



Technical Note 66

Vehicle Noise Printing - Optimus

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Updates

In the interests of continuous product improvement, Cirrus Research plc reserves the right to make changes to product specifications without notice.

To understand the latest updates that have been implemented into this product and to download the most current version of this user manual, visit our website at www.cirrusresearch.co.uk

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1. Introduction

This tech note describes equipment required to perform vehicle noise and print results using an Optimus+

Please refer to ISO 5139 2007 for the procedure to be followed to perform a vehicle noise test.

2. Equipment Required

To perform a vehicle noise test and print results the following equipment is required:

- Optimus plus – any variant (with at least V5.6.3177 firmware)
- PR:311 printer
- ZL:173 printer cable 1m (optimus COM1 to 9 pin D type male)
- ZL:151 vehicle noise button

Please speak to your Cirrus Research sales representative to discuss suitable vehicle noise kits including tripods, preamplifier extension leads and carrying case.

3. Preparation

To configure the optimus for a printer, plug the optimus into Noisetools, select 'Configure' then select the 'Advanced' tab and select the Printer (Generic 32ch) option for Port B. Click on 'Save to Instrument'.

The screenshot shows the 'Instrument Settings' window for device G300749, CR:171C. The 'Advanced' tab is active in the sidebar. In the 'Serial Port Modes' section, 'Port B' is configured as 'Printer (Generic 32ch)'. A red arrow points from the text 'Select printer here' to this dropdown menu. Other visible settings include:

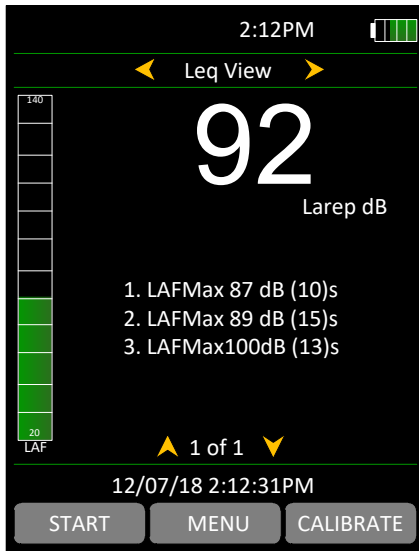
- Serial Number: G300749
- Current Time: 25/03/2021 11:37:51
- Type: CR:171C
- Last Recalibration: 31/01/2021
- Version: 5.6.3177 (3177)
- Level: 93.70 dB
- Tone Detection: Show checked, Type Improved, Thresholds: 18 dB (6.3-20 Hz), 15 dB (25-125 Hz), 8 dB (160-400 Hz), 5 dB (500 Hz-10 kHz), 5 dB (12.5-20 kHz)
- Wind Farm Options: Automatically Record Audio unchecked, Audio Duration 10 s
- Serial Port Modes: Port A Terminal (115.2 kbps), Port B Printer (Generic 32ch)
- External Battery: Type ZE-100
- AC Out Settings: Enabled, +20 dB
- DC Out Settings: Type LAF

4. Operation

Set up the vehicle noise kit and plug in the preamplifier extension and the push button.

Plug the printer in the optimus and press the button on the printer to switch on.

Press the right/left buttons on the optimus to show the Vehicle Noise screen, as shown below.



Perform a vehicle noise test per ISO 5130 2007, by pressing the vehicle noise button three times. After three samples an average noise figure will be displayed as above.

To print the results, ensure the printer is plugged in and switched on, press the 'Menu' soft button and then select the 'Print' menu option on the bottom right. If the print does not occur, press the button on the printer and the print should start.

Please note the following:

- the previous vehicle noise measurement is cleared when switching back from the menu view to vehicle noise view ready for a new measurement.
- Vehicle noise measurements are not stored within the optimus, and should be printed immediately after performing a test.
- The vehicle noise report is only printed if the menu is entered from the vehicle noise page, otherwise a standard noise report will be printed for the last noise measurement performed.

The following Vehicle Noise Report should be printed:

Vehicle Noise Report

Sound Level Meter:

Type CR:171C

Serial No. G300749

Accuracy:

IEC 61672-1:2002 Class 1

Print Date : 25/03/21

Print Time : 11:57:16

Calibration Date : 25/03/21

Calibration Time : 8:56:36

Calibration Level : 93.7 dB

LArep : 95.0 dB

1 - LAFMax 96.0 dB

Elasped Time 4 s

2 - LAFMax 95.0 dB

Elasped Time 4 s

3 - LAFMax 93.0 dB

Elasped Time 2 s

Notes:

Operator:

Signature:

Cirrus Research Plc.

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