

# WOOFER L18S801

Professional Low Frequency Transducer

PART NUMBER 11100047

The L18S801 is the RCF classical high efficiency 18" woofer. A perfect blend of voice coil length, moving mass weight and suspensions control makes this transducer the preferred solution for many speakers and rental companies. Efficient heat dissipation is ensured by forcing air out through a special vented radiator system which is part of the gap, situated between the basket and the upper plate. Voice coil construction, suspensions and cone materials are upgraded in order to withstand up to 700 Watt RMS power.

## Features

- 4-inch, fibreglass inside-outside copper voice coil
- 1400 Watt continuous program power handling
- 99.5 dB Sensitivity
- 38 Hz - 1 kHz Frequency range
- Forced air ventilation and front heat sink for minimum power compression
- Dual spider design with silicon based dampening control
- M-roll surround and exponential cone geometry

## Applications

The L18S801 finds its best application in band pass, reflex-horn and horn loaded systems.

It is a perfect compact bass reflex solution for live music, when the maximum punch is required.

It is one of the fastest transducers in its category.



38 1000

20

100

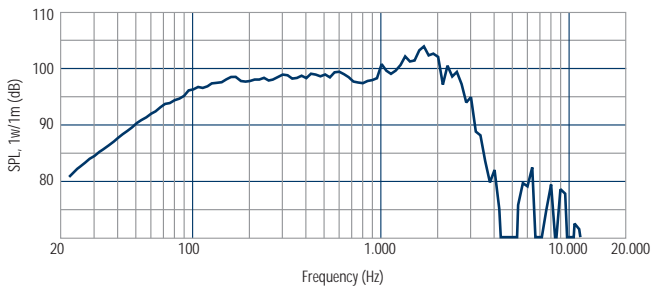
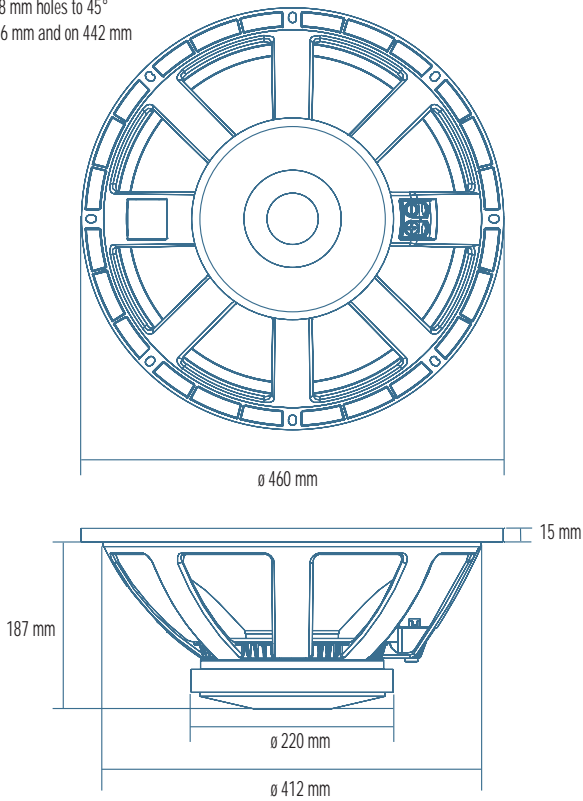
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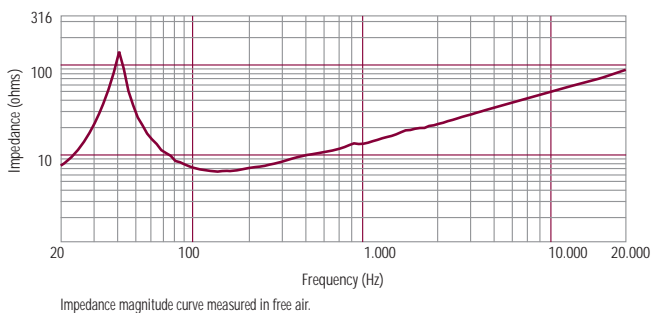
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8 x ø 8 mm holes to 45°  
on 436 mm and on 442 mm



Frequency response curve of the loudspeaker taken in a hemispherical, free field environment and mounted in a closed box with an internal volume of 600 litres (21.2 cu.ft) enclosing the rear of the driver.



