

Connection of ALD to external accessories

Most instruction books only give a few pictorial instructions for connection of Assistive Listening Devices (ALD) or cochlear implants to phones-computers etc which gives the impression this is an instantaneous activity whereas some connection may take 15 minutes to achieve, unfortunately the devil is in the detail and the objective of this document is to provide a more detailed description of such connections and the complications which may arise

Please be aware that any form of streaming will deplete the battery life of the ALD.

Mobile Phones

The most common connection used is Bluetooth, which comes in three main forms:

- 1) Classic: which almost every phone has and is also used for wireless headphone, earbuds and connection to computer audio etc. Bluetooth SIG regularly issues updated versions and older phones or specific models may not be compatible with the ALD software
- 2) LE or low energy: not many models of phone currently have this, manufacturer's using LE will have a list of suitable phones or an external unit which converts the ALD transmission to classic Please be aware that dependant on the software implementation on phone and ALD the phone may pair with the ALD but will not communicate music-speech etc to the ALD
- 3) Auracast: released in late 2023 and not yet commonly available on phones (as at January 2025). Whereas Bluetooth Classic and LE are a one to one link, Auracast is a broadcast, i.e. one to many BUT the linkage will depend on the Auracast transmitter manufacturers "assistant" which is the software app controlling access to that transmission which is currently under the control of the Auracast manufacturer's design. Also, an ALD manufacturer may "lock" their accessories to their own ALDs

If problems are experienced which cannot be overcome by information in this document most ALD manufacturers have a list of phones which can be used with their device.

When connecting an ALD to a phone for the first time it is best to switch off any Bluetooth transmissions in computers, mouse, headphones, wireless speakers, HiFi and radios etc. or physically separate the ALD and phone by going outside or into another room. Switch off any ALDs (radio aids) as well.

On the phone go to settings, then Bluetooth In the Bluetooth menu select "pair new device". Switch on ALD, place the phone in search mode for "pair new device" it will pick up any other Bluetooth devices in range and most, such as a PC, will have relatively powerful transmissions compared with the ALD, the search may take some time and if not successful may require a number of repeats of the "pair new device" and switching off and restarting the ALDs before the ALD is found by the phone.

Whilst most ALD manufacturer's place their ALD in pairing mode on switch on for a limited time, if this does not work refer to manufacturer's information to find out how to put the device into pairing mode .

And of course, ensure that the ALD has a fully charged battery.

Once the ALD is 'found' it may take some time before it has a full connection as there is often an extensive exchange of data to ensure the phone and ALD software are compatible.

Be aware of strong magnetic fields!

It's important to be cautious about electromagnetic compatibility (EMC) when working with sensitive electronic devices like ALDs. Laptops and PCs generate electromagnetic fields that might interfere with the programming or pairing process of an ALD. However, the risk of actual damage to the ALD software is generally low."

An ALD may have two connections to a mobile phone:

1. To a manufacturer's app for control of ALD
2. To the phone for audio from phone calls music etc

In most cases pair the ALD with the phone before attempting to connect to the app.

In the case of an external device between the ALD and phone, pair the external device first.

In all cases as described above this may be a protracted activity. It may take in excess of 15 minutes to achieve full connection.

TV Streamers

These will mainly use some form of Bluetooth or Roger (including Auracast) protocol and the pairing issues identified above are relevant.

Audio Connection of Streamer

These require a connection to the TV audio output. These used to be a simple connection to Philips/RCA connectors or if daisy chained from HiFi a simple doubler, however most modern TVs only have an optical or HDMI connector.

Optical: Doublers or treble units are available using the description to search below:

Digital Audio Optical Cable 1 in 2 out Toslink Splitter Dual Port Audio Adaptor



HDMI: A converter from RCA to HDMI are available using the search description below:

HDMI to AV Converter



RCA to HDMI Adapter,



Please note, these sometimes require a 5V power source. Please see below.

Power Source

Both the TV streamer and the HDMI adaptors usually require to be powered by a USB 5v source, whilst the TV streamer usually comes with a 250vAC or USB 5V adaptor it may be more convenient to use the TV USB sockets with the leads provided, if only one socket is available 2-3-4 splitters are available using the search criteria below:

USB Splitter, USB to USB Female Adapter,

Costs

The units described above are normally below £10 each