



# PANARAY® LT 6400

## Mid/High-Frequency Loudspeaker

### PROFESSIONAL SYSTEMS DIVISION

#### Product Overview

The Bose® Panaray® LT 6400 loudspeaker is a mid/high-frequency device designed for medium throw distances. The LT 6400 loudspeaker offers a 65° horizontal by 52° vertical dispersion pattern that allows you to cover a large seating area and direct energy away from reflective surfaces such as ceilings.

The mid/high design allows this loudspeaker to be used in installations that require separate bass arrays to better control low-frequency energy. The LT 6400 loudspeaker also provides a more cost-effective solution for voice-only applications in medium-size venues and as delay-fill in larger installations.

When arrayed correctly, multiple LT 6400 loudspeakers behave sonically as a large single source of sound energy. This coherent wavefront provides full fidelity and even coverage at critical mid and high frequencies throughout the coverage area of the array.

#### Product Information

Each Panaray LT 6400 loudspeaker incorporates a single V2 mid-frequency driver and a 1" compression driver mounted on a 60°H x 40°V constant directivity waveguide.

In passive mode, the LT 6400 loudspeaker utilizes the internal passive crossover network and a single amplified signal is connected to the loudspeaker.

The LT 6400 employs equalization through the use of Bose active equalization or by using four to six bands of parametric equalization along with a high-pass filter and a low-pass filter. Equalization is recommended.

The 10-ply, Baltic birch enclosure has 16 threaded inserts, four each on the top, bottom and sides. Each hang point will accept standard SAE 3/8 – 16 rigging hardware.



#### Key Features

- Pattern control of 65°H x 52°V
- Designed for indoor applications
- When arrayed correctly, provides even coverage at critical mid and high frequencies
- Proprietary V2 mid-frequency engine with integrated heat sink provides smooth mid-band frequency response and high driver reliability
- 10-ply, Baltic birch enclosure
- 16 steel hang points
- Contoured, powder-coated steel grille
- Designed for medium throw distances
- Available in black and white

#### Applications

The Panaray LT 6400 is well-suited for professional applications such as:

- Houses of worship
- Auditoriums
- Performing arts facilities
- Dance clubs
- Live sound venues
- Sports facilities
- Transportation facilities



# PANARAY® LT 6400

## Mid/High-Frequency Loudspeaker



PROFESSIONAL SYSTEMS DIVISION

### Detailed Product Specifications

Power Handling <sup>1</sup>	100W
Impedance	8 $\Omega$
Sensitivity <sup>2</sup> (at 1W @ 1m)	100 dB-SPL
Maximum SPL <sup>3</sup> (pink noise @1m @ rated power)	120 dB-SPL 126 dB-SPL (Peak)
Internal Crossover	Mid/High-Frequency @ 1.8 kHz
Frequency Range <sup>4</sup> ( $\pm$ 3dB)	200Hz - 16kHz
Beamwidth (-6dB point, average 800 - 5 kHz)	Horizontal: 65°; Vertical: 52°

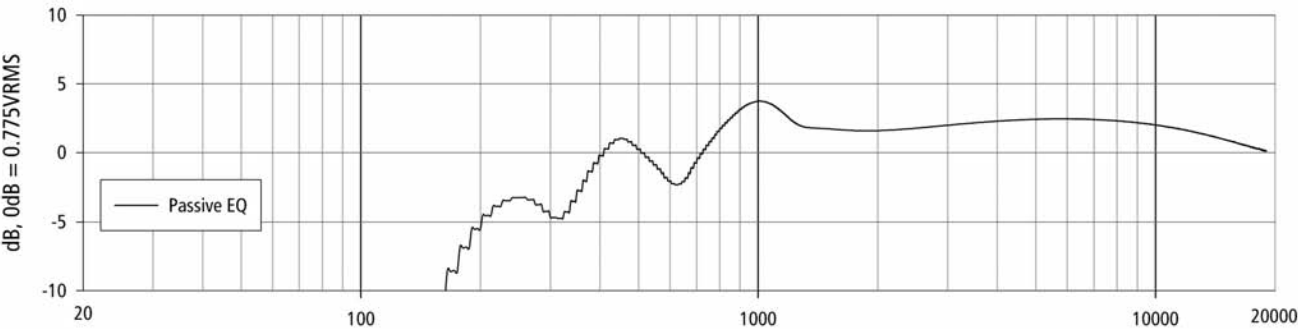
<sup>1-4</sup> See "How our loudspeakers are measured" on page 8.

