

Wired Audio

Hubbell Unitized Audio
Communication Systems

Catalog 31.600 • January 1999 • New
Replaces Catalog Sheet 31610 of May 97

Hubbell Wired Audio Systems provide clear, distinct voice communications and paging between widely separated stations in a plant, and outdoors. A typical handset station is wall mounted in a NEMA 12 enclosure and provides a page line and five party lines. Also available are desk-top and desk-edge stations and their remote amplifiers. Handset stations are designed to withstand the rough usage usually associated with a steel mill application, yet the stations are attractive enough for use in locations where appearance is important. Noise canceling mikes are standard.

Speaker amplifiers are used in locations that require a speaker but not a handset. One Line Balance Unit is required per system.

"Unitized" means the stations are connected in parallel and the failure of one station does not affect the rest of the system. Hubbell Wired Audio Stations are designed for mini-mum maintenance and easy replacement of modules. In most cases, non-technical personnel can restore a non-functioning station by simply replacing the plug-in power supply module or speaker amplifier module.



**Handset Station -
NEMA 12/Indoor**



Desk-Top Station



**Handset Station -
NEMA 4X/Outdoor**



Desk-Edge Station

Features

- Solid state hook switch
- Speaker volume adjustment through front panel
- Noise canceling dynamic mike is standard
- Plug-in power supply module
- Plug-in speaker amplifier module
- Low hum and noise level, suitable for quiet office
- Simple to operate
- Attractive appearance
- Full line of speakers, cables, other accessories

Typical System Configuration

A typical Hubbell Cat. 31.600 Wired Unitized Audio Communication System might consist of:

9 - Indoor Handset Stations and Speakers

- 9 UA 7400 Handset Stations, wall mount, 1-page/5-party lines, NEMA 12 indoor, 120V ac.
- 5 SP 2766 Horn Speakers with integral driver, 30W, standard, (10"h, 10"w, 11"d), indoor/outdoor.
- 2 SP 2590 Horn Speakers with integral driver, 30W, wide angle 95°, (8"h, 14"w, 13"d), indoor/outdoor.
- 2 SP 2702 Twin Horn Speakers with integral driver, 30W, bi-directional, (10"dia., 17"d), indoor/outdoor.

3 - Outdoor Handset Stations and Speakers

- 3 UA 7400 Handset Stations, wall mount, 1-page/5-party lines, NEMA 12 indoor, 120V ac.
- 3 UA 7040 Nema 4X outdoor fiberglass boxes, for above handset stations.
- 3 SP 2566 Horns, standard, (17"dia., 13"d).
- 3 SP 2714 Compression Drivers, 30W, indoor/outdoor, for above horns.

1 - Desk-top Station

- 1 UA 7200 Desk-top Station with integral speaker, 1-page/5-party lines, NEMA 1 indoor. This includes: 9 ft cable & plug for connecting to remote amplifier/power supply, UA 7202 Remote Amplifier/Power Supply, wall mount, NEMA 12 indoor, 120V ac.

1 - Desk-edge Station and Speaker

- 1 UA 7220 Desk-edge Station, 1-page/5-party lines, NEMA 1 indoor. This includes: 9 ft cable & plug for connecting to remote amplifier/power supply, UA 7202 Remote Amplifier/Power Supply, wall mount, NEMA 12 indoor, 120V ac.
- 1 SP 2585 Horn Speaker with integral driver, 15W, small, (8"dia., 7"d), indoor/outdoor.

2 - Outdoor Speaker Amplifiers and Speakers

- 2 UA 7500 Speaker Amplifiers, wall mount, NEMA 12 indoor, 120V ac.
- 2 UA 7040 NEMA 4X outdoor fiberglass boxes, for above speaker amplifiers.
- 2 SP 2685 Horns, wide angle 120°, (12"h, 22"w, 17"d).
- 2 SP 2714 Compression Drivers, 30W, indoor/outdoor, for above horns.

1 - Indoor Line Balance Unit

- 1 981304-304 Line Balance Unit, NEMA 12 indoor.

Communication and Speaker Cable

3000 ft. WI 2961 Communication Cable, 16-conductor for five party.

1000 ft. WI 2959 Speaker Cable, 2-conductor.

Speakers

(Cat. 31.630)



SP2766 Speaker
Standard, 30 W

SP2585 Speaker
Small, 15W



SP2566 Horn
Standard, 16.5" W



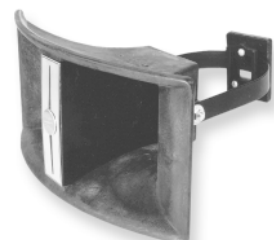
SP2590 Speaker
Wide Angle



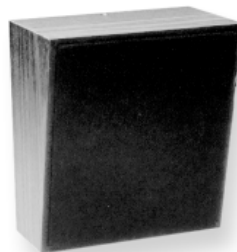
SP2685 Horn
Wide Angle



SP2702 Speaker
Twin horn, bi-directional



SP2684 Horn
Wide Angle, twin reflex



SP2774 Speaker in
Surface Mount Wall Baffle



SP2775 Speaker in
Flush Mount Ceiling Baffle

Peripheral Equipment



Remote Amplifier used with Desk-Top/Desk-Edge Stations



SP2714 Compression Driver for use with horns 30 W



Speaker Amplifier - NEMA 12/Indoor

Cables

(Cat. 31.640)

The station interconnecting cables and speaker cables are specially designed for industrial communication use and are suitable for installation in metallic or non-metallic conduits or cable trays. The outer jackets are extruded of flame-retardant, hard service PVC, eminently suited to most industrial environments.

