

# Connecting Connevens CRM-220s to computers

The mention of computers, CD ROM's and Multimedia is enough to strike fear in many a normally strong heart. Teachers of the deaf and parents also have to consider the effectiveness of computer sound for a hearing aid user in an average (noisy) room. Simply placing the radio system microphone near to a loudspeaker will be far from satisfactory.

Many computer programmes now have sound as an integral part of their use, this information sheet shows you how to connect a Connevens CRM-220 radio system directly into a computer sound system.

For hearing aid users without a radio aid, we suggest the Connevens information sheet *Connecting to Computers for hearing aid users (B0COMPAID)*.



## Why would I want to connect the CRM-220 radio system into a computer?

Probably for one of two reasons, either for group class work or simply because having got a user happy with their radio system you want to maintain consistency.

Also cochlear implantees who have a radio system which has been set up by their centre can use the radio system as a 'buffer' to connect into external equipment thus removing the need to return to the implant centre for setting up guidance.

## How do I tell if my computer is suitable?

### Firstly – does the computer interfere with the hearing aid or radio system?

For example: if the hearing aid is used on 'T' with the radio system, it is possible that the display screen may cause a buzz on the system.

So, before you buy any bits from Connevens and start connecting things up, please take your system (that's the radio system & hearings aids), sit exactly where the user will sit, listen to the system and make sure that you are not picking up any funny noises.

If you do find a problem, you will need to sort that out before trying to connect to the computer. If the hearing aid on 'T' has a buzz from the screen display then you will either need to try a TFT flat screen or use a direct input hearing aid.



*If you are a non hearing aid wearer who is not familiar with hearing aids but who has been asked to do the experimentation for a hearing aid wearer, you may be interested to read the Hearing Aid First Aid section in the Connevens Catalogue which shows steto-clips etc. that you can use to listen to a hearing aid.*

So you now know that the hearing aid and radio system work OK near the computer.

### Next – does your computer have a sound card?

If you have a pair of small speakers beside your computer then yes, you do have a sound card. Which is good as this is the part of the computer you will be connecting to!

*If you don't, you will need to have a look in your manual or ask a friendly computer boffin! Just because a computer makes some sort of noise does not guarantee that a sound card is fitted – sorry!*





## What equipment do you need for use with a CRM-220?

You will need a transmitter input adaptor with a suitable lead to connect directly into the computer sound system.

If you are buying from scratch then you should purchase:



**CRM-T220 Transmitter stereo input adaptor**  
Connevens part no. 2206S



**Pack of stereo leads**  
Connevens part no. 2206PKS  
This pack will allow connection to a wide range of electronic equipment.



**Stereo socket doubler**  
Connevens part no. \*F387\*  
3.5mm stereo plug to two 3.5mm stereo sockets

See Connevens Catalogue CRM-220 Radio Microphone section for these two items.

See Connevens Catalogue Section 11 for this item.

All these items can also be purchased online at our shopping website: [www.DeafEquipment.co.uk](http://www.DeafEquipment.co.uk)

**So, you have got the computer and all the bits and you are ready to connect up – but where does it all plug in?**




### A. Does the computer have a headphone socket that you can use?


**Headphone socket on peripheral speakers – YES, should work**

**Headphone socket at the back of the computer – YES, should work**

**Headphone socket on the front of the CD drive – NO, won't work, see below.**

If you want to use a headphone socket to connect to, then you have to look for one that is NOT on the CD drive. Some computer speakers have a headphone socket, if yours does then that should be ideal. If not, there is sometimes a headphone socket to be found on the sound card, accessible from the back of the computer. Have a look at the back of the computer, amongst all the wires and look for a socket with the  symbol.

*Most modern computers have a headphone socket on the front of the CD drive but this socket usually only works for audio cd's played on the computer, it does not provide the sound from computer programmes, so you cannot use it for connecting your CRM-220, sorry!*

If you have found a  socket, probably the best, if not the only, way to check that it is suitable is for somebody to use a set of personal stereo headphones and have a listen.

If you have found a suitable headphone socket and want to use headphones as well then you use the socket doubler (pt.no. \*F387\*).