### Additional Product Information

The Panaray® LT 6400 loudspeaker employs equalization through the use of Bose active equalization or by using four to six bands of parametric equalization along with a high-pass filter and low-pass filter.

Active equalization for the LT 6400 loudspeaker can be provided by using a Bose® controller or by using a ControlSpace™ ESP-88 engineered sound processor.

### Active Equalization Curves



# PANARAY® LT 6400

## Mid/High-Frequency Loudspeaker

**BOSE®**

PROFESSIONAL SYSTEMS DIVISION

### Driver complement:

Mid-frequency: One V2 driver

High-frequency: One 1" compression driver

### Construction features:

Cabinet: 10-ply, Baltic birch enclosure with 16 steel hang points

### Waveguide:

10-ply, Baltic birch construction

### Grille:

Powder-coated steel

### Hang points:

Sixteen steel threaded inserts – four top, four bottom and four on each side. Threaded inserts are SAE 3/8 – 16 thread, with at least 18 usable threads.

### Dimensions:

22.6"D x 25.2"H x 24.1"W

(574.0mm x 640.0mm x 612.2mm)

### Weight:

Product: 80 lbs. (36.29 kg)

Shipping: 102 lbs. (46.27 kg)

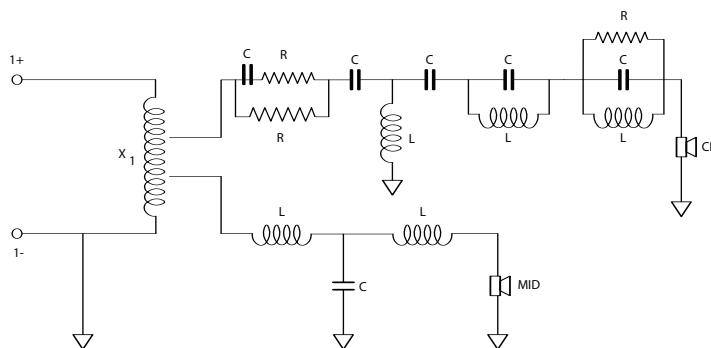
### Finish:

Each loudspeaker is manufactured with a textured black polyurethane finish and contoured, powder-coated steel grille. Both cabinet and grille can be painted to match the surroundings.

