



24" Focused Audio Array: Model FA-602

Technical Documentation

- Best Sound Quality of any focused sound technology
- Excellent Sound & Pattern Control via onboard user interface
- Not an ultrasonic solution—no safety concerns
- Custom Configuration/Enclosure and Cover colors available
- Greatest low frequency capability in the industry
- Built in Amplifier with balanced, line level input

Specifications

Maximum Output Level:

85dBA (8' MOUNTING HEIGHT, TIGHT PATTERN).

Size:

23.5 x 23.5 x 3 INCHES

Weight:

21 POUNDS

Color-Finish:

NON REFLECTIVE BLACK POWDER COAT

Cover:

OFF-WHITE FABRIC BONDED TO PERFORATED PLASTIC GRILL

Input Level:

ADJUSTABLE -15DBV TO +4DBV

Input Impedance:

5,000 OHMS TRANSFORMER BALANCED

Focal Pattern:

ADJUSTABLE FROM TIGHT TO 10 FEET IN DIAMETER

Mounting:

FOUR 0.080 AIRCRAFT CABLES WITH QUICK RELEASE CLIPS OR FOUR THREADED INSERTS (1/4" OR 6MM)

Frequency Response:

SEE ATTACHED CHARTS

Frequency Compensation:

SWITCH SELECTABLE: MUSIC, VOICE WITH MUSIC, VOICE

Power:

16 TO 18 VAC OR 24VDC, 15 WATTS

Connections:

SCREW TERMINALS ON TOP SIDE

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Bismarck, ND 58504
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Fax: 701-223-1296
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Dakota Audio FA-602 arrays are easily field adjustable for both mounting height and pattern width. There are two push buttons and two rows of LEDs on the top side of the array. One sets the mounting height above the floor in one foot increments from 8 to 14 feet. The other button controls the pattern width in seven steps from "tight" to a circle appropriately 10 feet in diameter.

A three position switch adjusts the frequency response for the program material. The "music" position provides full range sound. The "voice with music" position has a slight rise in the high frequency response to enhance voice intelligibility while maintaining good music reproduction. The "voice" position reduces low frequencies for maximum voice intelligibility.

Audio input is line level, transformer isolated. The array accepts any standard line level input, either balanced or unbalanced. A volume control and two position gain switch accommodate a wide range of audio input levels.

For installations where the audio level is set remotely, a switch disables the volume control.

The arrays are powered by either 16 to 18 Volts AC or 24 Volts DC. A plug-in 16 VAC transformer is supplied for installations where local 120 power is available. Where the array power and signal cables share the same conduit, we suggest powering them with 24VDC.

Generally, the arrays are suspended by four thin (0.080 inch) aircraft cables with easily adjustable clips (supplied). Optionally, four threaded inserts, either 1/4 - 20 American or 6 millimeter metric, are available.

The units are constructed of aluminum, with a non-reflective black powder coat finish. The snap-on fabric cover is provided, available in black, white, and cream with other colors available. Logos or designs can be printed on the face of the fabric.



