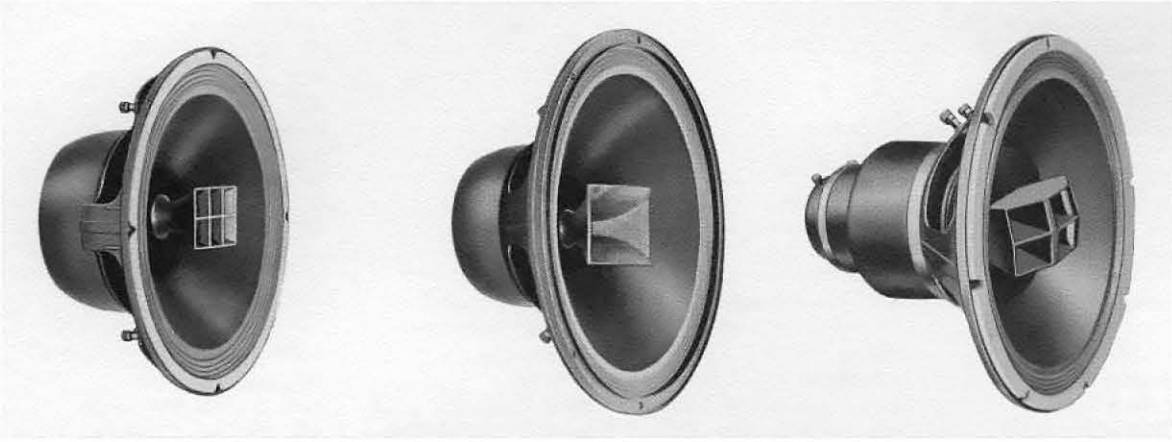
601C, 602C, 605B Duplex® Loudspeakers



601C 602C 605B

Features:

- Two-way
- Highest efficiency
- 22,000 cycle range
- 3" edge-wound bass voice coil
- Massive magnetic structures
- High power handling capacity
- Heavy cast frame construction
- Guaranteed frequency range
- Smooth response
- Low cone resonance
- Improved bass response
- Low distortion

• PROFESSIONAL BROADCAST AND STUDIO PLAYBACK MONITORING •
• HIGH QUALITY DISTRIBUTED SOUND SYSTEMS FOR:
• AUDITORIUMS • FACTORIES • TRANSPORTATION TERMINALS • RESTAURANTS •
• CENTRAL PUBLIC ADDRESS SYSTEMS FOR:
• HOTELS • CLUBS • SCHOOLS • HOSPITALS • CIVIC CENTERS •

Altec 'Duplex' ® Loudspeakers are two-way transducers, consisting of magnetically, electrically, and mechanically independent high and low frequency units, mounted within one physical frame, to provide the quality advantages of a professional two-way speaker system in a compact form. Every Altec Duplex Loudspeaker is guaranteed to meet or exceed its published specifications stating its capability to reproduce the entire audible range of sound, when mounted in the correct enclosure. The efficiency, power handling capacity, and extremely wide response of these units make each an ideal choice for both single-source (high-level) and distributed (low-level) sound systems. The minimal distortion, wide range, smooth response, and excellent distribution characteristics assure perfect audio reproduction of speech and music for all PA, sound reinforcement, or background music installations — in addition to providing highest quality monitoring of broadcast and recording material for the largest studios.

Each 'Duplex' Loudspeaker is supplied with a professional-type, full-section dividing network, incorporating a high-frequency balance control for correctly matching or adjusting to the acoustical characteristics of individual listening areas.

The 605B Duplex — the finest 15-inch, full-range loudspeaker in use throughout the audio industry — has, for years, been the accepted standard monitor speaker of major broadcast and recording studios, wherein no compromise may be afforded between the original performance and the reproduced sound. The 605B covers the entire audio range from 20 to 22,000 cycles. The exceptional uniformity of response is due, in part, to the large, edge-wound aluminum (in the high-frequency section) and copper (in the low-frequency section) voice coils, operating in magnetic gaps of high flux density, produced by independent oversize Alnico V magnets. The large $2\frac{1}{4}$" aluminum high-frequency diaphragm, having tangential compliance, is coupled to a heavy, high-impact, compression-molded multicellular horn, providing both outstanding sound distribution and an amazing clarity of the higher musical harmonics — without annoying resonant 'peaks' or 'hollows' which produce undesirable sound cancellation. A combination phasing plug and pole piece, precision-machined with two acoustically exponential annular slots, assures correct phase relationship between the center and outer edge of the HF diaphragm. The high-compliance low-frequency cone, driven by the large 3-inch copper voice coil, reproduces the lowest fundamental bass tones without frequency doubling or 'bottoming' — even at full rated power. It is this exceptional attention to the numerous details of engineering and production which make the Altec 605B the finest two-way 'Duplex' loudspeaker available.