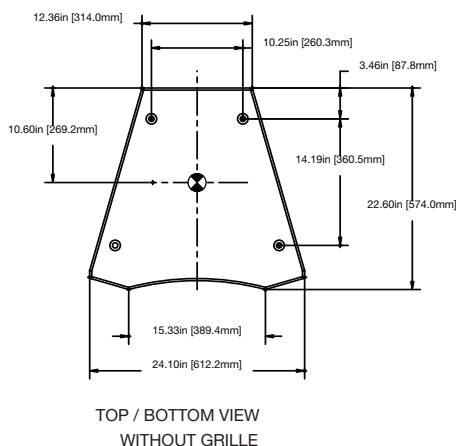
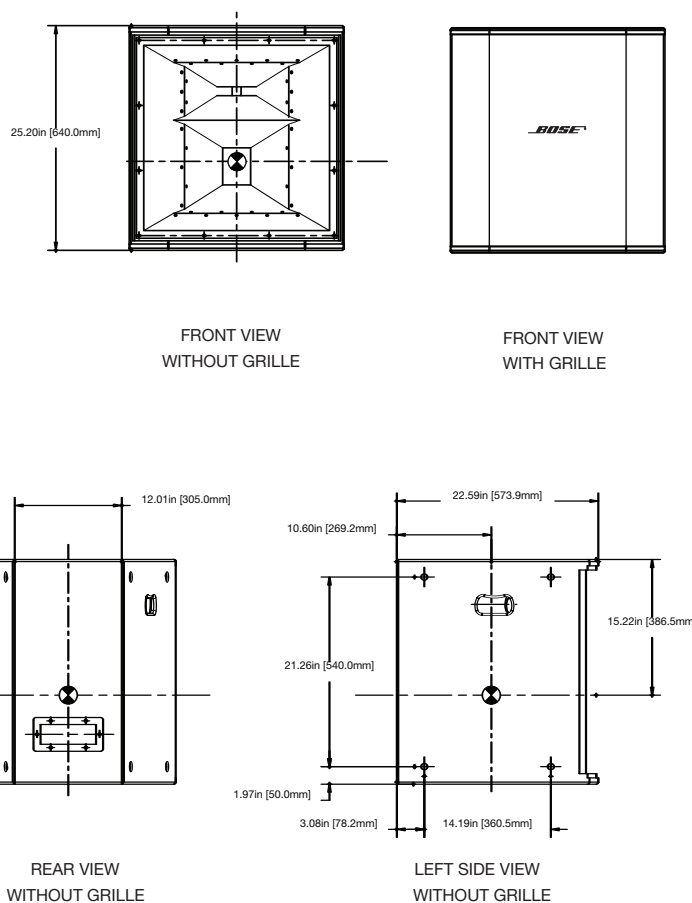
### Connectors:

Two Neutrik NL4 connectors wired in parallel.

