

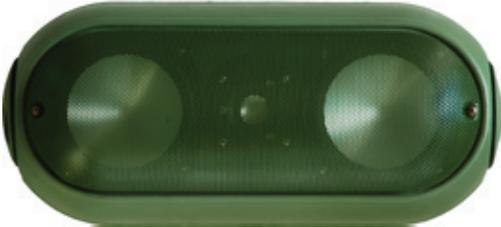


AC SERIES ALL CLIMATE LOUDSPEAKERS

OWNER'S GUIDE FOR ALL AC.15e, AC.16e, AC.17e
AND AC.WF16 SPEAKER MODELS

Visit www.terraspeakers.com for additional technical information and new product announcements.

AC.17e



AC.16e



AC.15e



AC.WF16



ADVISORY

The Terra AC Series loudspeakers can be used in a variety of applications, outdoors or indoors. If you are not completely comfortable with speaker wiring, amplifier connections, or other aspects of the physical installation, we encourage you to hire a professional audio/video contractor. For safety's sake the supplied mounting brackets must be secured properly with the appropriate fastening hardware. As an added precaution, a user-supplied safety strap can be affixed to the back of the speaker using a 1/4x20 screw, and then attached to the mounting surface. Please follow all applicable local codes and laws.

TERRA TECHNOLOGY & DESIGN

ALL CLIMATE DESIGN

The Terra ACAD™ driver design is immune to harsh environments • Terra's MFCSTM system eliminates spider degradation and improves driver linearity • The rigid UniCavity™ enclosure is weather tight • Optional watertight connectors available • Aluminum/stainless steel hardware • Non-corroding plastic grille • UV resistant design

ACAD: Anodized-Ceramic Aluminum Diaphragm

One of Terra's founding principles is that metal is an ideal choice for speaker cones. Terra's proprietary ceramic anodizing method stiffens and weather proofs the aluminum cone. The result is a cone that's as light and rigid as possible – two qualities essential for producing great sound. And unlike ordinary cone materials, ACAD is immune to harsh outdoor environments and won't degrade over time. Other benefits of the ACAD driver design include:

Greater Clarity - unmasks the details that distinguish truly musical sound

Purer Sound - rigid, lightweight cone minimizes distortion, plays loud without harshness

Better Dynamics - reproduces musical dynamics without strain

More Listenable - smooth, non-strident sound eliminates listener fatigue

More Reliable - seamless, one-piece cones will not deteriorate or change characteristics with age

MFCS: Magnetic Fluid Centering System

In a conventional loudspeaker the typical pleated fabric "spider" acts like a spring to return the voice coil (and the cone) back to the "neutral" position, centered within the magnet's gap. Terra bass/midrange drivers eliminate spiders, using instead a special magnetic fluid in the gap. This fluid provides the restoring force - in the form of magnetic attraction - needed to guide the voice coil and keep it centered within the gap. At higher output levels, the enhanced precision of MFCS reduces driver nonlinearities and permits longer cone excursion for greater output. And unlike a traditional spider, Terra's MFCS design is immune to harsh outdoor environments and won't degrade over time. In addition, the magnetic fluid acts as a heat sink for the voice coil, which increases the driver's power handling capability by cooling the voice coil. Other benefits of the MFCS systems include:

Extended Bass - longer cone excursion maximizes bass output

Less Distortion - voice coil is constantly centered, even at the loudest levels

Better Dynamics - absence of mechanical resistance speeds transient response

Greater Linearity - linear damping forces ensure consistent response

More Reliable - no mechanical parts to deteriorate or fail with age

UniCavity™ Enclosure

The best way to keep the elements out is to give them no way in. Terra's UniCavity enclosure is rotationally molded as a single piece with uniform wall thickness and a seamless aesthetic. The threaded end caps that secure the multi-angle aluminum bracket attach to a screw post that is part of the mold (thus, no screw hole). The cabinet's thickness and rigidity minimize vibrations that would color the sound. The rounded baffle minimizes second-order harmonic distortion typical of conventional angular baffles. The result? Clearer, more accurate sound. Other benefits of the UniCavity enclosure include:

All Climate - sealed enclosure keeps out moisture and corrosive particles

Less Distortion - thick, rigid cabinet minimizes vibration

Purer Sound - curved baffle minimizes refraction distortion



SPEAKER LOCATION & BASS PERFORMANCE

Speaker placement affects distribution of sound as well as bass performance. Simply mounting the speakers on a wall or low, close to the ground – rather than up on a post in free space – will increase the apparent bass output of the speaker. Since outdoor speakers are almost always mounted on a wall or very close to the ground, Terra speakers are acoustically balanced to provide the smoothest response in these locations, taking into account the bass “bump” caused by adjacent surfaces. If you wish to maximize the speaker’s bass output place them in corners, along the base of a wall or directly under an eave (every directly adjacent surface will double the apparent bass produced by each speaker). For low-amplitude installations (i.e., sensitive neighbors) mount the speakers low and aim them up towards the listeners (avoiding reflective surfaces) or mount speakers high and aim them down (where shrubbery and such will absorb sound). You can also extend and dramatically enhance outdoor bass performance by adding one or more Terra AC.SUB all-climate subwoofers to the system.

