



## Hearability information sheet

### ENVIRONMENTAL AIDS

This term is used to describe equipment that assists people in hearing every day sounds around the home or at work. Some equipment is designed for Deaf people and some specifically for the hard of hearing. Most equipment can help both those that wear hearing aids and those that do not.

Environmental aids are designed to assist with two things. They either alert us to a sound that we tend to miss such as the doorbell, or they assist us to hear sounds that are too faint such as the TV or telephone.

#### **Alerting devices**

These can help by providing you with an alert signal in one of three ways. Firstly they may amplify the sound (extra loud doorbell), secondly they may add a visual indicator (phone flash) or third they may provide a tactile response (vibrating pad for an alarm clock). Some alerting devices use a combination of all three.

#### Paging systems

There are several pagers available that can provide alerts to all sorts of sounds. Most consist of a small pager that is carried around the home (or worn on a belt) and a set of sound triggers that listen for particular sounds. When activated the trigger sends a signal to the pager making it vibrate. The pager usually has a series of lights and symbols on it that light up according to which trigger has been activated. Paging systems can provide alerts for the telephone ringing, the doorbell, the fire alarm, the burglar alarm, a baby crying or can be used by one person to 'page' another.

#### Alarm Clocks

There are several clocks available that are adapted to provide a flashing light, extra loud alarm and a vibrating pad. The vibrating pad is linked to the clock by a short cable that enables it to be placed under the pillow. Once the alarm clock goes off, the pad vibrates until the alarm is cancelled. Both mains and battery-powered clocks are available with digital display, analogue display or both.

#### Doorbells

There are extra loud doorbells, doorbells with a flashing light and even doorbells that are linked to a pager. The extra loud doorbells are usually fixed, but small portable door chimes are available that can be carried from room to room. These portable chimes work by infrared signal so there are no wires between bell push and chime. Some chimes have variable volume and a flashing light built in. One doorbell system can be wired into the house lights so that when the doorbell is pressed one or more lights in the house flash.

#### Fire alarms / smoke detectors

Standard smoke alarms have now been adapted to provide a visual indicator, a siren and a vibrating alert. The visual indicator is normally a very bright flashing beacon (like a camera flash). Several of these can be run from one alarm so they can be placed at intervals around the home. The siren emits the same high pitched sound as standard smoke detectors. The vibrating pad is used like the alarm clock pad and is designed to wake you up if the alarm is activated at night. Pagers can also be linked to a fire alarm or smoke detector.

There are three types of detector unit and it is important that the correct one is fitted in the appropriate place. There are optical smoke detectors (smouldering fires which produce lots of smoke), heat detectors and ionising smoke detectors (fires with more flame than smoke). Seek

professional advice from a reputable alarm installer, the Fire brigade or social services before making any decisions.

### Telephone ringers

There are several ways to be alerted to an incoming phone call. A visual indicator, an extra loud bell, a tone caller or a vibrating pager. The visual indicator is a bright flashing beacon (phone flash) that flashes with each ring of the telephone. Several extra loud bells are available or there is a 'tone caller' that has four ring tones and a variable volume control. These are all linked to the incoming phone line. Pagers respond to the sound of ringing and vibrate.

### **Assistive devices**

These include equipment designed to assist us in hearing sounds such as the television, radio, telephone calls or face to face conversations.

### Television / Radio / Hi-fi.

Whether you wear hearing aids or not, it is important to listen to the TV or radio at an appropriate volume. Our hearing can be damaged by excessive noise especially if we are exposed to it for any length of time

A portable amplifier is normally battery powered and comprises a small hand held unit with separate volume and tone controls. It is linked to the sound source by a microphone lead. Some have a tiny microphone built in so can be used more discreetly to help face to face conversations.

Portable amplifiers can be used with headphones for those who do not have hearing aids or with a small neck loop for those who have hearing aids. The neck loop is able to send information direct to the hearing aid when it is set to the T position. This setting activates the inductive coupler built into the hearing aid. Once received by the coupler, the sound is transmitted into the ear in the normal way.

Larger loops can be used with a more powerful mains powered amplifier. These fixed loops of cable can be laid around an entire room or part of a theatre or cinema. They can be used by people who wear hearing aids and allow them freedom to move freely inside the looped area without losing the sound. An additional microphone connected into a fixed loop system at home will allow other sounds such as the telephone or doorbell to be heard along with the TV, radio or conversations.

Some amplifiers use an infrared signal instead of a directly connected loop cable to receive the sound. They comprise a small amplifier unit connected to the sound source and either a set of headphones or a neck loop. The sound is transmitted between the source and the listener via an infrared signal much the same way as the TV remote control does.

### Subtitles on television

Any television that has a teletext facility can bring subtitles up on the screen with the programme you are watching. These provide a word by word transcript of the programme as it is being viewed. The teletext page for subtitles is 888.