### NL4 Wiring Diagram:



### Mechanical diagram:



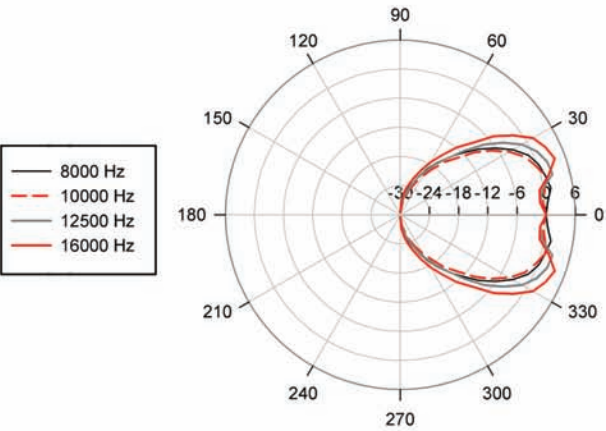
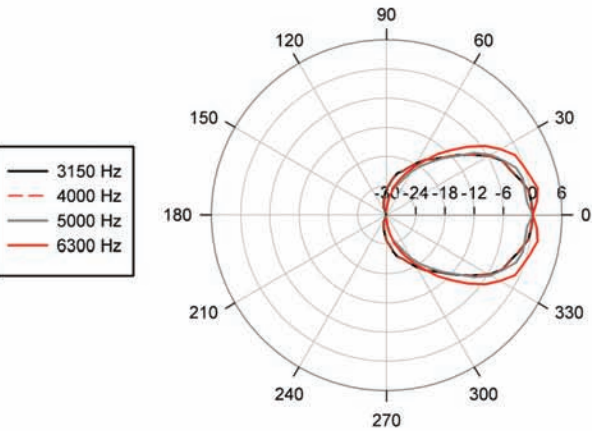
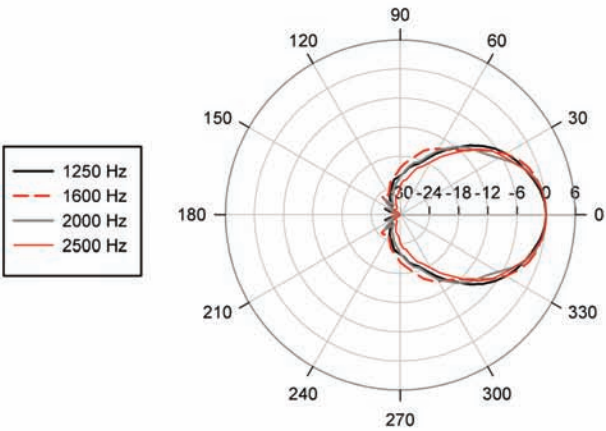
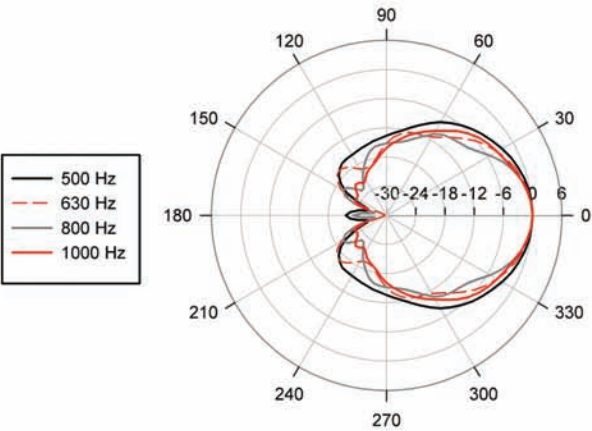
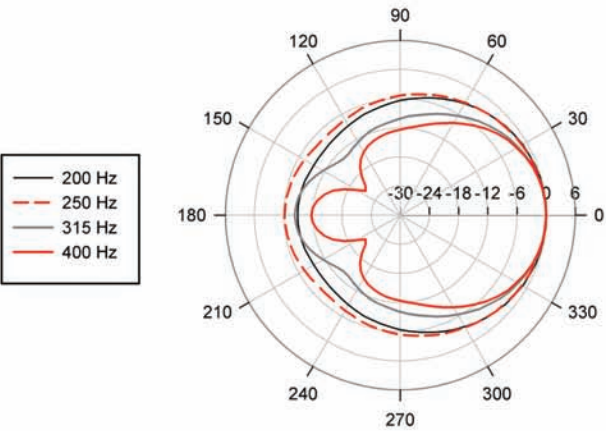
# PANARAY® LT 6400

