



# iSV1611

## 1/2" USB Microphone



### iSV1611

The USB microphone model iSV1611 is a digital microphone consisting of a pre-polarized 1/2" condenser microphone capsule, preamplifier, 2 channel (stereo) ADC and USB interface which can be used with apps on smartphone, tablet, or PC.

PC, smartphone, or tablet receive the digitized 2 channel signal data via a USB cable connected to the iSV1611.

The two-channel operation allows simultaneous measurement from 16 dB(A) to 146 dB.

The 1/2" microphone capsule is designed for acoustic measurements in research, development and industry and is also used in building acoustics and audiology, among others.

### Technical data

A/D sampling frequency kHz	48/96/192
Frequency range ( $\pm 1.5$ dB)	4 Hz - 20 kHz
Microphone capsule thread	60 UNS
Polar pattern	Sphere
Electrical noise floor	12 dB (A)
Acoustic background noise	16 dB (A)
Limit sound pressure level	146 dB
Sensitivity	40 mV/Pa
Measuring range	16 dB(A) - 146 dB
USB standard	2.0 & 1.1
USB Power consumption	60 mA @ 5.0 V
Dimensions mm	$\varnothing 20 \times 165$
1/2" diameter	13.2 mm
Weight	96 g

## Microphone Capsule Specifications

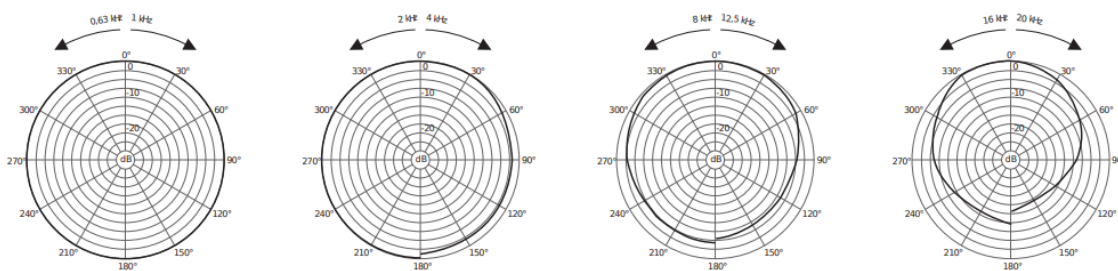
Transducer type	Capacitive pressure receiver
Frequency range 4 Hz – 20 kHz	4 Hz – 10 Hz: $\pm 1.5$ dB 10 Hz – 4 kHz: $\pm 0.5$ dB 4 kHz – 20 kHz: $\pm 1.5$ dB
Field Idle Transfer Factor	40 mV/Pa
SPL Max. for 3 % distortion at 1 kHz	146 dB
Noise	16 dB(A)
Polarization voltage	0 V
Capacitance with polarization voltage at 1 kHz	18 pF
Working temperature range	-50 ... +100 °C
Humidity up to	70 °C, 90 %
Temperature coefficient	$\leq 0.01$ dB/K
Static pressure coefficient	0.00001 dB/Pa
Diameter with protective cap	$13.2 \pm 0.02$ mm
Height	10.9 mm
Weight	8.3 g
Thread for preamplifier	11.7 mm 60 UNS
Thread for protective cap	12.7 mm 60 UNS



### Maintenance and servicing

To ensure proper functionality, the measuring microphone capsule must be protected from mechanical damage and, depending on the conditions of use, checked on all sides for contamination at intervals to be specified in the operating voltage-free state. After removing the protective cap, the impurities in its interior, as well as on the membrane, should be removed extremely carefully with a soft brush or cloth. The measurement microphone capsule is not suitable for use in chemically aggressive media and conductive dust. Condensation formation must be ruled out.

### Polar diagrams



### Free-field frequency response

### Typical frequency response