If you do not have a suitable set of stereo headphones, Connevens also sell good value personal stereo headphones (part no. FMG7410) for checking computer headphone sockets. OK, I give in, these are not just good value – they are **cheap!**



In addition to the FMG7410 headset, Connevans are able to supply two further headsets and an extension lead which has its own in-lead volume control.



**Stereo headphones**  
Connevans part no.  
FMG7410

Extremely good value but maybe for testing rather than extended use.



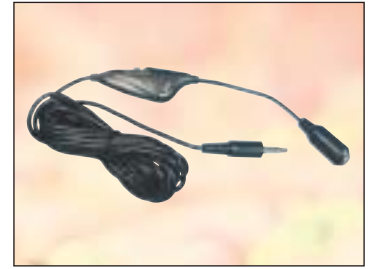
**Stereo headphones**  
Connevans part no.  
FMG7420

Good listening quality and comfort.



**Stereo earphones**  
Connevans part no.  
FMG7431

Good listening quality and comfort for those preferring earphones.



**Stereo/mono 3m extension lead with volume control**  
Connevans part no.  
X35ESVOL



## B. Connecting to the low level output from the sound card

If the answer was 'NO' to question A, no suitable headphone socket, then please don't give up. If you have external speakers, you can connect to the low level output from the sound card – which is what the speakers normally plug into.

**Follow the speaker wires down to the back of your computer, make sure you recognise which socket it is and then unplug the speakers and plug in the Stereo socket doubler instead.**

**Replug the speakers into one side of the doubler and the transmitter input adaptor into the other side. You may find it easier to plug the speakers and adaptor into the doubler before plugging back into the computer.**

If the connection on the computer is not as straightforward as this, then the instructions with your computer sound card will indicate what socket does what, you need the stereo line (or headphones) output.

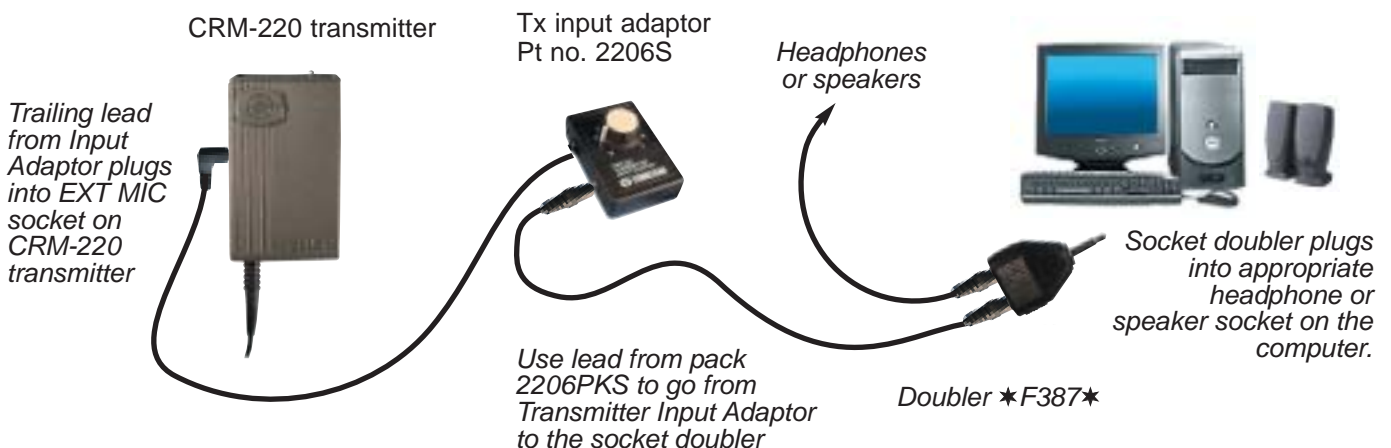


If you have problems working out the connections please phone your computer supplier not Connevans(!), we are not computer experts. However, as a small suggestion from us to help, you may find that talking to your computer supplier about deafness, hearing aids and radio systems adds unnecessary complexity so simply ask "which output socket on the computer can I use to make a recording on a tape recorder?".

