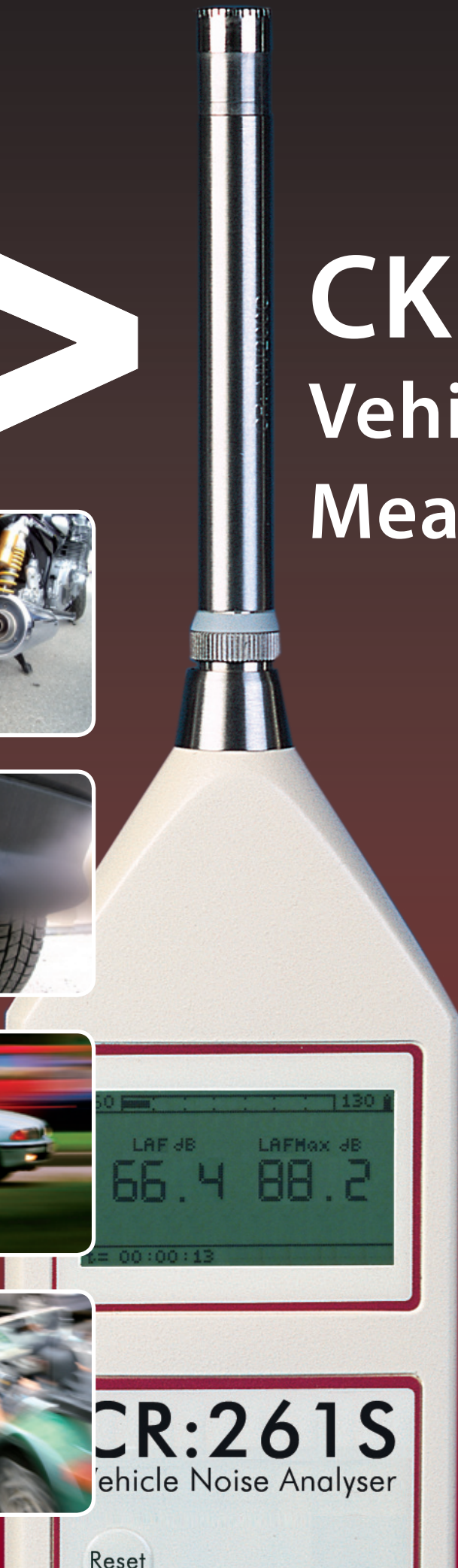


# CK:261S

## Vehicle Noise Measurement Kit



50 130  
LAF JB LAFMax JB  
66.4 88.2  
= 00:00:13

**CK:261S**  
Vehicle Noise Analyser

Reset

# CR:261S

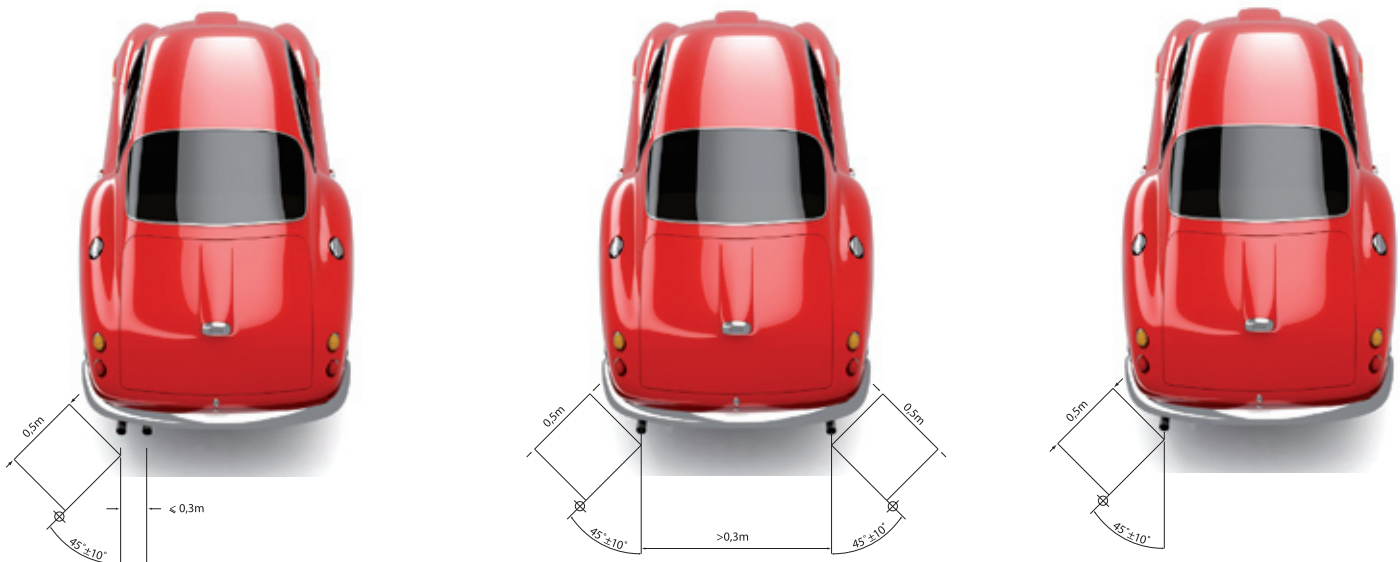
## Key Features

- > Vehicle noise testing to ISO 5130:2007 'Acoustics - Measurement of noise emitted by stationary road vehicles' & §29 StVZO
- > Class 1 according to IEC 61672-1:2002
- > PTB Type Approval to DIN EN 61672-1:2002-10 and DIN EN 61672-2:2003-08
- > Ideal for static noise testing of cars, trucks & motorbikes in workshops, garages and test laboratories
- > Suitable for Local, State and Federal enforcement agencies
- > Suitable for motorsport noise measurements
- > Simple Operation with 3 buttons
- > Remote control for measurement and display of three measured levels
- > Complete measurement kit (CK:261S) includes all of the accessories needed to make measurements
- > Tripod, Microphone positioning template and tape measure included in the CK:261S measurement kit
- > Automatic calibration
- > Available in English & German versions

## Introduction

The CR:261S is a Class 1 Sound Level Meter that has been designed to meet the requirements of ISO 5130:2007 and §29 StVZO for the noise testing of motor vehicles.

Designed to be used in workshops, garages and test laboratories alike, the CR:261S is a robust instrument that is simple to operate whilst providing the measurements needed.



## Type Approval to IEC 61672

The CR:261S is the first Cirrus Research plc Sound Level Meter to carry full PTB Type Approval to the latest IEC 61672 Standard for Sound Level Meters.

The approval is to DIN EN 61672-1:2002-10 and DIN EN 61672-2:2003-08 and the PTB reference number is PTB-1.72-4025043.