## Mid/High-Frequency Loudspeaker



PROFESSIONAL SYSTEMS DIVISION

### Polar Plots 1/3 Octave Horizontal



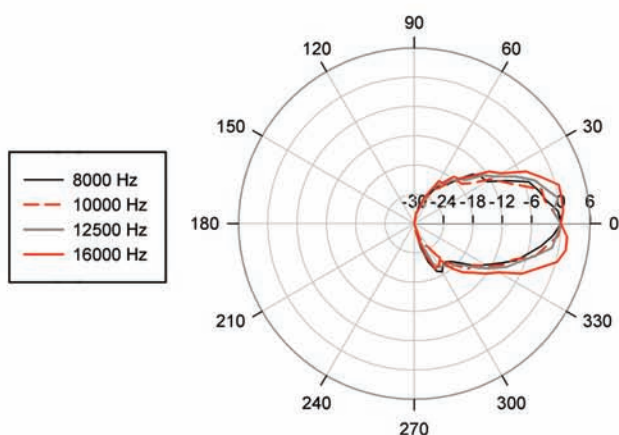
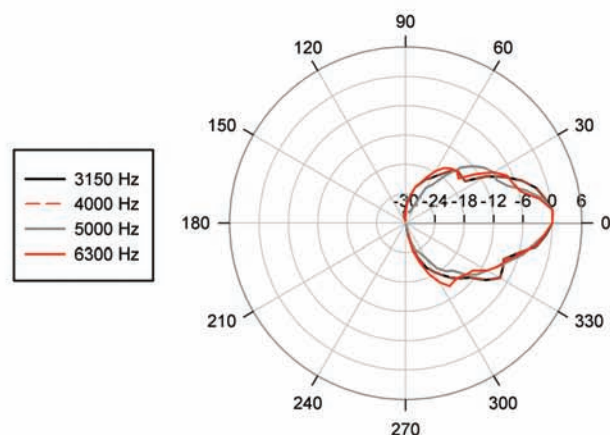
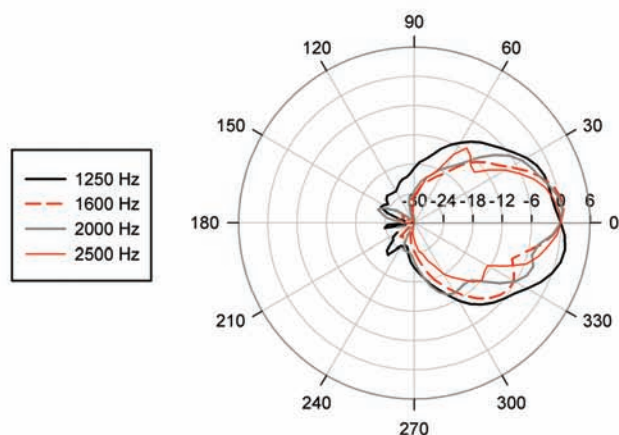
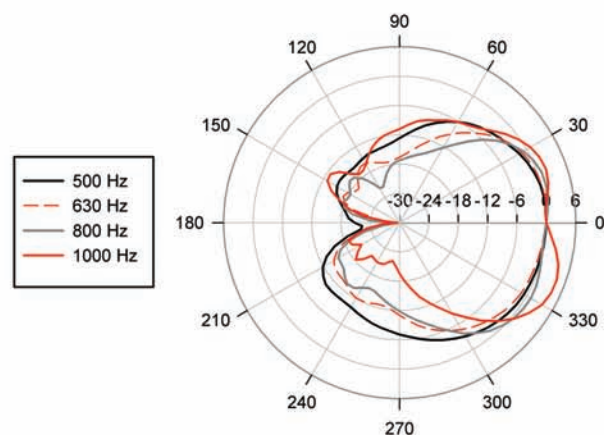
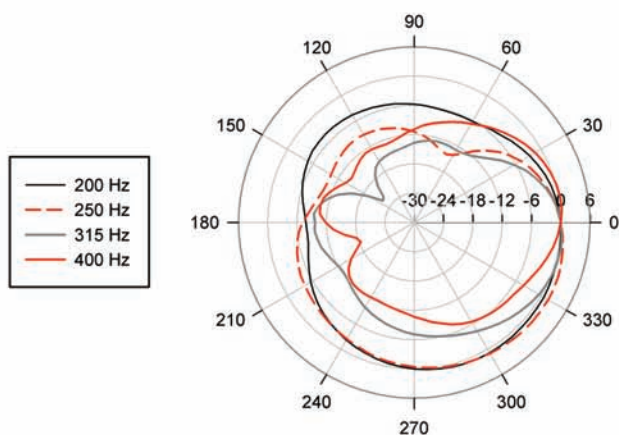
# PANARAY® LT 6400