Please note that the Connevans CRM-220 transmitter input adaptor is suitable for connecting both to a low level sound output from a sound card or the higher level of a headphone output.



## Connecting it all together – typical connections



There is a section on the use of a transmitter input adaptor in the CRM-220 instruction booklet, but to help you we include similar information here.

## CRM-220 Radio System Transmitter Input Adaptor

### Reason for use

In most situations it is better to feed amplified sound directly into the transmitter without using the microphone. A good example is during the showing of a video. For the hearing aid user the level of background noise could possibly be louder than the film soundtrack. By feeding the sound directly from the video (or computer, cassette, television, etc.) into the transmitter it is possible to eliminate the unwanted background noise.

### What does a transmitter input adaptor look like?

The transmitter input adaptor is a small box with a volume control and scale. There is one trailing lead and one 3.5mm jack socket.

### What does a transmitter adaptor box actually do?

The transmitter input adaptor box is more than just a method of connection to a transmitter, the unit reduces the audio signal from the computer (video or whatever) to a level that will be accepted by the transmitter. The input adaptor volume control will allow you to adjust the input level into the transmitter.

### What are the trailing lead and socket for?

The trailing lead is used to connect into the transmitter external microphone socket of the CRM-220 and the 3.5 mm jack socket will accept the appropriate lead from the computer (or other sound source).

### What else could I use the transmitter input adaptor for, apart from connecting to the computer?

Connecting to video, TV, cassette, personal stereo, soundfield and PA systems etc. – please refer to the CRM-220 Fast Track guide or Instruction booklet for more information on connecting to other sound sources.

## Two ways of using the transmitter input adaptor



**Individual use** with CRM-220 transmitter connected to computer.



**Group use** with the computer connected to the environmental microphone input of the radio aid receiver and the transmitter worn by the tutor as usual. The receiver 'Tx' vol control adjusts the tutor volume and the 'E' volume control adjusts the computer volume.



## SUMMARY (PLAN OF ACTION)

1. Check that the computer is not interfering with the hearing aid and radio system.
2. Check that the computer has a sound card.
3. Buy any bits that you need.
4. If you do not have 100% technical confidence then, before you connect to your computer, can we suggest that you start by connecting to the stereo socket of a personal stereo. Having got that working, you are then ready to plug into your computer with confidence.
5. Identify the socket on the computer to use.
6. Connect up the radio system, transmitter input adaptor and computer.
7. Carry out a listening test.
8. **Congratulate yourself!**



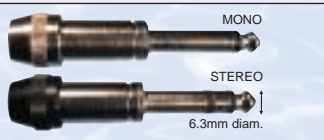
In case you have trouble identifying different audio plugs, we have reproduced our handy visual guide from the Connevens Catalogue.

*"I am afraid that I am not very technical and don't understand the names you use when talking about connecting things".*

**Jack plug 3.5mm** – that's a small jack plug usually found on headsets for personal stereos.



**Jack plug 1/4" (6.3mm)** – that's a big jack plug often found used with school equipment.



**Mono or stereo?**

Look for the number of black bands on the plug... one for mono, two for stereo.



Jack plug 2.5mm right angle



Jack plug 3.5mm right angle

**5 pin din – 180°**



**2 pin speaker din**



**Phono** – that's a connector with a large round centre pin with claws around it. The sockets are often found on videos (audio out) and domestic hi-fi equipment.



**SCART** – that's a large rectangular connector with lots of slanted pins found only on television and video equipment.



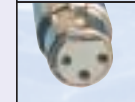
**XLR** – 3 pin XLR connectors are commonly used for balanced line connection for both conventional and radio microphones.



A male connector is usually found on the microphone



MALE



**www.connevens.com** and **www.DeafEquipment.co.uk**

**www.connevens.com** – the information website for Connevens includes full online catalogue, downloadable info & instruction sheets

*(Adobe Acrobat 5 or later is required to fully use this website)*

**www.DeafEquipment.co.uk** – the e-commerce website for Connevens has all our products available for purchase online.

If you would like to be kept updated with notification of new products and other news from Connevens please send a blank email to [update@connevens.com](mailto:update@connevens.com) and we will keep you informed.

