# PROFICIENT. Protege... OUTDOOR LANDSCAPE SPEAKERS



# **INSTALLATION GUIDE**

#### CONTENTS

#### PAS-4.1-BU:

- (4) 4" Satellite Speakers with quick connect stakes
- (1) 8" Burial Subwoofer
- (1) Hammer Cap for stake installation
- · Silicone-Filled Wire Connectors for all connections

#### PAS-4.1-HS:

- (4) 4" Satellite Speakers with quick connect stakes
- (1) 8" Hardscape Subwoofer
- (1) Hammer Cap for stake installation
- (1) Mounting template
- (3) Subwoofer mounting stakes
- · Stainless-steel mounting screws
- Silicone-Filled Wire Connectors for all connections

#### PAS-2.0:

- (2) 4" Satellite Speakers with quick connect stakes
- (1) Hammer Cap for stake installation
- · Silicone-Filled Wire Connectors for all connections

#### **REQUIRED TOOLS:**

- Wire Strippers
- Digging Tools as needed for the soil type
- Measuring Tape
- Pea Gravel (optional, recommended as a drainage base for high clay content soils)

#### REQUIRED AMPLIFICATION:

The Protege 4.1 systems have a nominal Impedance of 80hm per channel and requires an amplifier with at least 50 Watts per channel for optimal performance.

#### **WARNING:**

- PLEASE READ AND FOLLOW ALL INSTRUCTIONS BEFORE BEGINNING YOUR INSTALLATION.
- POTENTIAL HAZARDS SUCH AS ELECTRICAL, GAS, BURIED CABLES, PLUMBING OR OTHER OBSTACLES SHOULD BE VERIFIED AND CHECKED BEFORE INSTALLING GROUND STAKES AND/OR OTHER ACCESSORIES.
- MANY LOCALITIES FORBID DIGGING WITHOUT PRIOR AUTHORIZATION, SO CONTACT LOCAL AUTHORITIES BEFORE INSTALLATION.

Burial–rated cable (not included) is strongly recommended. It is also important to use the proper speaker cable gauge depending on the size of your area and the length of the wire run.

# **INSTALLATION CONSIDERATIONS**

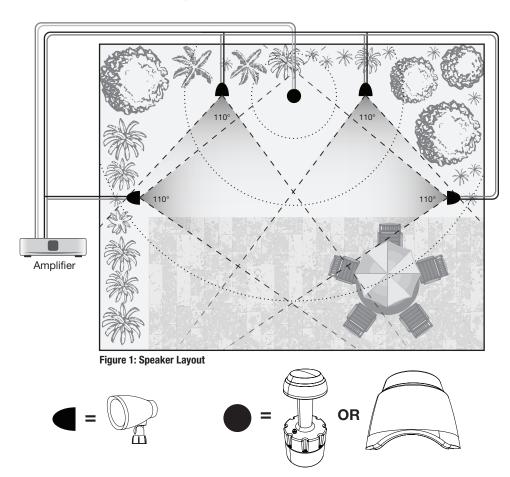
# Before you start digging a trench:

- · Test EACH speaker prior to installation.
- Verify that the proposed area is accessible and not prone to flooding or standing water. It is also
  important to ensure your speakers cannot be easily damaged, kicked, or hit.
- Take into consideration the overall landscape/garden design and positioning in relation to listening area.

Cable Gauge	Distance	
18 Gauge	Up to 100 ft (30m)	
16 Gauge	Up to 150 ft (45m)	
14 Gauge	Up to 200 ft (61m)	
12 Gauge	Up to 400 ft (122m)	
10 Gauge	Up to 650 ft (198m)	

# PLANNING THE LAYOUT

- · Determine the location of your speakers.
- Determine the positioning of subwoofer and satellite speakers.
- Dig the trench according to speakers and accessories to be installed.
- The trench should be 6"- 8" deep.



Each Protege 4.1 system will provide coverage for up to 1500 sq ft. Expanding your system by adding additional speakers can provide coverage of up to 3000 sq ft. (8.2 application).