DIN EN 61672 is the same as IEC 61672 and is the latest standard for sound level meters.

Full details of the PTB Type Approval are available from Cirrus Research plc.

## Operation & Making Measurements

The CR:261S has been specifically designed to be used for vehicle noise measurements. In this application, the most commonly used measurement is the maximum sound level, or  $L_{AFmax}$ . The instrument has two operating modes.

### Stand-alone Mode

This is when the CR:261S is used without the remote control. In this mode, the display shows the current sound level,  $L_{A^r}$  and the maximum sound level,  $L_{AFmax}$ , recorded.

### Remote Control Mode

The second measurement mode uses the remote control to start and stop the measurements.

With the remote control unit, ZL:261S, the noise tests can be carried out quickly and comfortably by one person alone - with a single button. When the remote control is pressed, the instrument will measure and record the  $L_{AFmax}$  value. This mode allows noise measurements to be made in accordance with the requirements of ISO 5130:2007 as well as §29 StVZO.

The last three  $L_{AFmax}$  measurements are displayed on the screen allowing the user to safely operate or monitor the vehicle under test whilst making the noise measurements.

## Measurements to ISO 5130:2007

ISO 5130:2007 requires three consecutive measurements to ensure repeatability. These measurements are taken at a specified engine speed, or RPM, and the maximum sound level produced during the test is taken. Once three valid measurements have been made, the highest is taken and used as the valid result.

