

351C Power Amplifier

351C



Features

- All Transistor
- Low Power Consumption
- Built-in Transistor Protection
- 50 watts Output Power
- Minimal Phase Shift
- Operational Stability
- No Hum
- Non-Microphonic
- High Efficiency
- No Warm-up Time
- Low Heat Generation
- Small Size
- Light Weight
- Continuous Operation
- 70 volt Output Tap

CHURCHES • SCHOOLS • HOTELS • THEATRES • CONVENTION HALLS • INDUSTRIAL PAGING • SOUND REINFORCEMENT "GIANT VOICE" WARNING SYSTEMS RECORDING STUDIOS • BROADCAST STATIONS

The Altec 351C is an all solid state, 100% silicon transistor amplifier; an extremely efficient unit combining high power with low distortion. The use of silicon transistors throughout the entire circuit eliminates all periodic testing and replacement of vacuum tubes, and prevents the hum and microphonics inherent in tube circuitry. The 351C provides 50 watts of output power with minimal distortion and phase shift, easily meeting or exceeding the critical specifications of high quality recording studios, broadcast stations, and sound system installations. Protection against transistor damage from a mismatch load or short circuited line is built into the 351C Amplifier.

As an all-transistor unit, the amplifier occupies only a portion of the space required by most comparable vacuum tube devices. Therefore, a considerable saving in mounting requirements is obtained. Because of the low heat generation, the 351C may be installed in many locations which would preclude vacuum tube units of similar power and quality.

The 351C is ideally suited for remote booster applications where operational stability is necessary to meet exacting requirements of high quality sound reproduction. Facilities are provided for a plug-in 150/600-ohm line transformer (Altec 15095), in addition to a high impedance input. A rear-mounted potentiometer serves as a level control for all input sources.

When used in conjunction with the Altec SEQR panel, two 351C Amplifiers are capable of delivering 100 watts of usable output power — forming the nucleus of an Altec 'Giant Voice' Warning and Survival System remote station. Instantaneous operation and no warm-up requirements means that the 351C is continually ready for emergency usage in such applications.

When the 351C is in the idle state (no signal drive), the power drawn from the ac line is only 6 watts. This eliminates the need for the 'B' supply cutoff circuit frequently specified in many present day paging systems. In the average industrial system of this type, such a feature permits a saving in excess of two kilowatts of electrical energy every 24 hours! The current drain of the 351C is, therefore, negligible — permitting the amplifier to remain 'on' at all times.

The power transformer of the amplifier utilizes two primary taps (easily selected by an internal strapping arrangement) to allow the unit to operate at maximum efficiency from a line source voltage of 120 volts or to permit it to be adapted for 240 volts on export models.

The Altec 351C all silicon transistor amplifier is recommended for every application wherein the finest quality reproduction together with maximum reliability and maintenance-free operation are required.



A Division of *ESV* Ling Altec, Inc.

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RECORDING &

BROADCASTING

EQUIPMENT

PERFORMANCE SPECIFICATIONS

Type:	Transistor Power Amplifier	Power Supply:	120 v ac, 50/60 cps
Gain:	68 db (with 15095 Line Transformer)		6 watts at zero signal
			55 watts at 1/3 output
			80 watts at maximum output
Input Sensitivity:	0.45 v (rms)		240 v ac, 50/60 cps
Power Output:	50 watts at less than 0.5% THD		8 watts at zero signal
Frequency Response:	± 1 db from 20 to 20,000 cps		70 watts at 1/3 output
Input Impedance:	50,000 ohm potentiometer		100 watts at maximum output
Source Impedance:	150 and 600 ohms (with 15095 Line Transformer)	Transistors:	2-2N2712, 2-AL40461, 1-36811, 4-AL40934
Load Impedance:	4, 8, 16, and 100 ohms (70 volts)	Dimensions:	5 1/8" H x 9 3/4" W x 9 3/8" D
Load Voltage:	14.1, 20, 28.3, and 70 volts	Color:	Dark Green
Output Impedance:	Less than 7% of nominal load on low impedance taps Less than 15% on 70-volt tap	Weight:	16.5 lbs.
Noise Level:	90 db below full output	Ambient Temperature Range:	-5° to +120° Fahrenheit
Controls:	Level (rear panel)	Accessory:	Altec 15095 Line Transformer

ARCHITECTS AND ENGINEERS SPECIFICATIONS

The amplifier shall be completely self-contained for shelf-mounting and shall employ solid state devices (transistors) throughout. Any amplifier utilizing vacuum tubes in any part of the circuit shall be deemed unacceptable under these specifications.

The amplifier shall have a gain of not less than 68 db, using the 15095 input transformer, and an input sensitivity of 0.45 (rms). The unit shall deliver 50 watts of music power output from the direct 4-ohm output terminals. The amplifier shall deliver 40 watts output power at less than 0.5% THD within the frequency range of 25 to 10,000 cycles. Frequency response of the unit shall be ± 1 db from 20 to 20,000 cycles.

The amplifier shall be designed for continuous operation from a 120 volt, 60 cycle, AC line and shall have facilities provided whereby optimum performance may be obtained with line voltages of 240 volts for export models.

The output transformer of the amplifier shall provide output taps of 8, 16, and 100 ohms (70 volts); the 70 volt winding of this transformer shall be isolated and ungrounded. Insertion loss for the 16 ohm tap shall not exceed 0.4 db; for the 70 volt tap, 0.9 db. The 4 ohm output shall be the direct output of the transistor power stages; output impedance shall not exceed 7% of nominal load on the low impedance taps.

The amplifier shall have an input potentiometer of 50,000 ohms, located on the rear of the chassis. Provisions shall be incorporated to accept a plug-in type transformer for a source impedance of 150 and 600 ohms; such a transformer shall be able to be installed from the rear of the chassis.

The amplifier shall incorporate a protective circuit to protect against immediate failure of the output transistors in the event of serious load mismatch, or shorted circuit. This protection shall be in the form of a self-resetting circuit breaker in the OC circuitry.

The damping factor of the amplifier shall be 7.5 on the low impedance taps; the noise level shall be not less than 90 db below full power output. The amplifier shall be designed for unattended operation and have a low temperature rise.

The amplifier shall have dimensions not exceeding 5 1/8 inches in height, 9 3/4 inches in width, and 9 3/8 inches in depth; the weight shall be no more than 16.5 pounds. The unit shall be finished in dark green. Any amplifier not conforming to all the above conditions shall be deemed unacceptable under this specification.

The amplifier shall be Altec Lansing model 351C.

NOTICE
We recommend that you obtain your Altec products from factory trained authorized Altec Sound Contractors and Distributors. This will assure you of proper installation, a continuing source of knowledgeable advice, service, and quick warranty protection.