Model FA-602

3"x24"x24" - with user control panel

Digital Signage

Museum Exhibits

Supermarkets

Trade Show Booths

Waiting Areas

Retail

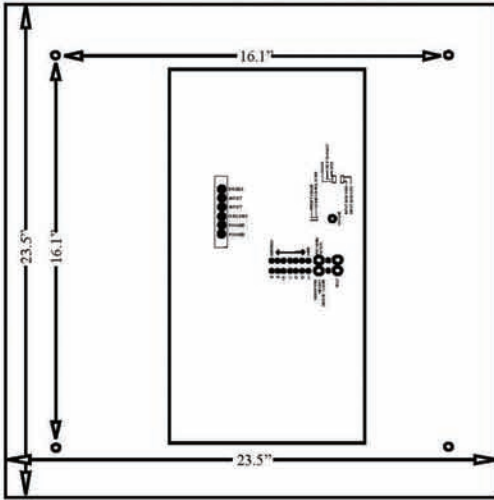
Healthcare

Education

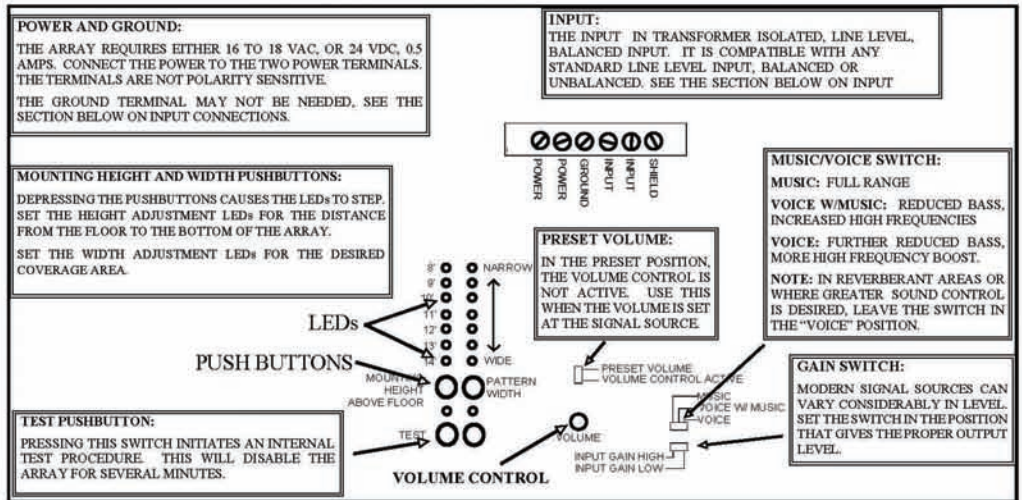
Libraries

MECHANICAL DRAWING, OPERATION, & CONNECTIONS

BACK SIDE SHOWING MOUNTING HOLES



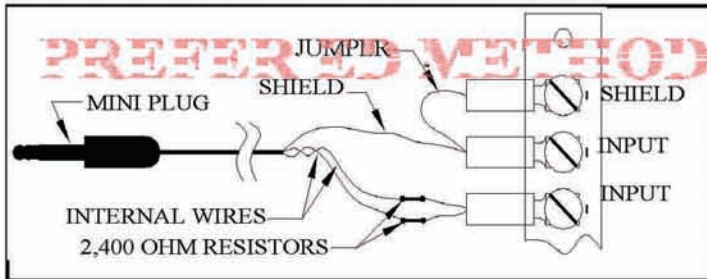
CONTROLS & CONNECTIONS PANEL ON THE BACK OF THE ARRAY



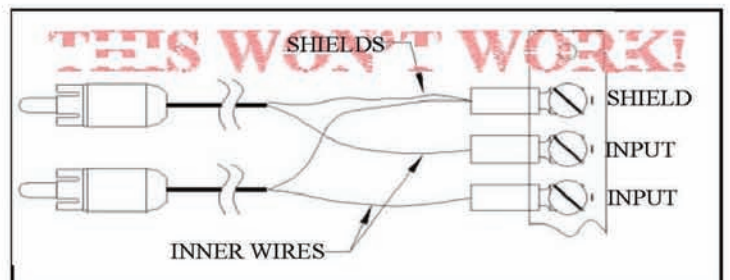
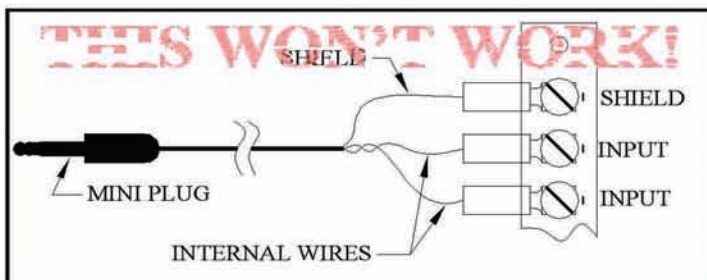
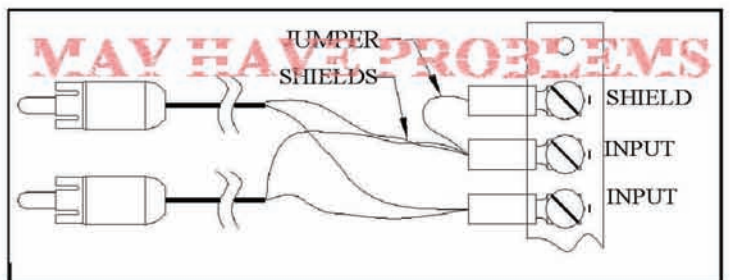
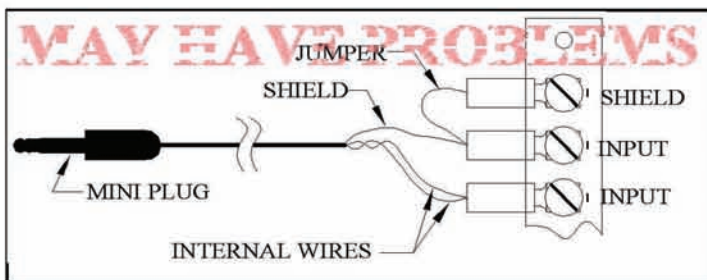
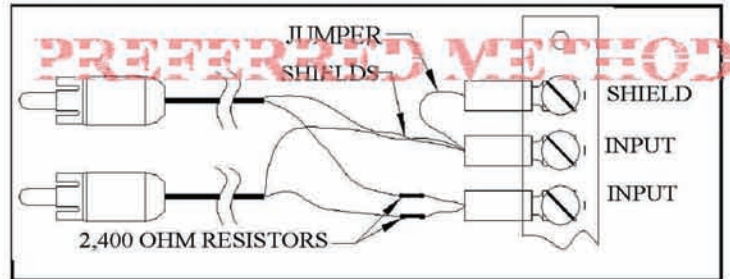
CONNECTING TO AUDIO SOURCES:

The input was designed to accept a wide range of audio sources, from balanced line-level professional boxes to unbalanced consumer equipment such as DVDs, CDs, AND MP3 players. Connecting unbalanced sources to the balanced input on the array can be a tricky. If you are in doubt, we have ready-made cord assemblies available at a reasonable price.

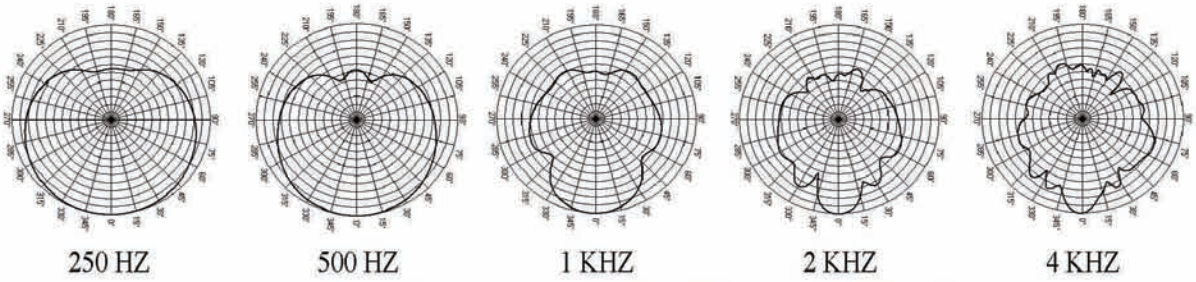
1/8" MINI-PLUG



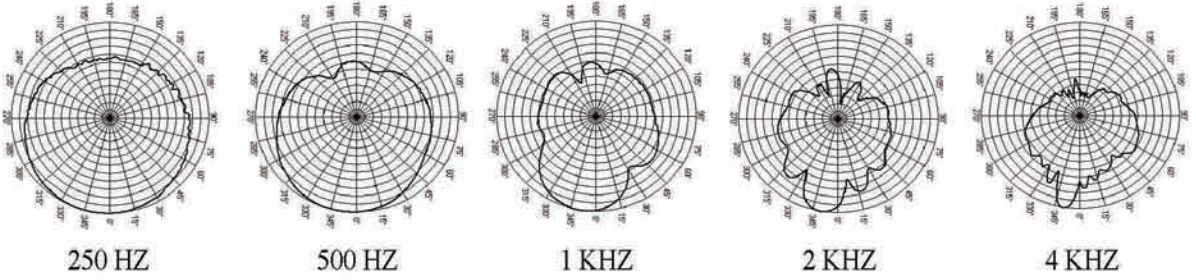
PHONO (RCA) PLUG



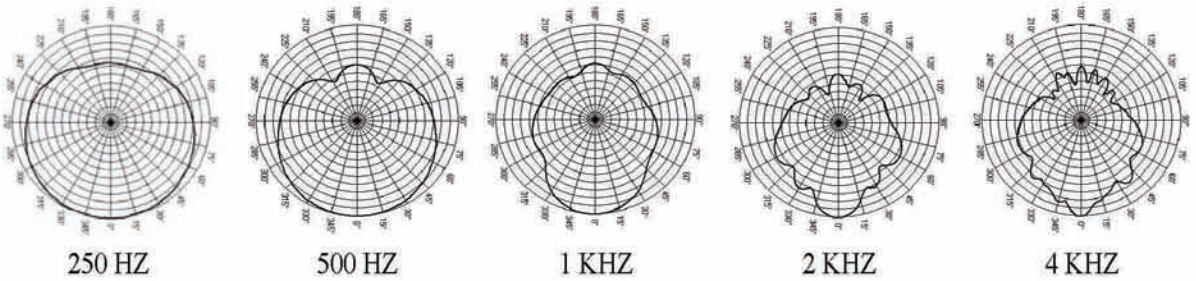
POLAR PATTERNS



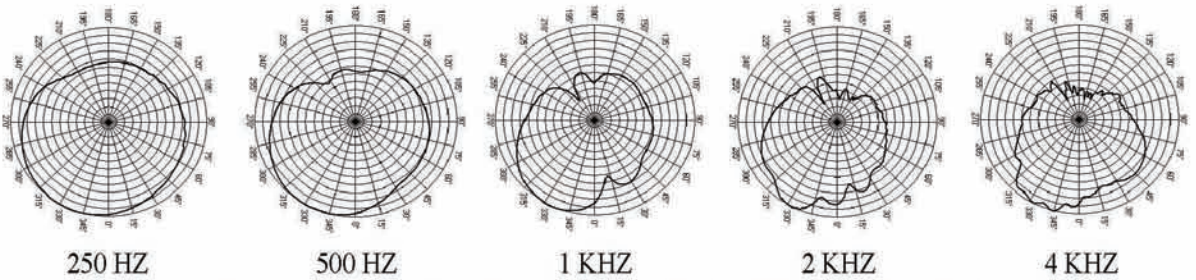
SET AT 11' HEIGHT, NARROWEST PATTERN.



SET AT 11' HEIGHT, NARROWEST PATTERN - OFFSET.



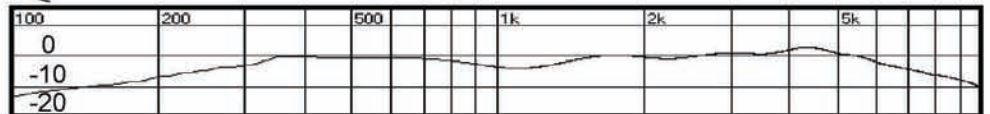
SET AT 11' HEIGHT, WIDEST PATTERN.



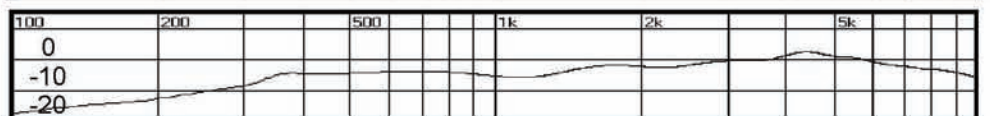
SET AT 11' HEIGHT, WIDEST PATTERN - OFFSET.

FREQUENCY RESPONSE

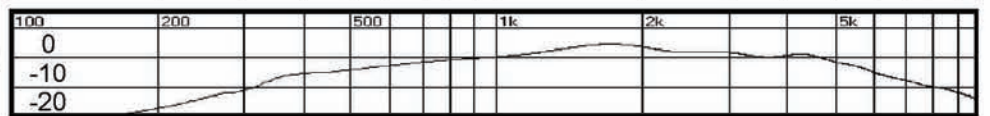
EQ SWITCH - MUSIC



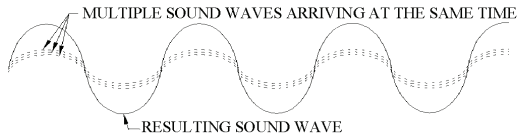
EQ SWITCH - VOICE W/MUSIC



EQ SWITCH - VOICE

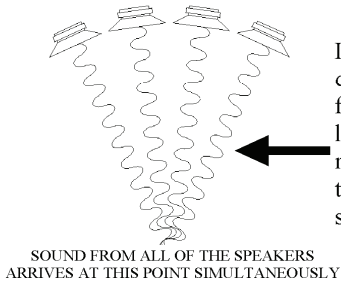