According to the Independent Television Commission (ITC) up to 8 million people in the UK currently use subtitles on television. The Subtitles and Broadcasting Act (2003) which applies to digital broadcasting makes several demands. By 2008 ITV and Channel 4 must subtitle 90% of its programmes, Channel 5 must subtitle 80% and the BBC has committed to subtitle 100% of programmes. However, the quality of subtitles remains a problem and is not currently subject to a code of practice.

Free view and digital terrestrial TV all have the capacity to show subtitles.

### Recording and viewing subtitles

This can be achieved with a video recorder linked to a TV showing subtitles. However there are no video recorders on the market at the moment that can do this. The only way to record subtitles at the moment is with a 'telemole' adapter. This allows a non teletext TV to show subtitles on television programmes and record them on tape. Freeview and Digital TV subtitles can be recorded straight onto tape via the video and set top box.

Many films are now available in video format, which includes hidden subtitles or 'closed captions'. These can be made to appear on screen if the video player is linked to a caption decoder. The decoders are small units that link between television and video. There are only two makes of decoder available at present. Check that the video bears the logo of the National Captioning Institute.

DVD's are also now widely available and all films in this format have subtitles on them. Switch them on in the main menu settings of the DVD player, using the remote control.

### Face to face conversation

The portable amplifiers already mentioned can be of great help in amplifying speech particularly for face to face conversations, social gatherings or meetings. However, another device is available that can help in this way, the radio aid.

These are normally used in schools and provide a link between teachers and deaf children, but are perfect for face to face conversation. They consist of a transmitter with a microphone (worn by the speaker) and a receiver (worn by the listener). The transmitter uses radio waves to send its signal to the receiver so there are no wires between the two. It is a 'wire-less' connection. The receiver is connected to the hearing aids in two ways. Either by input leads that connect direct to the hearing aid or via a neck loop with the hearing aids set to 'T'. The receiver can also be used with headphones for people who do not wear hearing aids.

Radio aids are battery powered (often rechargeable) and have the advantage of being useable over a distance of many metres. There is no need for the transmitter and receiver to be in line of sight for the system to work.

### Telephone calls

Hearing a voice clearly on the telephone can be one of the biggest challenges for hard of hearing people. However, there are several types of telephone that can help. All British Telecom (BT) phones now have a small loop or 'inductive coupler' in the handset. This means that people with hearing aids can use their 'T' switch to cut out background noise and get better clarity on the telephone. If you do not wear a hearing aid, several telephones are available that have tone control and are able to amplify the incoming voice. Some can also amplify your outgoing voice if needed.

All public (BT) telephones have loops in the handsets. If the phone you are using has no way to amplify there are several clip on amplifiers available. They amplify the incoming voice and some have an inbuilt loop so you can use them with the hearing aid 'T' setting. This handy battery powered gadget simply slips over the telephone earpiece.

Some BT handsets for use at home also have a hands free facility. These allow you to press a button and leave the handset on the phone. A built in speaker plays the call to you and a microphone receives your reply. This allows you to 'talk' to the telephone as if having a conversation.

BT has just launched a phone for use at home that can be used for making voice calls and has the ability to send 'short text messages' (SMS) to a mobile phone. The phone has a keypad and screen to allow you to see the message before it is sent. There are several similar phones available.

### Mobile phones

Mobile phones are problematic as they cause interference with hearing aids. This makes it difficult to use them in the conventional way. However, there are several ways that people with hearing aids can use them. The latest technology includes neck loops and hearing aid links that utilise the 'T' switch facility. There are also small hand held units that look like a mobile phone but contain a loop. These are connected to the mobile phone by a cable and are used in place of the phone which can be placed in a pocket away from the hearing aids so removing interference problems. The hand held loop has a microphone built in allowing you to respond to the call heard via the loop.

Mobile phones also have the capacity to send text messages to one another via a keypad. This is a quick and easy method of keeping in touch. Computer software now exists that allows text messages

to be sent from some mobile phones (Nokia communicator 9210) direct to textphones. Many mobile phones can also receive email and faxes. It is also possible to send a text message to a mobile phone via a computer.

#### Text telephones (minicoms)

If your hearing loss is such that you cannot make use of a conventional voice telephone, there are several text telephones available that use a keyboard to send typed messages. These text telephones have a small screen so that you can see what is being typed. Textphones normally communicate with another textphone via an ordinary phone line. Your message is typed and appears at the same time on the screen of the phone you have called. Their reply appears on your screen as soon as it is typed. If however, you want to contact a hearing person on voice telephone from your textphone, there is a special operator service available. This service called type talk, creates a three way call with the operator acting as a go between. The operator conveys your message to the hearing person and sends their reply in text back to you. The service can also be used to allow hearing people to contact a textphone user.

Mr A Goldsmith RHAD BA Health MSHAA RGN RMN PGCEA RNT  
Registered Under The Hearing Aid Council Act 1968 N° 5640  
Hearability Ltd, 29 Broadwater Street West, Worthing, Registered N° 4625005  
 07990796210/ 01903 237732  
Email: [hearabilitys@btconnect.com](mailto:hearabilitys@btconnect.com)