

ARD9000 service bulletin - audio buzz in analogue mode (28.07.2005)

Reports have been received of a 50Hz audio buzz when using the ARD9000 in analogue mode. The characteristic is apparent when the PTT is used to toggle between analogue and digital transmit, audio is clean in digital mode but a buzz is present in analogue mode (most noticeable when not talking into the microphone - blank carrier).

There are two actions to eliminate the noise if you feel it is a problem...

1) If you use the front panel VOLUME / ON / OFF switch to switch the ARD9000 off, it will still pass audio in analogue mode and key the PTT line of the transmitter. In this condition there is NO BUZZ on the analogue audio. Do not remove the DC power feed to the ARD9000 or it will not function.

2) If you specifically want to switch between analogue and digital via the PTT, remove chip resistor R22. The audio will then be clean on analogue mode (digital is unaffected). However, the ARD9000 will no-longer pass audio when switched off.

The level of buzz is not the same on all units and varies depending on the transceiver / earthing / earth loops / power supplies employed... there appears some batch variation too due to tolerances and component manufacturer. This information is based on production serial numbers around 091500xx (July 2005). Remember, the audio level adjustment controls need careful setting to achieve best results.

If you are not skilled at working with SMD components, don't try the following! Do not unnecessarily touch the PCB or components, ensure you have observed standard anti-static procedures (and disconnect all leads and power):

- a) Remove the two rear panel case screws (leave the earth screw in place).
- b) Slide the PCB backward by holding the assembly by the rear panel (no need to remove the front panel).
- c) R22 is located on the underside of the PCB close to the DC input socket, the PCB is printed "R22".
- d) Carefully remove R22 using a soldering iron, ideally with the aid of de-soldering braid or a de-soldering pump.
- e) Reassemble the cabinet, if the front panel holes will not line up, temporarily loosen or remove the front panel (two screws).
- f) Test the ARD9000.