The 602C Duplex is designed to fulfill the same professional requirements as the 605B for use in installations where the higher power rating and sensitivity of the latter are not required . . . with an attendant decrease in cost. The 602C utilizes a compression driver, coupled to a non-resonant fiberglass sectoral horn, providing distribution in a 90° by 40° pattern. Both the high and low-frequency voice coils are of edge-wound aluminum ribbon.

The 601C — smallest of the Duplex line — represents the only 12-inch, two-way loudspeaker of professional quality which has been adopted by the audio industry for applications involving limited space, wherein high quality standards must be maintained. The high-compliance low-frequency cone, actuated by a large 3-inch edge-wound aluminum voice coil and compression driver, coupled to the rigid, die-cast multicellular-type horn, provides a clarity and distribution of frequencies up to 22,000 cycles in a 90° by 40° pattern.

ALTEC LANSING®

A Division of LTV Ling Altec, Inc.

1515 S. Manchester Ave., Anaheim, Calif.

New York

ALTEC 601C, 602C, 605B

	601C	602C	605B
Power:	20 watts (30 watts, peak)	25 watts (35 watts, peak)	35 watts (50 watts, peak)
Frequency Response:	30 - 22,000 cycles	20 - 22,000 cycles	20 - 22,000 cycles
Pressure Sensitivity:	99 db SPL at 4 ft. from 1 watt* or 112 db SPL at 4 ft. from 20 watts.	101 db SPL at 4 ft. from 1 watt* or 115 db SPL at 4 ft. from 20 watts.	97 db SPL at 4 ft. from 1 watt* or 112.4 db SPL at 4 ft. from 35 watts.
Impedance:	8 ohms	8 ohms	16 ohms
Cone Resonance:	39 cycles	28 cycles	25 cycles
Voice Coil Diameters:	LF: 3 inches HF: $^3/_4$inches	LF: 3 inches HF: $^3/_4$ inches	LF: 3 inches HF: $1^3/_4$ inches
Horizontal Distribution:	90°	90°	90°
Vertical Distribution:	40°	40°	40°
Magnet: Type:	Ainico V	Alnico V	Alnico V
Weight:	LF: 1.8 pounds HF: .188 pounds	LF: 2.4 pounds HF: .188 pounds	LF: 2.25 pounds HF: .531 pounds
Structure Weight:	LF: 9.44 pounds HF: .23 pounds	LF: 10.5 pounds HF: .23 pounds	LF: 15.13 pounds HF: 5 pounds
Flux:	LF: 10,400 Gauss HF: 10,000 Gauss	LF: 11,400 Gauss HF: 10,000 Gauss	LF: 11,000 Gauss HF: 14,000 Gauss
Crossover Network:	3,000 cycle full-section (furnished with speaker)	3,000 cycle full-section (furnished with speaker)	1,600 cycle full-section (furnished with speaker)
Terminals:	Binding Post (4)	Binding Post (4)	Binding Post (4)
Diameter:	$12^1/_8$ inches	$15^5/_{16}$ inches	$15^5/_{16}$ inches
Mounting Data:	Baffle Opening: $10^1/_4$ inches Mtg. Bolt. Cntrs: $5^{25}/_{32}$ inches (4, equally spaced, at 90°) Depth: $5^5/_8$ inches	Baffle Opening: $13^1/_4$ inches Mtg. Bolt Cntrs: $7^9/_{16}$ inches (8, equally spaced, at 45°) Depth: $7^1/_4$ inches	Baffle Opening: $13^1/_4$ inches Mtg. Bolt Cntrs: $7^9/_{16}$ inches (8, equally spaced, at 45°) Depth: 10 inches
Weight:	15 pounds with network *(Equivalent to EIA rating of 52 db at 30 feet from 1 mw)	16 pounds with network *(Equivalent to EIA rating of 54 db at 30 feet from 1 mw)	28 pounds with network *(Equivalent to EIA rating of 50 db at 30 feet from 1 mw)

ARCHITECTS AND ENGINEERS SPECIFICATIONS

601C: The loudspeaker shall be $12^1/_8$ inches in diameter and of the 2-way Duplex type, having a continuous power rating of 20 watts and a peak power rating of 30 watts. The loudspeaker shall be capable of reproducing a frequency range from 30 to 22,000 cycles per second and shall have a minimum pressure sensitivity of 112 db SPL, at 4 feet from 20 watts, measured on axis. The loudspeaker shall employ a full section dividing network, having a 3,000 cycle crossover frequency and a continuously adjustable range, from 0 to —10 db, of high frequency attenuation.

The loudspeaker shall have a nominal impedance of 8 ohms. The low frequency cone shall have a free air resonance frequency of 39 cycles per second; the LF voice coil shall be of edge-wound aluminum ribbon having a diameter of 3 inches and shall operate in a magnetic gap having a flux density of 10,400 Gauss, derived from an Alnico V magnet having a weight of at least 1.8 pounds. The outer edge (rim) of the LF cone shall utilize a high-compliance, mechanically-damped cloth-surround which, complemented by the correct apex suspension (spider), shall be capable of reproducing the stated low frequency response.