The microphone can be placed at the specified measurement position, typically 45° and 0.5m from the exhaust of the vehicle under test.



The CK:261S Measurement Kit includes a positioning template which can be used to ensure that the microphone capsule is set at the correct angle and distance from the vehicle exhaust.

The tripod included with the kit allows the sound level meter and microphone to be set at the correct height from the ground. The remote control allows the user to control the measurements whilst ensuring that the engine is at the correct RPM for the test.



The CR:261S can be supplied with a range of accessories and optional extras that allow the instrument to be used for various different applications.

## CK:261S Measurement Kit

The CR:261S Sound Level Meter is usually supplied as part of the CK:261S Vehicle Noise Measurement Kit.

Containing the Sound Level Meter and a full range of accessories, the CK:261S Kit is the ideal tool for the measurement of noise according to ISO 5130:2007 and §29 StVZO. The CK:261S Measurement Kit contains the following items:

- > CR:261S Class 1 Vehicle Noise Sound Level Meter
- > CR:515 Class 1 Acoustic Calibrator
- > UA:237 Windshield
- > CK:260 Carrying Case
- > ZL:261S Remote Control (5m)
- > User Manual & Certificates of Calibration
- > Tape Measure & Positioning Template
- > Tripod

The CK:261S can also be specified with the CR:511F Acoustic Calibrator and the CR:590 Reference Barometer which carry PTB Type Approval to IEC 60942:1988.

The measurement kit includes a tripod to allow the microphone to be positioned at the correct height along with an alignment tool to position the microphone at the correct angle to the exhaust.

A tape measure is also provided to ensure that the vehicle under test is positioned away from objects as specified by ISO 5130:2007.





# Specifications

## Applicable Standards

IEC 61672-1:2002 Class 1 X  
DIN EN 61672-1:2002-08 & DIN EN 61672-2:2003-08

## Microphone

Class+ Pre-polarized Free-field 1/2" Condenser

## Microphone Preamplifier

MV:200C Fixed Preamplifier

## Approvals

PTB-1.72-4025043 to DIN EN 61672-1:2002-08 & DIN EN 61672-2:2003-08

## Measurements/ Features

Sound level  $L_{AF}$   
Maximum Sound Level  $L_{AFmax}$   
Measurement program for automatic measurement and display of 3 maxima ( $L_{AFmax}$ )  
Remote control unit (5m) with one-touch operation

## Time Weighting

F (Fast) to IEC 61672-1:2002

## Frequency Weighting

dB(A) to IEC 61672-1:2002

## Measurement Range

60 to 130dB(A)

## Display

$L_{AF}$  digital and quasi-analogue,  $L_{AFmax}$  battery level, overload, measurement range

## External Connections

Remote Control Connection for ZL:261S  
RS232 Connection for instrument configuration & testing

## Physical

Dimensions	340mm x 75mm x 25mm
Weight	450 gms
Power	2 x 1.5v Alkaline LR6/AA
Battery Life	Typically >24 hours

## Environmental

Temperature	Operating -10°C to +50°C Storage -20°C to +60°C
Humidity	Up to 95% RH Non Condensing

## Electromagnetic Performance

EN 55022:1998  
EN 61000-4-2:1995  
EN 61000-4-8:1994  
EN 61000-4-3:2002

## Standard Accessories

The CK:261S Vehicle Noise Measurement is supplied with the following components:

CR:261S Vehicle Noise Sound Level Meter  
CR:515 Acoustic Calibrator  
UA:237 Windshield  
CK:260 Carrying Case  
ZL:261S Remote Control (5m)  
User Manual & Certificates of Calibration  
Tape Measure & Positioning Template  
Tripod

## Optional Accessories

The following optional accessories are available for the CK:261S Vehicle Noise Measurement Kit:

CR:511F Class 1L Acoustic Calibrator  
CR:590 Barometer for use with CR:511F

## Localisation

The CR:261S is available with the display and operating manuals in English & German. Other languages may be available. Please contact Cirrus Research plc or your local distributor for details.



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