



Central High School Stadium Audio
2017



Verge Multimedia

-Sale/Install Proposal-

Central High School Football Stadium Audio Upgrade

Class - Sale/Install

Time Frame - Fall Season 2017

Location - 200 State Rd S-13-135, Pageland, SC 29728

Date - Fall 2017

Project Manager - Daniel Rich



Project Scope

- Design new stadium audio/control system
- Install 3x new speakers, cabling, and new control rack in/on press box
- Remove existing control equipment/speakers from box/poles (Verge will do this free of charge)
- Provide training on new system

System Will Consist Of

- 2 Community r5 speakers for home side/fill away side/field
- 1 Community r2 speaker pointed across for direct coverage of away side/field
- 1 mixer
- 1 wireless handheld mic
- 1 wired announcer's mic
- Power amp for speakers
- Power conditioner
- Equipment rack
- All rigging
- All cabling/conduit

Further Info

- Both Community r5 speakers are to be mounted on the left and right side of the press box roof
- The single r2 high output speaker will be mounted in the center directed towards to field/away bleachers.
- A power conditioner filters the power coming into the equipment rack protecting it from "Dirty Power" or any type of surge/hit produced by a lightening strike or power surge.
- The mixer spec'd is a 10 channel mixer. The system also includes a CD player for playback of music, dance team content, etc. The mixer has inputs for microphones as well as ipad/ipod/phone/computer inputs to run content. Verge can assist with setting this up as needed.
- This equipment rack is removable. The only cabling coming out of it is that for the microphones as well as 2 wires going to the roof for the speakers. These simply



screw into the terminals on the amplifier. All that is needed is to unscrew the 2 wires, tuck them back into the wall box, and remove the rack. Verge will provide training on this process free of charge

Equipment Specs



Community R2 3 way full range speaker - Community R5 2 way full range speaker

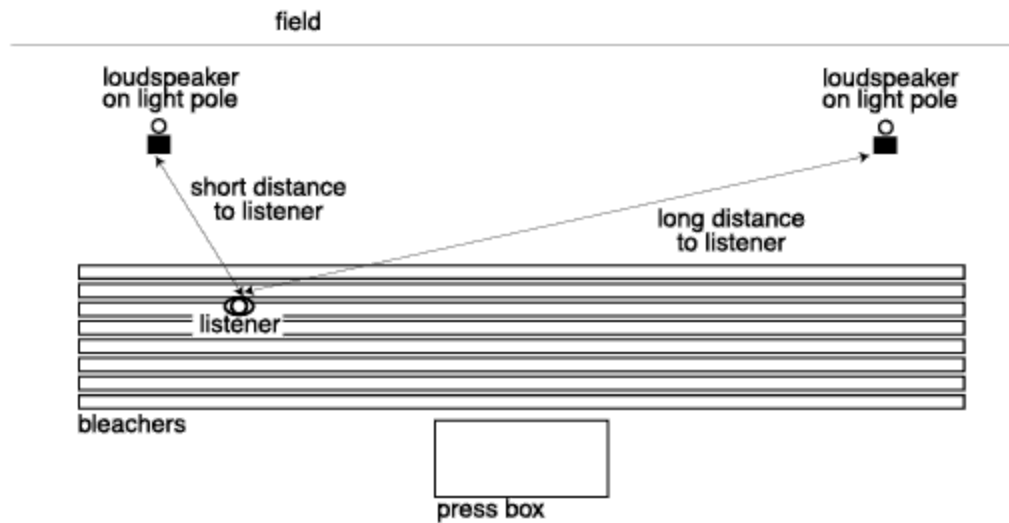


**System Incl. Rack, Speakers,
Wireless Antennas,
Mics. (Ref. Lav Mic not Incl.)**



Install Info (Source - Technomad)

