

To: Neales Bert E Jr NPRI <NealesBE@NPRI70.NPT.NUWC.NAVY.MIL>
From: Ender Kuntsal <kuntsal-itc@channeltech.com>
Subject: ITC-8201 Output Offset Voltage
Cc:
Bcc:
Attached:

Hi Bert,

I apologize for the delay but I was gathering information.
We are going to correct this offset DC voltage issue in future preamplifiers. But, I understand you are interested in a solution for the existing units.
I will try to explain the issues here...

To eliminate the .6-.7 VDC offset voltage (both outputs to grd) we need two capacitors, each will be added, in series, to the output leads of a hydrophone.
If your load stays well above the output Z there should be no other side effects at all. Even if there will be this will be at LF's. When you add these capacitors the output impedance will change in an order of magnitude. For example: if you connect 15 uF the output will be 650 Ohm, 100 uF will give 100 Ohm and 220 uF 60 Ohm. Currently the P/A output is 30 Ohms (as is). The larger the cap the lower the offset value gets but also the size gets bigger. This approach should bring your offset value close to 10-20 mV range.

You can use electrolytic caps (polarized); pls. make sure the positive (+) side is attached to the non-inverting output of the preamp and negative (-) is attached to the inverted output.
I guess you can try a few of these options and see which one will work better for you.

I hope this will help. Pls. let me know how this will turn out.

Regards,
Ender
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DC output
offset