## Mid/High-Frequency Loudspeaker

**BOSE®**

PROFESSIONAL SYSTEMS DIVISION

### Polar Plots 1/3 Octave Vertical





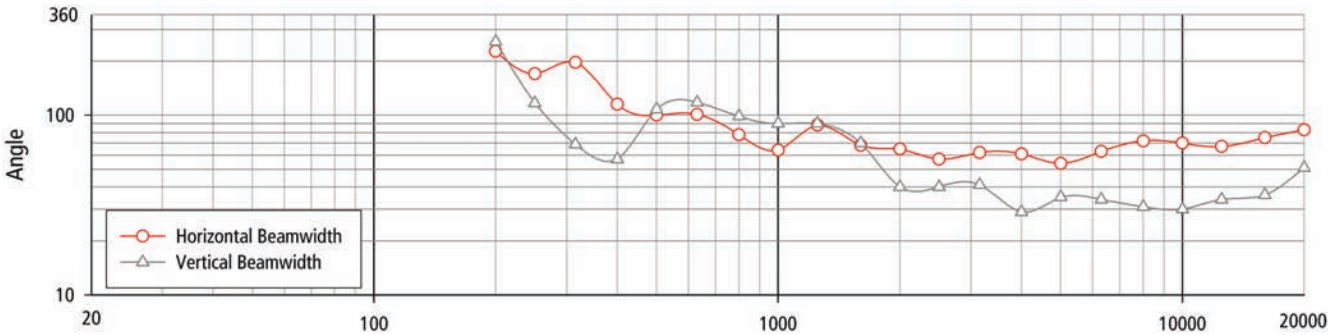
PANARAY® LT 6400

Mid/High-Frequency Loudspeaker

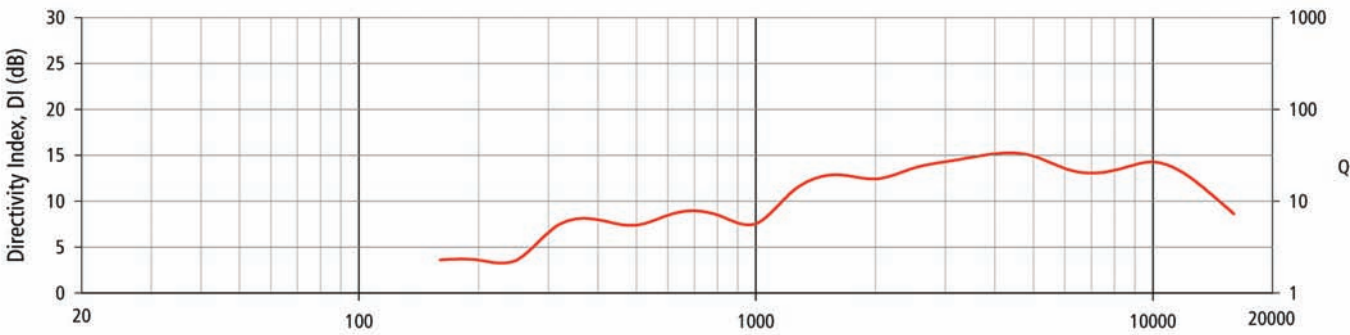


PROFESSIONAL SYSTEMS DIVISION

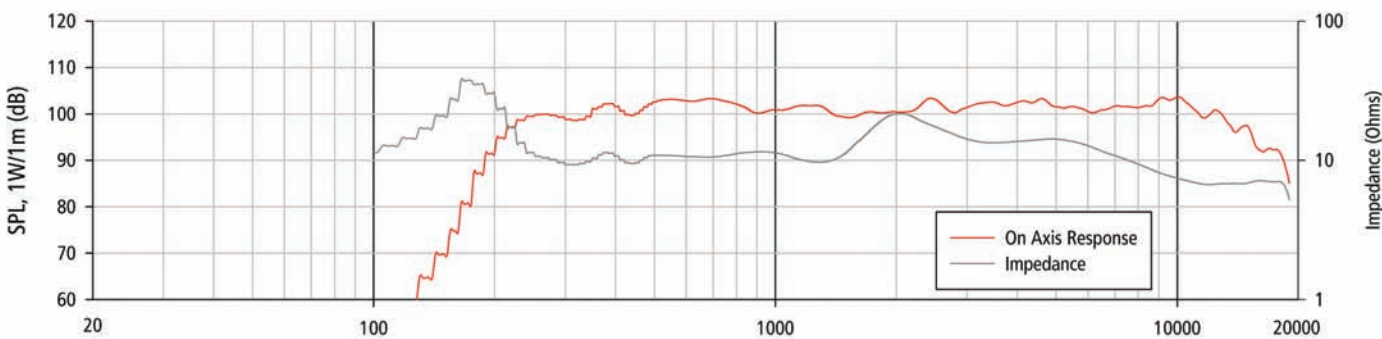
Beamwidth



Directivity Index and Q



On-Axis Response – Impedance vs. Frequency



# PANARAY® LT 6400

## Mid/High-Frequency Loudspeaker



PROFESSIONAL SYSTEMS DIVISION

### Engineers and Architects Specifications

The device shall be a two-driver system as follows:  
The transducer complement shall consist of one mid-frequency driver and one high-frequency driver mounted vertically such that directional characteristics provide a smooth response.

