

SECTION 16735

PUBLIC ADDRESS AND SOUND SYSTEM

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, Division 0, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 WORK INCLUDED

- A. The work includes, but is not limited to the following:
- B. Provide and install public address system, interior and public address speakers and accessories gymnasium sound system.
- C. Provide a system of raceways and cables for speakers and wire to designated point demarcation.

1.03 WORK NOT INCLUDED

- A. The following work is not included:
- B. Audio intercom controls, amplifiers and related and its installation.

1.04 SUBMITTALS

- A. Submit product data for the following:
 - 1. Control Rack
 - 2. Amplifier/Mixer
 - 3. Speakers
 - 4. Volume Controls
 - 5. Baffles
 - 6. Back boxes
 - 7. Cable

PART 2 - PRODUCTS

2.01 CONTROL RACK

- A. Acceptable Manufacturers:
 - 1. Dukane
 - 2. Rauland

2.02 LOUDSPEAKERS

- A. Acceptable Manufacturers:
 - 1. Bogen
 - 2. Dukane
 - 3. Rauland
 - 4. Soundolier

- B. Interior Speakers: Eight inch, seamless cone type with minimum 4.8 ounce ceramic magnet and frequency range of 90 to 15,000 Hz, normal wattage rating of 8 watts with a program rating of 12 watt, voice coil minimum 3/4" diameter and impedance of 8 ohms, include a universal matching transformer suitable for use on a 25-volt output line and equip with taps at 1/2, 1, 2 or 4 watts, like Dukane Model 5A 606.
- C. Interior Baffles: Perforated steel finished in semigloss white enamel, 12 3/4" diameter, 60% opening for sound transmission, like Dukane Model 6A625-A, or equal. Mount speaker on a separate steel plate to conceal the mounting screws. Pre-drill the speaker mounting plate and baffle to match the back box.
- D. Interior Backbox: 18 gauge steel with rust preventative coating, 11" x 9 1/2" x 4" nominal dimensions, with conduit knockouts, interior coating to prevent metallic resonance, Dukane Model 145-222, or equal.
- E. Volume Control: Area speaker control, rotary switch type, 11 position, rated minimum 10 watts or as necessary to control connected speaker load, voltage rating of 25 and 70 volts, with 11 attenuation steps 0db to 90db, mounted on stainless steel wall plate with engraved step identification, like Dukane Model 9A1550B, or equal.
- F. Exterior Loudspeakers: Weatherproof loudspeaker assembly, Atlas/Soundolier #APF-15T, or equal, housing constructed of treated, heavy gauge aluminum, all exposed parts plated and sealed. Driver unit shall be double re-entrant type with audio power rating of 15 watts at full range and 20 watts at frequencies above horn cutoff, frequency response shall be 475-14,000 Hz., horn dispersion angle 180 degrees, and sound pressure level 121 dB at rated power.
- G. Exterior Baffles: Square front grille manufactured from self-aging aluminum alloy with a minimum tensile strength of 44,000 P.S.I., 10-3/4" square x 3/4" projection, weather resistant textured white enamel finish, with tamperproof hardware, Atlas Soundolier Model VP161-APF, or approved equal.
- H. Exterior Backbox: 20 gauge steel with rust preventative coating, 9 5/8" square x 5" nominal dimensions, with conduit knockouts, interior coating to prevent metallic resonance, Atlas/Soundolier Model I20-211, or equal.

2.03 CABLES

- A. Acceptable Manufacturers:
 1. Alpha
 2. Belden
 3. Dukane
 4. West Penn
- B. Speaker Cable (without drain): UL listed 16 AWG stranded copper conductor, PVC insulated, twisted pair with an overall PVC jacket, Dukane model 176-187.
- C. Speaker Cable (with drain): UL listed 22 AWG conductor stranded copper with PVC insulation; 2 twisted conductors with an aluminum mylar tape shield and 22 AWG tinned drain wire, plus an unshielded conductor not shielded; overall PVC jacket, like Dukane Model 176-185.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Mount speaker volume control 4'-0" up adjacent to doorways or access points served or where indicated.
- C. All wiring shall be in conduit per rules for branch circuits in Section 16050.

- D. Coordinate field testing with Contracting Officer and supplier of GFE equipment. Submit field reports indicating satisfactory installation and testing of system components provided by contractor.

END OF SECTION