--- Traditional Pole Mounted System ---

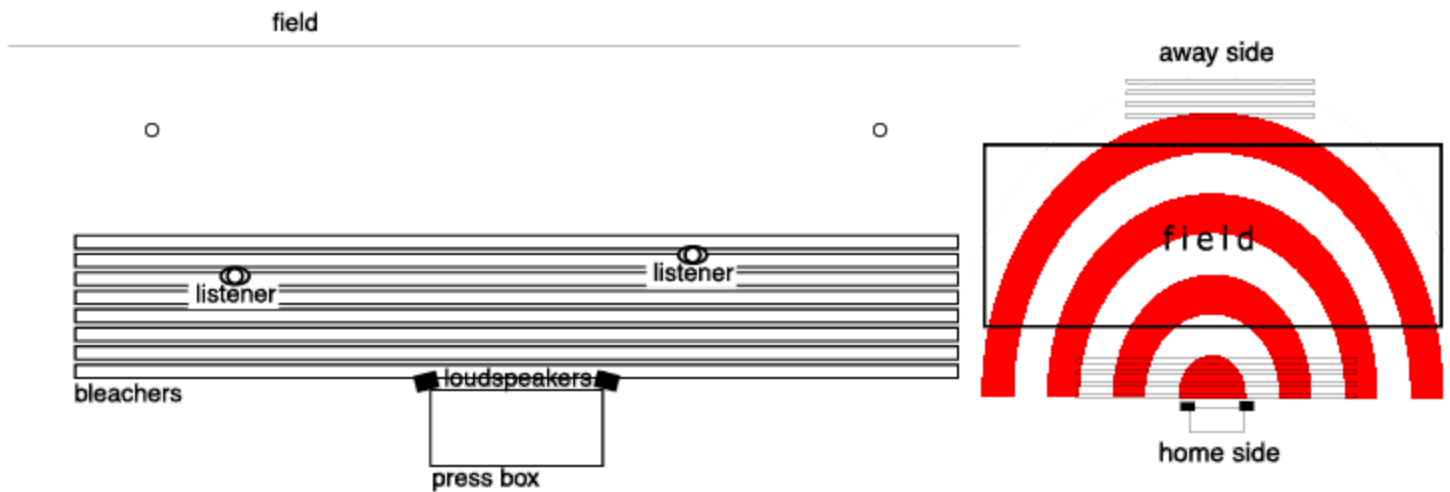


Problems:

- Installing loudspeakers on widely separated light poles seems like a good idea, but it actually leads to many problems. The sound from the near speaker arrives before the sound from the far speaker – resulting in an impossible-to-kill echo. This echo degrades speech clarity and music quality.
- Wiring is another problem – the cable runs required to reach from the press box (where the announcer is operating the PA system) all the way to the light poles may be several hundred feet. This requires either VERY thick or expensive cable (to avoid wasting all the amplifier power in the wire), or a more costly “70-volt” system.
- Another problem is coverage – by pointing loudspeakers towards the home side only, the field and the visitor side remains uncovered. Additional loudspeakers may be needed to cover the field and away side, which is costly and leads to other problems with echo, acoustic cancellation, wiring etc.
- Another problem is that any “excess” sound is radiating out of the stadium in the direction behind the press box – perhaps into a residential neighborhood. Not good!



---Proposed Press Box Mounted System ---



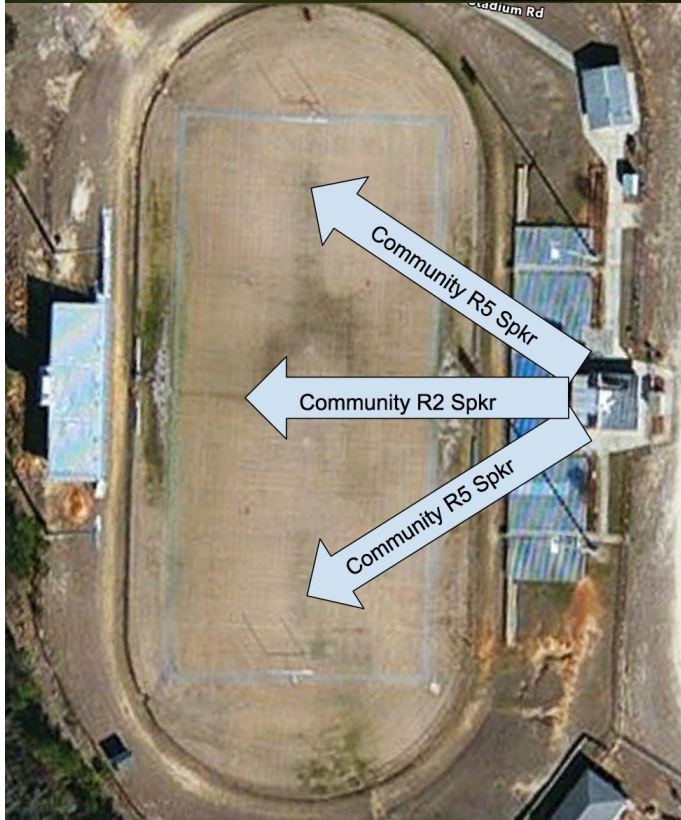
- Installing loudspeakers on press box means any listener hears just one speaker (or if they hear two, sound from the two loudspeakers arrives at the listener simultaneously). Result: minimal echo!
- Cable runs are very short, reducing cost and making installation quick and simple. Cables only have to reach from the amp rack in the press box to the corners of the press box.

Q. "Don't the loudspeakers on the press box fry the ears of fans sitting near them?"

A. No. First of all, Community loudspeakers do not produce the nasty horn-throat distortion typical of horn-based systems, so the sound at all locations in the stadium is smooth, clear, and non-abrasive. The loudspeakers on the press box should be installed above the fans, pointing straight out from the mounting surface (not tipped down towards the bleachers), and rotated left and right by 5 to 10 degrees. This results in complete coverage of the home side bleachers, with all the sound radiating usefully towards the field and to the Visitor stands. This type of installation delivers most of the sound onto the field, and minimizes spillage into adjacent areas.



System Outline/Proposal



Project Total

Discounts Applied - - -

- Tax Exempt (501c3) *-tax*
- Removal of old equipment (no charge/free) *-\$900*

**Total Amount (Including
Install) - \$12,500**