



5¼" Two Way System
Model 50-14910

6½" Two Way System
Model 50-14915

8" Two Way System
Model 50-14920

Features

- Wide frequency response
- High efficiency
- Injected polypropylene cone woofers
- Mylar dome tweeters
- Fully weatherproof design
- Suitable for permanent outdoor installation
- Attractive authentic rock shape
- Available in three sizes
- Natural gray stone color
- All speakers are sold individually
- 8ohm and 70V distributed system compatibility

Warranty

MCM Electronics warrants to the original purchaser that these speakers will be free from defects in materials and workmanship for a period of one year. In the event that warranty replacement is required, the unit will be replaced or repaired at the sole discretion of MCM Electronics. Warranty claims must be processed through the MCM Electronics customer service department.

This warranty does not include service or parts to repair damage caused by accident, disaster, misuse, abuse, or improper installation. This warranty is in lieu of all other expressed warranties. If the product is defective in materials or workmanship as warranted above, the purchaser's sole remedy shall be repair or replacement as provided above. In no event will MCM Electronics be liable for any incidental or consequential damages arising from the use of this product.

Overview

New from Stellar Labs, these simulated rocks will add a distinctive look to any outdoor landscaping arrangement, while providing outstanding music fidelity. Available in three sizes, these speakers are perfect in gardens, atriums, around swimming pools, shrubs, walking paths, decks and patios.

Popular locations include residences, restaurants, theme parks, ball parks, any outdoor location that requires high quality background music or paging.

Fully sealed enclosures are designed to provide years of trouble free service, and may be permanently installed and exposed to weather year round.

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Specifications

Model	50-14910	50-14915	50-14920
• Woofer size	5-1/4"	6-1/2"	8"
• Tweeter size	1/2"	1/2"	1/2"
• Power capacity RMS:	30W	40W	50
• Frequency Response	90Hz ~ 20KHz	80Hz ~ 20KHz	60Hz ~ 20KHz
• Sensitivity (SPL W/M)	88dB	88dB	88dB
• Nominal impedance	8Ω	8Ω	8Ω
• Dimensions HxWxD (approximate)	9.8" x 9.5" x 7.9"	12.6" x 12.6" x 10.6"	11.8" x 11.8" x 17.3"

Installation

Following details installation of your Stellar Labs rock speakers, to conventional home audio equipment located inside the house, utilizing an outdoor volume control. This should be considered one of the more involved installations, possibly more than is needed in your specific application. Generally speaking, these speakers connect in the same manner as any other 8Ω home audio speaker. While perfectly suitable for temporary use outside, the following details represent a permanent installation.

Items you will need:

- One pair of Rock Speakers
- Direct bury speaker wire
- Wire Nuts or similar solderless connectors
- High quality Electrical Tape
- Masonry Drill Bit
- Silicone Caulk
- Outdoor Volume Control (optional) such as MCM Model 50-7885
- Short section of 3/4" PVC Conduit (used with volume control)
- Sound source (see below)

Alternatives

Commonly available 12V landscape lighting wire may be substituted (18 gauge minimum) for speaker wire. This is available at most home center and hardware stores, and is excellent for use as speaker wire. Any type of silicon caulk sealant may be used as long as it is rated for outdoor use. Color selection will depend upon location of exit hole and color of exterior wall.

The PVC conduit is required if the outdoor volume control is to be used. The length required will be that to reach from the base of the control in its mounting location, to approximately 6" beneath the ground.

Connection to a sound source

This speaker pair is intended to be connected to a conventional stereo receiver. If the stereo receiver is already in use, these speakers may be connected to the "B" speaker output. If the receiver is to be used solely for outdoor speaker connection, two pairs may be connected directly to the receiver (speaker "A" and speaker "B" outputs), and the outdoor volume control may be eliminated.

There are multiple methods of connecting numerous sets of indoor/outdoor speakers to single sound source. Persons interested in doing this should contact their MCM Electronics Sales Representative for more information.

Speaker positioning

Since Stellar Labs Rock Speakers were designed for landscaping use, they perform best when on the ground, as opposed to being placed on a deck surface or in elevated planters. Unlike conventional bookshelf speakers perform best at eye level, the Rock Speakers tweeter positioning and response curve were designed with the intention of these speakers being located on the ground.

As the listening area is typically large, do not be afraid to put some distance between the left and right speaker. For example, in a square listening area of 30' x 30', the speakers should be located on the ground, on one side of the square, centered approximately 20' apart, and angled slightly inward.

Determine a convenient location for the Outdoor Volume Control. Ideally, this will be located someplace close to the location where the speaker wire exists the exterior wall, but is not limited to this. Using proper fasteners, attach the volume control housing to the wall of the desired location, with the conduit opening facing downward. Determine the necessary length of PVC conduit required to reach from the bottom of the volume control housing, to a level 6" below the surface of the ground, and cut the conduit to this length (do not install yet).

Routing cable

Establish a desired location in an exterior wall, ideally close to the location of the sound source. If the sound source is located in the center of the home, it may be helpful to rout the wire down from the source, through the floor into a basement or crawl space, then out the exterior wall.

A hole must be drilled through the exterior wall to facilitate routing the speaker wire. If the exterior surface is brick, the ideal location for this hole will be in a mortar joint, above the bottom layer of bricks. In vinyl siding, the ideal location is immediately below a bevel. Wood siding is best to drill inside a vertical indent. In all instances, the closer the opening is made to the ground, the better. Note that it is not recommended to drill through the poured or block foundations.

Take extreme care to note possible locations of other wiring and plumbing prior to drilling hole.

Drill the hole in the exterior wall, rout left and right speaker cables to the sound source, and connect. Pull all available cable slack to the outside. Once the cable has been permanently positioned inside the home, seal the exit hole (with cable in place) with caulk.

