

Indoor/Outdoor

IO-ST6

Congratulations on the purchase of the IO-ST6 speaker. The IO-ST6 has been specially tuned for outdoor use and sounds best in the outdoor environment. Since the IO-ST6 has a built-in transformer it is ideally suited for use in commercial 70V/100V distributed audio systems in addition to consumer applications with amplifiers that are designed to drive 8-ohm loads. With its 360 degree high fidelity dispersion, the IO-ST6 creates a rich enveloping listening environment when used in multiples.

CONTENTS

- (1) ST-6 High Performance Landscape Speaker
- (2) Security Brackets
- (2) 8mm X 10mm Socket Head Screws
(Requires 6mm Hex wrench)

ADDITIONAL TOOLS & ACCESSORIES THAT MAY BE REQUIRED

- Wire cutter / stripper
- 6mm Hex Wrench (Allen Wrench)
- (2) Waterproof wire connectors / Silicone filled wire nuts
- 2-Conductor direct-burial stranded speaker cable

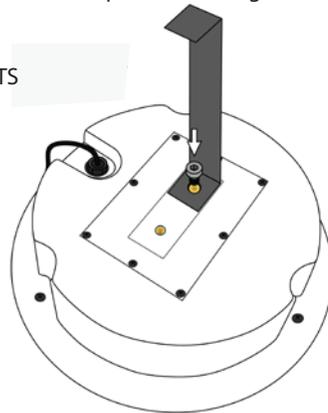
SHIPPING DAMAGE

Each speaker is thoroughly tested before it leaves the factory. However, in shipment, accidents may occur. Please inspect your speakers carefully when you receive them to make sure there is no damage. If there is, please notify your dealer or supplier immediately for assistance. If you received your speakers by public transportation, report the damage at once to the shipping company.

ATTACHING SECURITY BRACKETS

Should you wish to restrict movement and/or theft of the IO-ST6, two security brackets are supplied with each speaker to anchor the speaker into the ground.

1. Place the speaker upside down on surface that will not damage the top surface.
2. Install the brackets as shown in the image using the supplied hardware.
3. Repeat for the 2nd bracket.



CONNECTION & SETUP

Connection from the speaker to the amplifier should be made with appropriate size cable. Use the chart below to help determine the best wire size. The cable should be rated for direct burial applications. Landscape lighting wire often meets these requirements.

Use waterproof wire connectors for all exterior connections. These connectors usually contain a silicone gel to prevent moisture ingress. This type of connector is commonly used for landscape lighting.

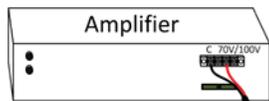
Connect the short cable that is protruding from the bottom of the speaker to the direct-burial trunk line. Prepare the connections by stripping a short length of insulation from the ends of each wire, exposing approximately 5/8" (15mm) of each conductor, or perform the connections as directed by the manufacturer of the wire connectors. Ensure that the proper polarity is maintained for all connections. This will ensure maximum system performance. Refer to the diagram on the next page.

Set the transformer tap position to the desired level. When using multiple speakers on a single line in distributed 70V/100V audio systems, the sum of the power taps selected on all the speakers should approximately equal, but not exceed, the amplifier's power output. E.g. 24 speakers each set to 8 watts, 24 x 8W=192W, therefore the amplifier should have an approximate power rating of 200W or be limited to approximately 200W output.

Note: Not all speakers need to be set to the same position. Overdriving the transformer will cause saturation, distortion, and eventual failure. Setting a high-pass filter at approximately 60Hz will help reduce saturation of the transformer.