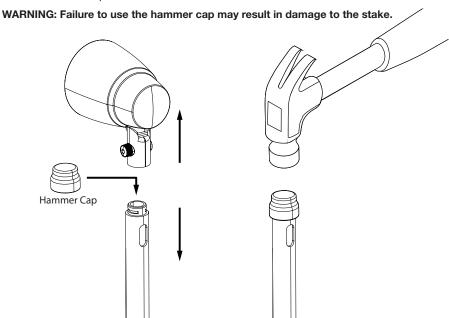
As a guideline, the satellite speakers should be placed from 6 to 10 feet apart for best coverage.

Locate the subwoofer(s) near the satellite speakers for proper blending.

# SPEAKER INSTALLATION

#### Satellite Speakers

Once the final location for each of the speakers is selected, drive the stake into the ground using the included hammer cap.



#### 8" Burial Subwoofer

#### **Hole Dimensions**

Figure 2: Speaker Setup

- 1. Dig a hole between 14" and 16" deep by at least 12" in diameter. In areas with clay soil we recommend using a 1" layer of pea gravel recommended as a drainage base.
- 2. Test the system before packing as much soil around the top of the subwoofer as possible.

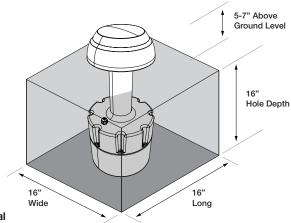


Figure 3: Subwoofer Burial

#### "8" Hardscape Subwoofer

Hardscape installation on a deck or other hard surface:

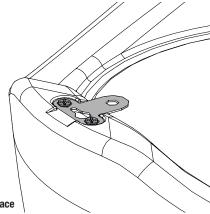


Figure 4: Pre-Installed Keyway Attachment for Hard Surface

- 1. On the mounting surface, use the included mounting template to mark the holes for the mounting keyways.
- Pre-drill holes into the mounting surface as indicated by the template.
- 3. Drill the included stainless-steel screws into the surface.
- 4. Attach the Hardscape subwoofer to the stainless-steel screws (as shown in Figure 6) by sliding the screws into the key-ways on the underside of the subwoofer- rotating the subwoofer slightly to lock it into place.

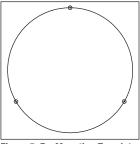


Figure 5: Ex: Mounting Template

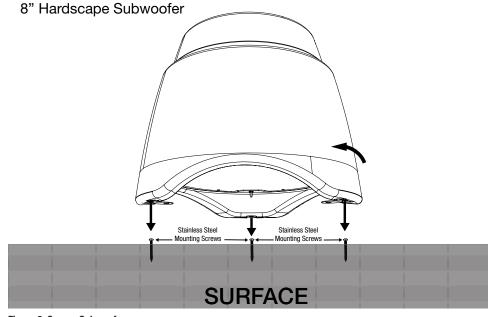


Figure 6: Secure Subwoofer

# 8" Hardscape Subwoofer

#### Hardscape installation using the supplied stakes:

- 1. When choosing a location, make sure that there is at least 1" clearance between the underside of the subwoofer's grille and the ground below it.
- 2. Remove three attached keyways (as shown in Figure 7a) from the underside of the subwoofer.
- 3. Flip the keyways (as shown in Figure 7b), and then re-attach using the supplied screws.

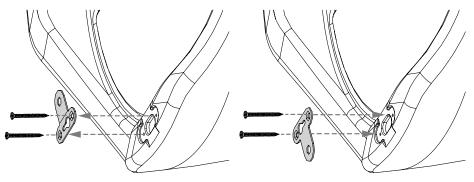


Figure 7a: Remove Keyway

Figure 7b: Flip/Re-attach Keyway

- 4. Rest the subwoofer on the desired surface (as shown in Figure 8) and use the supplied metal stakes to hold the subwoofer in place.
- 5. Remove any obstructions from around the perimeter of the subwoofer that could impede air flow.

