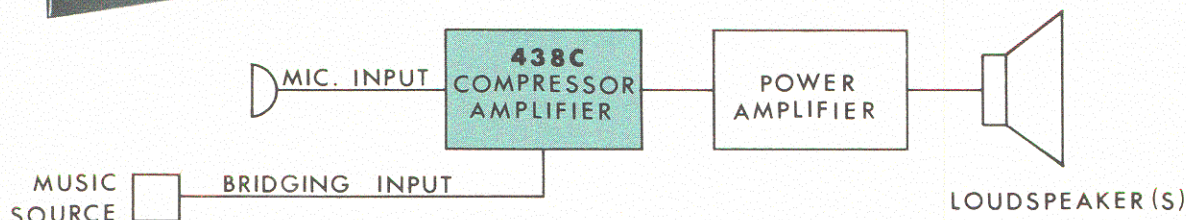


# 438C Compressor Amplifier

# 438C



## Features:

**Variable Compression**  
**Ratio, Threshold,**  
**and Release Time.**

**Microphone preamplifier**

**Line amplifier**

**90 db gain**

**Two inputs**

**Fast attack**

**Smooth recovery**

**30 db of compression**

**Compact**

**Fully automatic**

**Simple installation**

The 438C has been specifically designed for public address use but its outstanding quality also finds many broadcast, recording and communication applications. It is a dual purpose unit providing both high gain microphone preamplification and the complete facility of the Altec automatic compression line amplifier. Its gain and output are such that it will drive any Altec power amplifier to full output from the input of any quality dynamic microphone. Its unique compression assures high intelligibility and freedom from "blasting" or damage to the power amplifier and speakers due to sudden high-level sounds.


The 438C utilizes variable threshold/compression ratio and release time controls, permitting maximum flexibility in virtually any type of installation.

Operationally the 438C will compress signals as much as 30 db. This automatic compression with its rapid attack time of 50 milliseconds, can be used to compensate for the differences in loudness between users in paging or recording and to provide over-all system protection and smoothness. In addition to this microphone input there is a 600 ohm line bridging input for wired music and other program sources. The proper balancing of these two inputs results in automatic "fading" of background music material during paging. Use of the bridging input alone provides straight-forward compression of line program material. Removal of the 6AL5 tube from the circuit permits the 438C to operate as a simple microphone preamplifier and line amplifier without compression.

The hinged front panel of the 438C contains all controls, fuse, pilot light, and compression meter. For remote monitoring of the compressing action the Altec 6049 meter may be ordered. When opened, the front panel exposes all components and wiring for easy service. All connections are made to simple barrier terminals on the rear of the unit. A three conductor power cord is pre-wired for ease of installation.

This outstanding multi-function unit occupies only 3½" of standard rack space or it may be table or wall mounted in the compact Altec 12495 cabinet. The high quality, fully automatic compressor operation and wide range of function are obtained in this Altec amplifier at an extremely low price which makes it economically sound to use the 438C instead of less effective simple preamplifiers and line amplifiers.



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## SPECIFICATIONS

<b>Type:</b>	Compressor Amplifier
<b>Gain:</b>	90 db from microphone input; 40 db bridging 600 ohm line
<b>Frequency Response:</b>	$\pm 1.5$ db, 40-10,000 cycles
<b>Power Output:</b>	+24 dbm as straight amplifier
<b>Harmonic Distortion:</b>	At 25 db of compression: Less than 1.5%, 35 to 15,000 cycles; At 30 db of compression: Less than 2.5%, 35 to 10,000 cycles; (0 db Threshold Control setting)
<b>Noise Level:</b>	Gain control at maximum: -119 dbm equivalent input noise, microphone input; Gain control at minimum: -50 dbm output noise level.
<b>Input Impedance:</b>	Bridging: 20,000 ohms, unbalanced
<b>Source Impedance:</b>	Microphone Input: 150/250 ohms (30/50 ohms operation optional)
<b>Load Impedance:</b>	150 and 600 ohms
<b>Maximum Compression:</b>	30 db
<b>Attack Time:</b>	50 milliseconds
<b>Release Time:</b>	Adjustable: .3 to 1.3 seconds (63% recovery)
<b>Threshold:</b>	Adjustable: 0 dbm to +16 dbm output
<b>Compression Ratio:</b>	2:1 to 0 dbm threshold; 4:1 at +16 dbm threshold
<b>Controls:</b>	Gain, Threshold, Release Time, AC Power Switch
<b>Power Supply:</b>	115 volts, 60 cycles
<b>Power Consumption:</b>	22 watts
<b>Tubes:</b>	12AY7, 6BC8, 6CG7, 6AL5
<b>Dimensions:</b>	19" L; 3½" H; 6" D
<b>Color:</b>	Dark Green
<b>Weight:</b>	8½ lbs.
<b>Special Features:</b>	Compression meter; shaft locks for Threshold and Release Time Controls
<b>Accessories:</b>	12495 Cabinet, 6049 Meter

## ARCHITECTS AND ENGINEERS SPECIFICATIONS

The compressor amplifier shall have a frequency response of  $\pm 1.5$  db from 40-10,000 cycles and it shall be capable of delivering a power output of +24 dbm as a straight amplifier. With 25 db of compression, distortion shall not exceed 1.5% (0 dbm threshold) over the frequency range of 35 to 15,000 cycles. The threshold point shall be adjustable from 0 to +16 dbm output and the amplifier shall provide a maximum compression of 30 db. Attack time shall be fixed at 50 milliseconds and the release time shall be variable from .3 to 1.3 seconds for 63% recovery.

The gain of the amplifier shall be 90 db from the microphone input or 40 db bridging a 600 ohm line. Equivalent input noise shall not exceed -119 dbm at microphone input. The input impedance shall be 20,000 ohms (unbalanced) and for source impedance of microphone input, 150/250 ohms, (30/50 ohms operation optional). The load impedance shall be 150 or 600 ohms. The amplifier shall operate from a 115 VAC, 60-cycle source and be provided with a panel meter reading db of compression. It shall be of the rack mounting type and shall also have provisions for mounting in a desk top type cabinet for remote operation where required. The unit shall measure 3½" high, 19" long, 6" deep, and weigh in the order of 8½ pounds. The tube complement shall be one 12AY7, one 6BC8, one 6CG7, and one 6AL5. The hinged front panel shall be finished in dark green.

The variable threshold and release time controls shall be provided with shaft locks, accessible by dropping the hinged front panel for immediate adjustment.

Any compressor not meeting these specifications as to the microphone input, amount of compression, variable threshold, compression ratio, and release time, nor use as a straight amplifier shall be deemed unacceptable under these specifications.

The compressor amplifier shall be Altec Lansing model 438C.

### 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.