the thumb and forefinger at several place, lengthwise. A cracking noise indicates a broken cord. Inspect the plug pins of cord for any breakage. The plug pins should be cleaned periodically with a small brush.

Proper Plugging of the Cord : In the hearing aid cords one of the pins is smaller than the other. One of the holes is smaller than the other in the hearing aid. The smaller pin must be inserted in the smaller hole and the bigger pin in the bigger hole, as shown in the figure.



Proper Plugging

Be sure you are using the correct type of cord, i.e., 'S' 'V' or 'Y' two pin or three pin. Don't wind the cord around the hearing aid. Don't move the end back and forth in the socket or pull on the pliable area of the cord.

The contact points first between the cord and the receiver, second between the cord and the hearing aid may wear out or become loose. The cord should not be disconnected unnecessarily. When it becomes

necessary to disconnect, it may be done so by grasping the hard plastic at the end of the cord and pulling it gently straightout.

Receiver : The receiver is an integral part of the hearing aid. It converts the amplified electrical signal into acoustical signal before being fed to the ear. Each hearing aid model has a particular receiver that goes with it. The receiver that is meant for that particular model of hearing aid only must be used for best results. It is important to know the receiver type recommended, so that at the time of replacing the damaged receiver, correct type of receiver is purchased. If two receivers are used, one for each ear, they must be of the same type or matched.

Connect the receiver properly to the cord, so that the small and large pins of the cords are inserted properly into their corresponding plug points in the receiver.

The receiver being very delicate, it should not be dropped or banged against hard surfaces. It must be kept away from dust and not allowed to get wet. While cleaning the earmold, detach the receiver from it.

The receiver should not be detached from earmould or cord unnecessarily. Take care that no one hits the child when his hearing aid is worn for the safety of child as well as the receiver.

When giving the hearing aid for repairs, be sure the receiver is also included with it, for it is a vital link in the whole aid. Keep a spare receiver for continued use of the hearing aid.

Earmould : Earmould is the plastic piece with the help of which the hearing aid receiver fits snugly in the ear. For maximum benefit from a hearing aid, a custom-made' earmould is essential. Earmoulds must be made for each ear separately. They cannot be interchanged. Custom-made earmoulds are made from the impression taken of the user's ear, facilities for which are available at some of the Speech & Hearing centers. An illfitting earmould not only produces an unpleasant squeal, but is uncomfortable to wear.

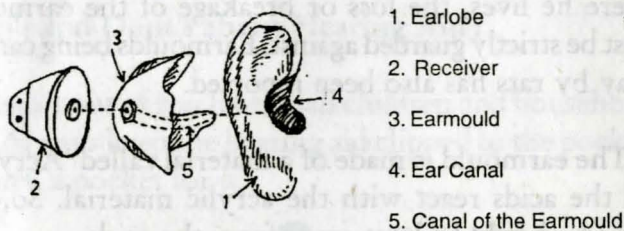
The receiver of the hearing aid should fit into the earmould so that the receiver does not revolve. If it does revolve, the ring of the earmould should be got fixed properly. When connecting the earmould with the receiver, the volume control must be turned down.

For optimum passage of sound into the ear canal, the earmould should not be plugged with dust, ear wax, etc. So, the earmoulds should be cleaned periodically with soap and lukewarm water. Blow out the dirt that may be blocking the passage for sound and wipe it dry. If there is wax plugging the passage for sound, it may be

removed with a pipe cleaner. Such a blockage will cause a squeal, or interfere with proper transmission of sound.

Persons subject to heavy wax secretion in the ear canal should have the ears cleaned by a doctor as often as it is necessary. Since even a thin film of wax on the eardrum can cause distorted hearing.

Do not attempt to clean or blow the earmould while it is still attached to the hearing aid. To do so could cause serious damage to the receiver.



Proper insertion of the earmould

Insert the earmould properly into the ear as illustrated in the figure. Be sure volume control is turned down completely before inserting the mould in the ear. Grasp the earmould between thumb and forefinger, placing canal of the earmould in ear canal. Gently press earmould into the ear, using slight back-and-forth

twisting motion. Pull out and down on ear until helix of earmould slips snugly into the helix of ear.

Earmould may have to be got done afresh periodically as the child grows. The canal shape and size changes even in old age due to shrinkage. So geriatric hearing aid users also will have to get the moulds remade.

As the earmoulds have to be made from the impression taken of the user's ears and facilities for making earmoulds may not be available for the user where he lives, the loss or breakage of the earmould must be strictly guarded against. Earmoulds being carried away by rats has also been reported.

The earmould is made of a material called 'Acrylic'. All the acids react with the acrylic material. So, the moulds should be kept away from the acids.

Caution must be exercised in using earmoulds for ears with ear discharge. Medical treatment must be sought without delay. When there is excessive wax also it is advisable to get it removed by an ear, nose and throat specialist. If there is ear discharge in only one of the ears, then the hearing aid may be used for the ear which has no discharge.

Caution your child against inserting mud or stick in the ear mould for fun.

If there is any irritation with the earmould, consult the earmould technician for proper adjustment. It is advisable to keep a record of the make, model number, cord length, receiver number, type of battery, type of cord, etc. Because hearing aid dealers sell cords and batteries for all types of hearing aids, the dealer is unable to help you if you don't have the pertinent data. The hearing aid must be cleaned and checked every year by a factory service representative.

Do's and Dont's about Hearing Aid :

Keep it out of reach of small children and household pets. Always keep the hearing aid clipped to the pocket or stitch a pocket for it.



Keep the hearing aid away from dust and water.

If hearing aid gets wet immediate action may preserve

t by :

- a. Removing the batteries at once.
- b. Drain all water.
- c. Dry with absorbent cloth, and place in a warm but not hot place. The low heat of hair dryer could be used.

Don't drop the hearing aid.

Don't leave it in bright sunlight.

Don't store it on a radio or on any other electronic gadget.

Don't let the aid hang creating pressure for cord and receiver.

If the hearing aid is handled carefully, you will enjoy many years of good service.

We are here to help you in selecting a hearing aid and in making a custom earmould. Feel free to call upon us. We do not charge for our service.

Our Address :

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