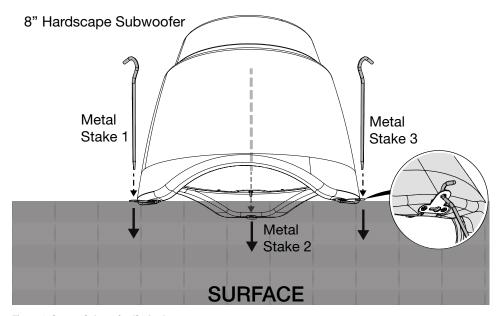
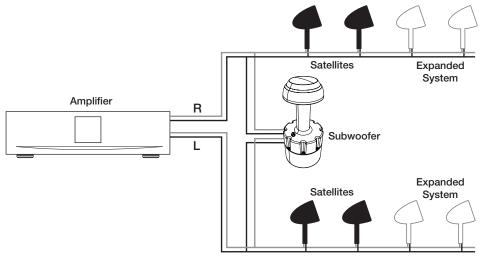


Figure 8: Secure Subwoofer (Stakes)

# **WIRING & SPEAKER INSTALLATION**

Stereo setup using 4-Conductor Burial Cable and Amplifier:



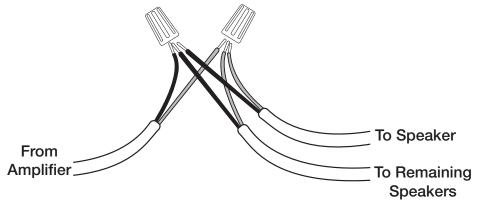


Figure 10: Wiring Bundle

- 1. Bundle all three of the LEFT channel positive (+) wires (amplifier wire, first speaker wire, and wire to the rest of the speakers) together and connect them with the first silicon filled wire nut.
- 2. Repeat step 1 but for all the LEFT channel negative (-) wires.
- **3.** Run the wires to the next speaker and connect them the same way, but this time connect the RIGHT channel positive (+) and negative (-) wires.
- Continue connecting the speakers like this, alternating LEFT and RIGHT, until you reach the subwoofer.
- 5. The subwoofer has a stereo input connection. Connect both LEFT and RIGHT channels to the subwoofer, making sure positive (+) and negative (-) are properly connected.
- 6. Continue by connecting the rest of the speakers. Then connect the wires to the amplifier.

#### Impedance and System Expansion

The nominal impedance of a 4.1 Protege speaker system is 8 Ohms per channel. You can expand your system by adding additional Satellite speakers to achieve the desired performance.

The Individual impedance of each Protege satellite speaker is 32 Ohms.

The Protege subwoofer is a dual voicecoil subwoofer. The individual impedance of each Protege subwoofer is 16 ohms per voicecoil.

Protege System	Satellites	Subs	Nominal Impedance (per Channel)
4.1 System	4	1	8.0
6.1 System	6	1	6.4
8.1 System	8	1	5.3
4.2 System	4	2	5.3
6.2 System	6	2	4.6
8.2 System	8	2	4.0

WARNING: Please check your Amplifier's owner's manual for minimum impedance specifications

#### LIMITED 5-YEAR WARRANTY

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This warranty is not transferable to subsequent purchasers of the product. To obtain warranty service, contact the authorized dealer where you purchased your product or take the unit to the nearest authorized dealer (with proof of purchase – claims made without proof of purchase will be denied) who will test the product and if necessary, forward it to Nortek Security & Control for service. If there are no authorized Dealers in your area, please contact Nortek Security & Control to receive a factory Return Authorization Number. DO NOT RETURN ANY UNIT WITHOUT FIRST RECEIVING WRITTEN AUTHORIZATION AND SHIPPING INSTRUCTIONS FROM Nortek Security & Control.

Upon examination, Nortek Security & Control will, at its sole option and expense, repair or replace any product found to be defective. Nortek Security & Control will return the repaired or replaced unit to you via its usual shipping method from the factory or repair center to your address in the United States of America or Canada only. Any shipping costs for addresses outside of the United States or Canada shall be the responsibility of the purchaser. In the event that this model is no longer available and cannot be repaired effectively, Nortek Security & Control, at its sole option, may replace it with a different model of equal or greater value, or refund the original purchase price paid.

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# This Warranty will be void if:

- The Serial Number on the product has been removed, tampered with or defaced.
- The product was not purchased from an authorized dealer or reseller.

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- 1) Goods acquired on a secondary or grey market
- 2) Counterfeit or stolen goods
- 3) Damaged, or defective goods

Please fill in your product inform	nation and retain for your records.	
Model	Serial No.	Purchase Date

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Nortek Security & Control offers a variety of accessories to make your installation of this and other products easy, economical, and professional. To learn more about our products, technologies and specifications, go to: www.nortekcontrol.com or contact your authorized Dealer for more information. For technical inquiries, please call 1-800-448-0976

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