The array enclosure shall be composed of 10-ply Baltic birch with 16 steel hang points and a paintable, contoured steel grille with outer dimensions of 22.6"D x 25.2"H x 24.1"W (574mm x 640mm x 612mm). Its weight shall be 80 lbs. (36 kg).

Nominal horizontal beamwidth shall be 65°H and nominal vertical beamwidth shall be 52°V (-6dB point 800Hz – 5kHz).

The loudspeaker shall comply with ANS/EIA 636 for mechanical safety and with EU DIRECTIVE 89/336/EEC.

All version of this product shall bear the CE mark.

The loudspeaker shall be the Bose® Panaray® LT 6400 loudspeaker.

### Technical Literature

Panaray LT Reference Guide

Available at [pro.bose.com](http://pro.bose.com)

### Safety and Regulatory Compliance

The LT 6400 loudspeaker complies with ANSI/EIA-636 *Recommended Loudspeaker Safety Practices* and with EU EMC Directives 89/336/EEC for CE marking.

### Safety Features

EIA-636: *Recommended Loudspeaker Safety Practices*

This document is a set of guidelines related to the safe design and testing of loudspeakers and their components set by the Electronics Industry Association. Although one cannot list a product to the standard, Bose has performed the tests outlined for the LT 6400 product, and it complies with the standard as set forth in EIA-636.

### Limited Warranty

The Panaray LT 6400 mid/high-frequency loudspeaker is covered by a 5-year transferable limited warranty.

### Product Codes

LT 6400 – Black	PC 039887
LT 6400 – White	PC 039888

### Replacement Parts

Item	Part Number
LT 6400 grille black (includes screws)	291908-001
LT 6400 grille white (includes screws)	291908-002
Replacement screws for black grille	276847
Replacement screws for white grille	291904
Replacement logo - black	276848
Replacement logo – white	291905
Input panel – black	291911-001
Input panel – white	291911-002
1" compression driver	286543
Diaphragm for compression driver	286544
V2 assembly with drivers	276850
Crossover board	286536

# PANARAY® LT 6400

## Mid/High-Frequency Loudspeaker

**BOSE®**

### How our loudspeakers are measured

#### 1. Power Handling

Full-bandwidth pink noise, meeting the IEC Standard #268-5, is applied to the loudspeaker and amplified to a level at the loudspeaker terminals corresponding to the power handling of the loudspeaker. The loudspeaker must show no visible damage or measurable loss of performance after 100 hours of continuous testing.

#### 2. Sensitivity

Full-bandwidth pink noise is applied to the loudspeaker with its active equalization curve and amplified to a level at the loudspeaker terminals corresponding to 1 watt as referenced to the nominal impedance. The average sound pressure level (dB-SPL) is measured at 1 meter from the speaker in an anechoic environment.

#### 3. Maximum SPL

Full-bandwidth pink noise is applied to the loudspeaker with its active equalization curve and amplified to a level at the loudspeaker terminals corresponding to the long-term rated power handling of the speaker. The average sound pressure level (dB-SPL) is measured at 1 meter from the speaker in an anechoic environment.

#### 4. Frequency Range

Sine waves are injected into the loudspeaker and the level is adjusted to 1W, as referenced to the nominal impedance, and the level measured at 1m. Resulting graph is smoothed by 0.05 octave-band.

**BOSE®**  
Better sound through research®

©2006 Bose Corporation, The Mountain, Framingham, MA 01701-9168 USA  
CCM-003022 PC40520