The high frequency diaphragm shall be of golden Mylar*, having tangential compliance, and shall be properly loaded, acoustically, by a die-cast aluminum multicellular-type horn, having exponential expansion. The frequency distribution pattern of the loudspeaker, owing to the use of this high frequency horn, shall be 90° by 40°. The HF voice coil shall be of edge-wound aluminum ribbon having a diameter of 3/4 inches and shall operate in a magnetic gap having a flux density of 10,000 Gauss, derived from an Alnico V magnet having a weight of .188 pounds. High frequency diaphragms having annular compliances, or horns with spherical radiation patterns, shall be unacceptable under this specification. The loudspeaker frame shall be of heavy cast construction.

Any loudspeaker not meeting all of the foregoing requirements shall be deemed unacceptable under this specification. The loudspeaker shall be Altec Lansing Model 601C.

602C: The loudspeaker shall be $15^5/_{16}$ inches in diameter and of the 2-way Duplex type, having a continuous power rating of 25 watts and a peak power rating of 35 watts. The loudspeaker shall be capable of reproducing a frequency range from 20 to 22,000 cycles per second and shall have a minimum pressure sensitivity of 115 db SPL, at 4 feet from 25 watts, measured on axis. The loudspeaker shall employ a full section dividing network having a 3,000 cycle crossover frequency and a continuously adjustable range, from 0 to —10 db, of high frequency attenuation.

The loudspeaker shall have a nominal impedance of 8 ohms. The low frequency cone shall have a free air resonance frequency of 28 cycles per second; the LF voice coil shall be of edge-wound aluminum ribbon having a diameter of 3 inches and shall operate in a magnetic gap having a flux density of 11,400 Gauss, derived from an Alnico V magnet having a weight of at least 2.4 pounds. The outer edge (rim) of the LF cone shall utilize a high-compliance, mechanically-damped, cloth-surround which, complemented by the correct apex suspension (spider), shall be capable of reproducing the stated low frequency response. The high frequency diaphragm shall be of golden Mylar*, having tangential compliance, and shall be properly loaded, acoustically, by a heavy molded fiberglass sectoral horn, having exponential expansion. The frequency distribution pattern of the loudspeaker, owing to the use of this high frequency horn, shall be 90° by 40°. The HF voice coil shall be of edge-wound aluminum ribbon, having a diameter of ¾ inches, and shall operate in a magnetic gap having a flux density of 10,000 Gauss, derived from an Alnico V magnet having a weight of .188 pounds. High frequency diaphragms having annular compliances and/or utilizing horns with spherical radiation patterns shall be deemed unacceptable under this specification. The loudspeaker frame shall be of heavy construction.

Any loudspeaker not meeting all of the foregoing requirements shall be deemed unacceptable under this specification. The loudspeaker shall be Altec Lansing Model 602C.

605B: The loudspeaker shall be $15^5/_{16}$ inches in diameter and of the 2-way Duplex type, having a continuous power rating of 35 watts and a peak power rating of 50 watts. The loudspeaker shall be capable of reproducing a frequency range from 20 to 22,000 cycles per second and shall have a minimum pressure sensitivity of 112.4 db SPL, at 4 feet from 35 watts, measured on axis. The loudspeaker shall employ a full section dividing network having a 1,600 cycle crossover frequency and a continuously adjustable range, from 0 to —10 db, of high frequency attenuation.

The loudspeaker shall have a nominal impedance of 16 ohms. The low frequency cone shall have a free air resonance frequency of 25 cycles per second; the LF voice coil shall be of edge-wound copper ribbon, having a diameter of 3 inches and shall operate in a magnetic gap having a flux density of 11,000 Gauss, derived from an Alnico V magnet having a weight of 2.25 pounds. The outer edge (rim) of the LF cone shall utilize a high-compliance, mechanically-damped, cloth-surround which, complemented by the correct apex suspension (spider), shall be capable of reproducing the stated low frequency response.

The high frequency diaphragm shall be of aluminum, having tangential compliance, and shall be properly loaded, acoustically, by a multicellular horn, compression-molded of heavy, high-impact plastic. The frequency distribution pattern of the loudspeaker, owing to the use of this multicellular horn, shall be 90° by 40°. The HF voice coil shall be of edge-wound aluminum ribbon, having a diameter of $1^3/_4$ inches, and shall operate in a magnetic gap having a flux density of 14,000 Gauss, derived from an Alnico V magnet having a weight of .531 pounds. High frequency diaphragms having annular compliances and/or utilizing horns with spherical radiation patterns shall be deemed unacceptable under this specification.

The loudspeaker frame shall be of heavy cast construction. The high frequency diaphragm and voice coil assembly shall be field replaceable without the use of special tools or skills; this shall be interpreted to mean that the loudspeaker shall incorporate self-centering dowels to insure proper spacing and alignment of the diaphragm and voice coil assembly. Any loudspeaker not meeting all of the foregoing requirements shall be deemed unacceptable under this specification. The loudspeaker shall be Altec Lansing Model 605B.

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