Impedance magnitude curve measured in free air.

## General Specifications

|  |                 |         |
|--|-----------------|---------|
| Nominal Diameter                           | 460/18          | mm/inch |
| Rated Impedance                            | 8               | ohm     |
| Program Power <sup>1</sup>                 | 1400            | Watts   |
| Power handling capacity <sup>2</sup>       | 700             | Watts   |
| Sensitivity <sup>3</sup>                   | 99.5            | dB      |
| Frequency Range                            | 38 - 1000       | Hz      |
| Effective Piston Diameter                  | 380/15          | mm/inch |
| Max Excursion Before Damage (peak to peak) | 40/1.6          | mm/inch |
| Minimum Impedance                          | 6.3             | ohm     |
| Voice Coil Diameter                        | 100/4           | mm/inch |
| Voice Coil Material                        | Copper          |         |
| Voice Coil Winding Depth                   | 18.5/0.7        | mm/inch |
| Number of layers                           | 2               |         |
| Kind of layer                              | inside/outside  |         |
| Top Plate Thickness                        | 10/0.4          | mm/inch |
| Cone Material                              | No pressed pulp |         |
| Cone Design                                | Curved          |         |
| Surround Material                          | Polycotton      |         |
| Surround Design                            | M - roll        |         |

## Thiele - Small Parameters <sup>4</sup>

|   |      |       |                |
|---|------|-------|----------------|
| Resonance frequency                               | Fs   | 39    | Hz             |
| DC resistance                                     | Re   | 4.9   | ohm            |
| Mechanical factor                                 | Oms  | 8.3   |                |
| Electrical factor                                 | Oes  | 0.30  |                |
| Total factor                                      | Ots  | 0.29  |                |
| BL Factor   | BL   | 24.5  | T · m          |
| Effective Moving Mass                             | Mms  | 148   | gr             |
| Equivalent Cas air load                           | Vas  | 206   | liters         |
| Effettive piston area                             | Sd   | 0.113 | m <sup>2</sup> |
| Max. linear excursion (mathematical) <sup>5</sup> | Xmax | 6.8   | mm             |
| Voice - coil inductance @ 1KHz                    | Le1K | 1.7   | mH             |
| Half-space efficiency                             | Eff  | 3.93  | %              |

## Mounting Information

|  |          |            |
|--|----------|------------|
| Overall Diameter                           | 470/18.5 | mm/inch    |
| Bolt Circle Diameter                       | 438/17.2 | mm/inch    |
| Bolt Hole Diameter                         | 8/0.3    | mm/inch    |
| Front Mount Baffle Cut-out                 | 416/16.4 | mm/inch    |
| Rear Mount Baffle Cut-out                  | 418/16.5 | mm/inch    |
| Depth                                      | 209/8.3  | mm/inch    |
| Volume occupied by the driver <sup>6</sup> | 6.5/0.23 | liters/ft3 |

## Shipping Information

|                 |           |        |
|-----------------|-----------|--------|
| Net Weight      | 13.1/29.1 | Kg/Lbs |
| Shipping Weight | 13.8/30.7 | Kg/Lbs |

## Notes to Specifications

1 Program Power is defined as 3 dB greater than AES power. - 2 AES standard. - 3 Sensitivity measurement is based on a 100-500 Hz pink noise signal with input power of 2.83V @ 8 Ohms. - 4 Thiele-Small parameters are measured after a 2 hour warm up period running the loudspeaker at full power handling capacity. - 5 The maximum linear excursion is calculated as:  $(Hvc - Hg)/2 + Hg/4$  where Hvc is the voice coil depth and Hg the gap depth. - 6 Calculated for front mounting on 18 mm thick board.