Dig a trench in the ground, preferably with depth of 6" or more, from the wall exit to the location of the outdoor volume control (if used), and then from the control to each speaker location.

Route the left and right speaker cables down the side of the wall, and into the trench in the direction of the volume control. Determine the amount of length required to route both left and right speaker wires from the bottom of the trench, to the inside of the volume control box, plus at least 12" (at this point, too much length is far better than not enough). Cut the speaker cable at this point and feed through the cut section of conduit. You should now have a section of left and right speaker wire, beginning at your sound source, and ending after passing through the conduit. Using electrical tape or other similar method, label the two speaker leads that originate at the sound source.

Take your remaining section of speaker wire, and feed through the same section of conduit, allowing at least 12" of extra length of wire to protrude from the end. Note, all wires should enter from the same end (what will be the bottom), with all 12" lengths protruding from the top, two labeled to identify that they originate at the source.

Connecting volume control

With the volume control housing mounted in its location, remove the round knob (simply pulls off), and remove the four Philips head screws which hold on the cover plate. Remove the cover plate, and then remove the interior clear silicon gasket seal. Locate and remove the two Philips screws that hold the volume control assembly inside the housing, and then remove the assembly.

Feed the speaker cables through opening at the bottom of the volume control housing, then insert the conduit into the opening. Allow the 12" of additional speaker cable length to protrude from the front of the housing, and position the conduit so that it extends from the bottom of the housing, into the trench. Route your left and right speaker cables from this location, one to each of the final locations of your Rock Speakers.

Using the instructions provided with the volume control, attach the speaker wire as shown. Take extra care to make sure the correct wire is connected to the inputs and outputs of this control. Reversing these connections can cause permanent damage to the sound source. It is also critical that proper (-) and (+) speaker polarity be observed throughout this system. Depending upon the sound source, improper polarity may cause damage and will adversely affect sound performance.

With speaker wire connected to the volume control, reinstall the control into the housing. Extra length of speaker wire will likely not fit inside this housing, so as this control is reinstalled, it will be necessary to pull extra wire length from the bottom end of the conduit. Once sufficient slack is removed back out the bottom of the conduit, reinstall the housing, silicon rubber seal, front cover plate and knob.

Connecting speakers

At this time, back fill the dirt into the trench covering all of the wire, leaving 12" of additional length available for connection at the locations of each speaker. For the purpose of troubleshooting, you should not yet backfill at the location of the volume control.

Strip 3/8" of insulation from each conductor of the speaker wire. You will notice 36" of speaker cable exiting from the bottom of the each Rock Speaker. This cable should already be stripped, if not strip 3/8" of insulation from each of these conductors as well.

Using the Wire Nut™ connectors, attach the speaker wire to each of the rock speakers. Polarity is not critical, however it must be consistent between both speakers to ensure proper phase. If the polarity is reversed between the two speakers, noticeable loss of low frequency will result.

After each Wire Nut™ has been installed, tightly wrap each connection with electrical tape. The Rock Speaker may then be positioned directly over this connection. Depending upon the ground surface and personal taste, it may be preferable to dig 1" ~ 2" down into the ground to slightly recess the rock. This will provide a more secure mount as well as add more realistic appearance to the installation.

Once the Rock Speaker is connected, it is completely acceptable to pack dirt, mulch, gravel or other material around the enclosure. Make certain not to block any part of the woofer opening on the front of the housing.

Wiring Instructions

When you are connecting a standard stereo amplifier, you will be using the 8Ω inputs on the speakers. You will connect the positive wire from your amplifier to the red wire on the speaker, and the negative wire from your amplifier to the black common wire on the speaker. If you are going to be using the 70V input on the speaker, connect the red and white wire together. After you do this, the black wire will remain the common or negative, and the other colored wires in the chart below labeled 70V become your positive. You can refer to the chart below to determine which wire to use depending on the wattage you wish to tap the speaker at.

Wiring Diagram								
Color:	Black	Blue	Green	Yellow	Green/Yellow	Brown	Red	White
Function:	Common (-)	70V	70V	70V	70V	70V	8Ω (+)	Combine with Red when in a 70V configuration.
50-14910		1W	2W	4W	8W	16W		
50-14915		2W	4W	8W	16W	32W		
50-14920		2W	4W	8W	16W	32W		

Testing the system

If at any point during these steps, your system does not function properly, immediately turn the sound source off and recheck connections.

1. Adjust the outdoor volume control to its maximum position (fully clockwise).
2. Turn on your sound source and set volume to a low setting
3. Walk outside and establish that sound is coming from both speakers
4. At the sound source, adjust the left/right balance fully to one side
5. Walk back outside and verify that sound is only coming from one speaker
6. At the sound source, adjust the left/right balance fully to the opposite side
7. Walk back outside and verify that sound is only coming from the opposite speaker
8. Return the balance control to the center position
9. Increase the volume setting, again checking for proper sound from both speakers
10. It is now recommended that you set the volume on the sound source to somewhat above the level you would listen to outside
11. You may then use your outdoor volume control to adjust the sound level down to a comfortable level
12. Your system is now ready for use
13. Backfill any remaining dirt into the trenches, you are now ready to complete any further landscaping

You are now ready to enjoy your outdoor speakers. In most climates, these speakers are completely suitable for continuous exposure to the elements. Snow, ice, rain wind and sun will not present any problem to these speakers.

For obvious reasons, they will not perform well if completely covered with snow (although the snow will not harm them). Also, while positioning in close proximity to swimming pools, lakes, beaches, ponds and fountains are completely acceptable, they are not suitable for continuous submersion in water.

Should you have further questions regarding the application of these or any other MCM speaker systems, feel free to contact your MCM Sales Representative.