The five-party stations use a 16-conductor communication cable that consists of a twisted pair of 14 ga. wires plus a single 14 ga. for power; six twisted pairs of 18 ga.

wire for the page-line and 5 party-lines, plus a single 18 ga. for misc. signaling.

The single-party stations use an 8-conductor communication cable that consists of a twisted pair of 14 ga. wires plus a single 14 ga. for power; two twisted pairs of 18 ga. wire for the page-line and the party-line, plus a single 18 ga. for misc. signaling.

The speakers require a 2-conductor speaker cable that consists of a twisted pair of 18 ga. wires within the outer PVC jacket.

Couplers

(Cat. 31.650)



Special purpose communication interface devices are available for coupling the Wired Audio

System to a Voice Radio System or tying into a PBX telephone system.

Fully automatic voice activated couplers are furnished, as most appropriate to the specific application.

Accessories

(Cat. 31.660)

One **Line Balance Unit** is required for each Wired Audio System to provide side tone rejection and insure proper system operation.



Portable Handset Stations

can be supplied when required by the customer. Such stations come with 25' of cable and plug into a mating outlet box. The outlet box is permanently wired into the communication system.

Junction Boxes are available in a variety of Nema enclosures to facilitate termination of interconnecting cables from several stations. The junction boxes feature labeled terminal strips and ample space for multiple cables.

Headsets with microphones can be supplied for high noise areas where handsets are not feasible. Headsets come with various lengths of cord and plug into a matching amplifier.

Tone and Speech Generators provide electronically synthesized audio alarm signals or play pre-recorded messages over the paging system. Message initiation can be manual or automatic.

Components

(Cat. 31.670)

UA 7003 Plug-in Power Supply Module (Replaces CO 1)



UA 7004 Plug-in Speaker Amplifier Module (Replaces DO 1)

Specifications

Power Requirements 105–130 Volt, 50/60 Hz
 No signal 3 Watts, 4 VA
 Max. signal 30 Watts, 35 VA
 Fuse 1 Amp, SB

Temperature Range -30°–70° C

Enclosure Handset station, speaker amplifier
 NEMA 12 Steel, safety yellow polyester powder paint
 NEMA 4X Molded, fiberglass reinforced gray polyester

Handset Assembly Black Cyclolac, page switch in handle
 Transmitter Noise canceling dynamic
 Receiver 130 ohm, high efficiency dynamic
 Cord Coiled cord, black, 6 ft.
 Other lengths optional

Handset Cradle Black Cyclolac

Hook Switch Solid state

Party-Line Selector Switch Five positions with positive detents

Handset Amplifier Board Replaces WBA 4090
 Output 1.5 Volt rms into a 33 ohm load
 Input Sensitivity Less than 0.7 millivolt
 Frequency Response 300 to 6,500 Hz, ± 1.5 dB
 Distortion 1.5% THD max. at 1,000 Hz
 at 1.25 Volt output
 Noise Level 60 dB below rated output
 Input Impedance 100 ohm at 1,000 Hz
 Controls Transmitter level, receiver volume

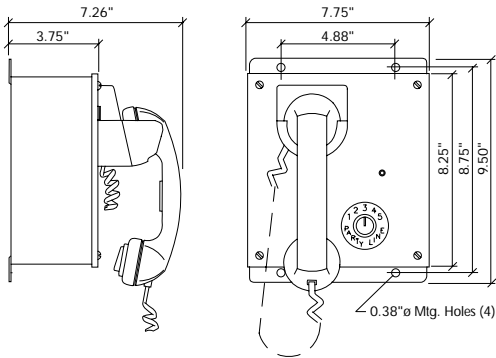
Speaker Amplifier Module Replaces DO 1
 Output Class B, push-pull, 12 Watt
 into 8 or 16 ohm load
 Power Gain 60 dB min.
 Frequency Response 250 to 9,000 Hz
 Distortion Less than 0.25% THD at 12 Watt, 1,000 Hz
 Input Impedance 50 K ohm min. bridging input
 Output Impedance Taps for 8 or 16 ohm speakers
 Controls Speaker volume

Power Supply Module Replaces CO 1
 Input 105 - 130 Volt 50/60 Hz, 35 VA
 Output ±24 VDC, 500 mA

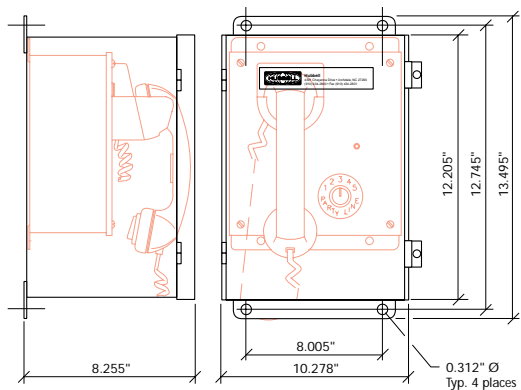
Desk-Top Station
 Speaker output 2 Watt to a 45 ohm internal speaker
 Controls Speaker volume, party-line selector switch

Desk-Edge Station
 Controls Party-line selector switch

Communication Cable
 Single Party 8-conductor, part number WI 2960
 Five Party 16-conductor, part number WI 2961
 Speaker Cable 2-conductor, part number WI 2959



NEMA 12 Handset Station – Wt. 9 lbs.



NEMA 4X Handset Station – Wt. 20 lbs.



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