AMPLIFIER POWER

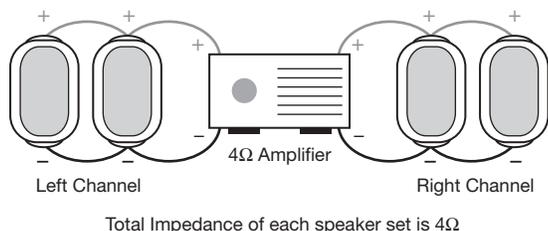
The single most common cause of loudspeaker failure is UNDERPOWERING the speaker. When an amplifier is called upon to deliver more power than it’s capable of, it starts to “clip”, delivering high levels of distortion to the speaker. This distortion will quickly damage the speaker and its effects are cumulative. So running the amp too hard for multiple short bursts will eventually cause serious speaker damage. Therefore, if you hear distortion from the speaker, chances are that the amplifier has exceeded its output capability and is clipping. If you hear distortion at loud levels, turn down your amp immediately! Clipping WILL cause damage to a speaker, and such damage is not covered under the warranty. But also note that if you have a very high powered amplifier and drive the speaker to very high levels without concern for damage this too can cause non-warranted failure. Think of the amplifier/speaker like your car engine. Overload the car and try to cross the Rockies and you’ll damage the engine (clipping from too little power). Or put the gas pedal to the floor and keep it there and you’ll eventually damage the engine as well (driving high power into a speaker without concern). Use common sense and care and your speakers (and engine) will last for years. **THE “BREAK-IN” PERIOD** You may play your Terra speakers immediately with excellent results. However, subtle improvement can be expected as the ACAD™ drivers break in after 50 to 100 hours of operation.

BRACKET KNOBS

Simply screw on the knobs until they are snug. Loosen slightly in order to adjust the angle of the speaker.

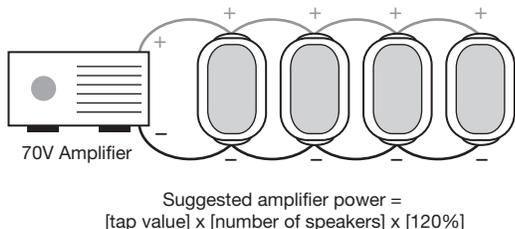
CONNECTING MULTIPLE SPEAKERS IN PARALLEL (Models AC.15e and AC.16e)

*NOTE the AC.17e is a 4 ohm speaker if wired as below, it would be a 2 ohm load

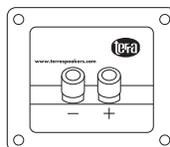


CONNECTING MULTIPLE SPEAKERS IN PARALLEL (Models AC.15e.XT and AC.16eXT and AC.17eXT)

(Models AC.15e.XT and AC.16eXT and AC.17eXT)

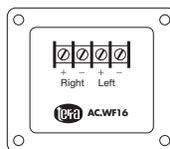


FIVE-WAY SPEAKER CONNECTORS (Models AC.15e, AC.16e and AC.17e)



The bindings screw down onto bare wire or wire terminations (spade lugs and pins) and also provide easy “push-in” connection for banana plugs. NOTE: Bare wire is not recommended for outdoor use.

TERMINAL STRIP SPEAKER CONNECTORS (Model AC.WF16)



The stereo WF16 includes screw-down terminals for both the left and right channels. Strip wire 1/4". NOTE: Bare wire is not recommended for outdoor use.

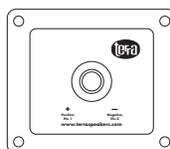
PIG-TAIL SPEAKER CONNECTORS (Models AC.15e.P, AC.16e.P, AC.17e.P and AC.WF16.P)



P models have a fixed, watertight connection with a 6' lead. For AC.15.P and AC.16.P: White = (+) Black = (-) For the stereo AC.WF16.P: Red = (+) Right Black = (-) Right White = (+) Left Green = (-) Left

WATERTIGHT CONNECTORS

(Models AC.15e.X/AC.15e.XT and AC.16e.X/AC.16e.XT and AC.17e.X/AC.17e.XT and AC.WF16.X)



X versions



XT versions

The X and XT versions of the AC.15e, AC.16e and AC.17e feature a Conxall® marine-grade watertight connector for the speaker cable. The AC.WF16.X features a Bulgin® marine-grade watertight connector (stereo). The watertight connectors consists of four parts:

1. Back Shell
2. Plastic Sleeve or Collar
3. Rubber Grommet for locking wire in connector
4. Connector Body

Directions for assembling watertight connectors (see diagrams below):

1. Disassemble by unscrewing the Back Shell
2. Slide Back Shell onto wire jacket
3. Slide Plastic Sleeve onto wire jacket
4. Slide Rubber Grommet onto wire jacket
5. Strip 5/8" from jacket; strip wire 1/4"
6. For the Bulgin connector: screw wires onto the connector
For the Conxall: Tin wire tips and then solder to pins on Connector Body
7. Test signal
8. For the Conxall: Use silicone sealant to seal connections at the solder points to prevent corrosion
9. Screw Back Shell to Connector Body
10. Tape Back Shell to wire if necessary to make watertight seal

Conxall® Watertight Connector Body



Bulgin® Watertight Connector Body (stereo)