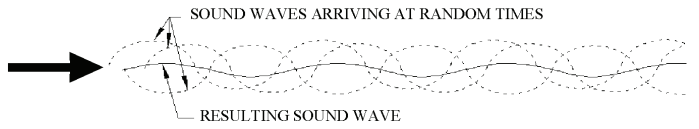


HOW DOES IT WORK?



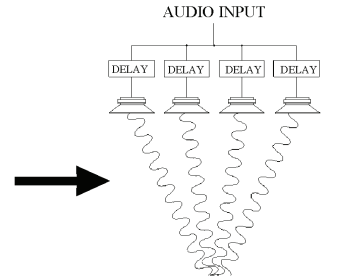
If two or more sound waves arrive at the same place at the same time, they add and produce a sound wave that is the sum of all of the incoming sound waves.

When multiple sound waves arrive at random times, some waves cancel, producing a sound wave that is less than the sum of the incoming waves.



If several speakers are mounted equal distance from the listener, the sound from each of the speakers arrives at the listener's ears at the same time. The resulting sound is considerably louder than the sound from each individual speaker.

While it wouldn't be practical to mount the speakers in a spherical array (and the result would not be adjustable), we can achieve the same results by delaying the launch time from the speakers.



SOUND FROM ALL OF THE SPEAKERS ARRIVES AT THIS POINT SIMULTANEOUSLY

FOCUSED SOUND BY DAKOTA AUDIO

LOOKS BETTER, SOUNDS BETTER, WORKS BETTER
AND IT'S ADJUSTABLE.



Dakota Audio Inc.
1815 Michigan Ave.
Bismarck, ND 58504