



# LORANTZ

AUDIO SERVICES PTY. LTD.

## technical data

ACN 007 396 705

## MODEL:AC304U100/MI/8

## 12" Guitar 100W

### Description

An Australian made ferrite-magnet electric guitar loudspeaker using current state of art materials.

The cone is produced from selected softwood, hardwood and hemp fibers; this fiber formulation accurately reproduces each musical note with greater detail without blending. The cone materials and speaker parameters also achieve high efficiency bright crisp highs complemented with warm balanced low end. This tonal quality and reliability is achieved under our control, and is based on prior art enhanced with 30 years of paper cone manufacturing experience. This model employs a PESV voice-coil wound onto a TIL bobbin to achieve a high 100W power rating in demanding environments. The voice-coil is adhered to the cone body with selected epoxy adhesive to ensure reliable performance.

This Australian hand crafted loudspeaker is an excellent choice for the serious musician where high efficiency, high reliability are desired.

### Application

Suitable for modern high power guitar amplifiers with effects pedals. The voice-coil materials employed in this model are stable in high humidity environments; this model is recommended for harsh environments. This model delivers clean tones and responds well to pedals. This model is loud, very efficient hence is also recommended for use with low power amplifiers where clean reproduction is required. Warm bass tones are achieved in a vented cabinet design, open back are less complimentary. Open back cabinets will produce detailed mid and highs with a tight bottom end some bass EQ is recommended in this instance.

### Options

Many variations to this basic model are available:

- Choice of impedance, resonance, dustcap, cone materials and treatments and bobbin materials available.
- Recone kits and repair service available.

Please discuss your requirements with us.

### Mounting Details

Baffle opening diameter

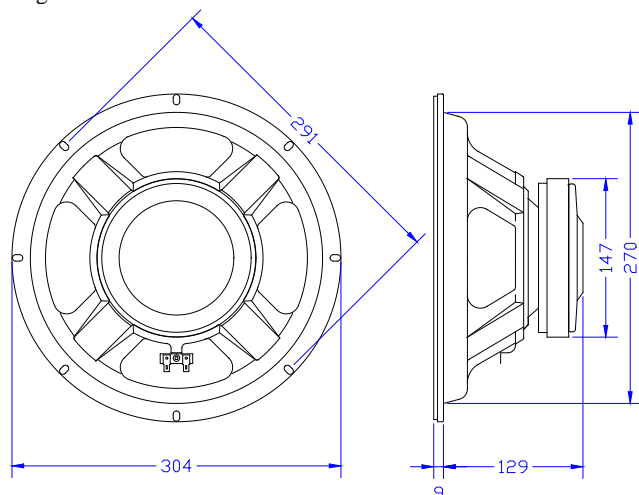
front mounting 273 mm

rear mounting 273 mm

Mounting pattern:

eight 6 x 9 mm slots equi-spaced on 291 mm PCD.

Flange thickness 9 mm



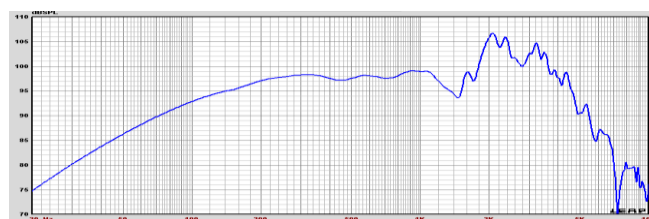
### Technical Data

Typical measured Thiele/Small parameters:

Maximum program power	=	100 watt
Thermal power rating	=	100 watt rms
Rated nominal impedance	Z	= 8 ohms
Rated frequency range	=	46 - 4500 Hz
Piston sensitivity level	=	97.8 dB SPL
Max SPL @ 1w	=	103 dB SPL
Resonance frequency	=	80 Hz
Mechanical Q	Qm	= 7.3
Electrical Q	Qe	= 0.43
Total spk. Q	Qts	= 0.41
Moving mass	Mmd	= 35.8 gms
Effective diaphragm diameter	D	= 25.3 cm
Effective diaphragm area	Sd	= .050 sq.m.
Vol. equiv to spk compliance	Vas	= 35 litres
Mechanical compliance	Cms	= 95.7 um/N
BL product	BL	= 18.4 T.m
Voicecoil diameter	d	= 50 mm
Voicecoil material	=	Copper
Voicecoil DC resistance	Re	= 6.9 ohms
Voicecoil inductance @ 1kHz	Lvc	= 1.3 mH
Voicecoil height	=	10.4 mm
Height of air-gap	Hg	= 8 mm
Peak linear displacement	Xpk	= 1.2 mm
Reference efficiency	$\eta_o$	= 3.8 %
Speaker total mass	=	3800 gms

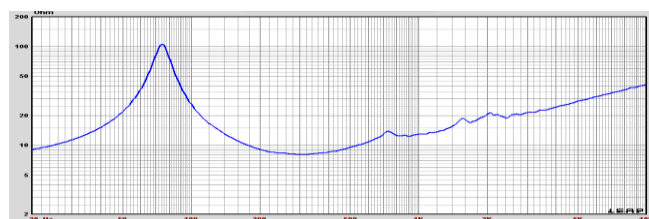
Specifications subject to change without notice.

### Frequency Response



Typical LMS infinite baffle response recorded at one watt at one meter.

### Impedance



Typical measured impedance plot

Refer C304U100/MI application notes for enclosure details.