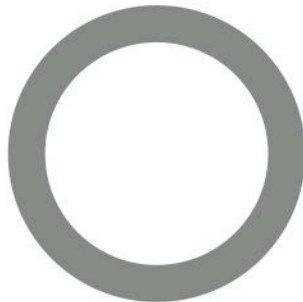


Goldline TEF Division

TEF25 USB Preamplifier – Low Noise Capability Verification

Orfield Laboratories Inc



Design Research Testing  
Acoustics / Vibration / Vision / Lighting / Architecture / Market Research

TEST

Manufacturer: **Goldline**  
Device **TEF25 USB**  
**Preamp**  
Report Date: **October 4, 2005**  
Test Date: **September 27, 2005**

RESULT SUMMARY

NC = 0

PREPARED FOR

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The information included in the following report are the results of low noise testing performed on one TEF25 USB Preamp.

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Reviewed by:

Elliott B. Dick  
Quality Manager





**TEST RESULTS**

**Measurement Equipment:**

Manufacturer: **Goldline, TEF Division**  
 Specimen: **TEF25 USB Preamp**  
 Serial #: **05H1604**  
 Date Tested: **September 27, 2005**  
 Calibrator: **Brüel & Kjær type 4230 #1379712\***  
 Microphone: **Brüel & Kjær type 4179 #1832800\***  
 Preamplifier: **Brüel & Kjær type 2660 #1885025**  
 Power Supply: **Brüel & Kjær type WB 1057**

\*NIST Traceable Calibration on file

**Environment:**

Anechoic Chamber at Orfield Laboratories.

**Conclusions:**

When combined with an appropriate very low noise microphone assembly and preamplifier, such as the B&K type 4179 / 2660 combination, the TEF25 USB Preamp was found to be capable of measuring sound pressure levels well below the threshold of human hearing (i.e. NC=0). As is most frequently the case the measurement noise floor capability of the system is dictated by the self-noise of the microphone and preamplifier. Typical high quality (ANSI type 1) 1/2" and 1" microphones are limited to a noise floor of around 10 – 15 dBA, quiet enough for most any architectural acoustic measurement purpose.

SPL = 0.9 dBA

Lower Limit w BK 4179  
 9/27/2005 5:56:01 PM

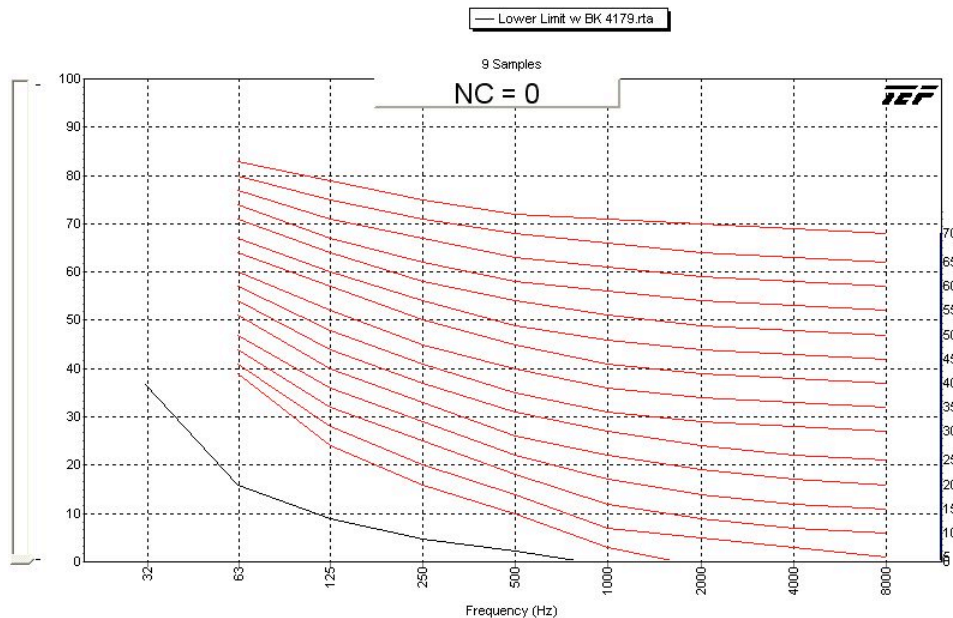


Figure 1 – Noise Floor at Anechoic Chamber w/ TEF25 B&K 4179/2660