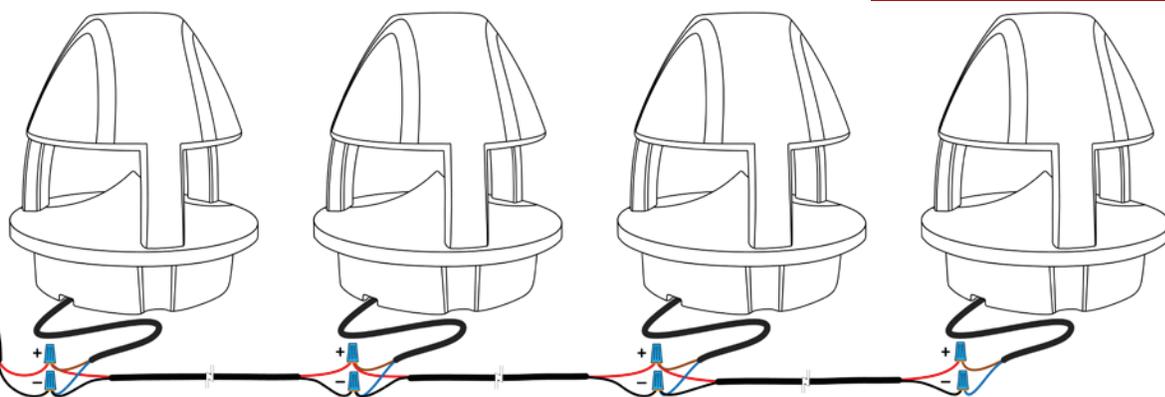
RECOMMENDED MAXIMUM CABLE LENGTH CHART (Based on 1dB maximum loss)				
Wire Size	8-ohm	70V with 100W Load	70V with 200W Load	100V with 200W Load
#20AWG	Up to 50ft (15m)	Up to 300ft (91m)	Up to 150ft (45m)	Up to 300ft (91m)
#18AWG	Up to 80ft (24m)	Up to 425ft (130m)	Up to 212ft (65m)	Up to 425ft (130m)
#16AWG	Up to 120ft (37m)	Up to 750ft (240m)	Up to 375ft (120m)	Up to 750ft (240m)
#14AWG	Up to 200ft (61m)	Up to 1200ft (370m)	Up to 600ft (180m)	Up to 1200ft (370m)
#12AWG	Up to 300ft (91m)	Up to 1900ft (580m)	Up to 950ft (290m)	Up to 1900ft (580m)



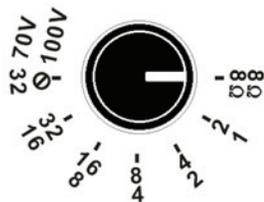


Example of 70V/100V Connection

All speakers are connected in parallel to the trunk line.

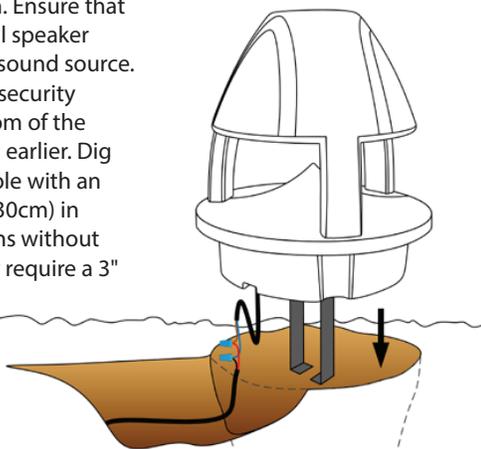


When selecting the tap position, there are two bands of numbers. The inside band is the 100V scale and the outside band is the 70V scale. The values shown are in watts. The most counter-clockwise position is for use in 8-ohm systems. The position with the on the 100V scale is NOT to be used on 100V systems.

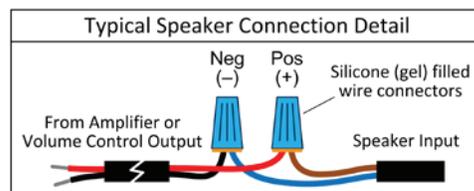


INSTALLATION

Plan your installation. Ensure that you have access to all speaker locations and to the sound source. If desired, install the security brackets to the bottom of the speaker as described earlier. Dig a 13" (33cm) deep hole with an opening that is 12" (30cm) in diameter (Installations without security bracket only require a 3" (8cm) deep hole.)



Excavate an extra space at the side of the hole to allow for backfilling. Run direct burial cable to each speaker location and make connections as recommended in the "Connection & Setup" section. Select the desired tap position. Bury the speaker to the level shown in the image.



Wire Color Code	
Blue	(-) Negative
Brown	(+) Positive

WARNINGS

- Do not place the speakers where the grille will receive direct high-pressure water spray.

TIPS

To increase their longevity, the speakers can be covered during winter months in regions that receive large amounts of snow.

SPECIFICATIONS

Model Number:	IO-ST6
Woofer:	6.5" Poly w/ butyl rubber surround
Frequency Response:	70Hz - 20kHz
Power Handling:	50W RMS, 100W Max (8-ohm)
Sensitivity:	87dB 2.83V / 1 meter (1W) (84dB Effective)
Crossover:	Dual-Band Multi-Order Topology
Tweeter:	1" Titanium dome
Impedance:	8 ohms nominal
Available Colors:	Garden Green
Selectable Tap Positions:	70V: 1, 2, 4, 8, 16, 32W 100V: 2, 4, 8, 16, 32W
Dimensions:	13-7/8" (346mm) Diameter 14-1/2" (368mm) Tall (w/o bracket) 11-1/2" (292mm) Tall (when buried)
Mounting Depth:	12-3/4" (33cm) with bracket, 3" (7.6cm) w/o bracket
Shipping Weight:	14.5 lbs (6.6kgs)
Net Weight:	10.5 lbs (4.8kgs)

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