



Engineering News

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USING ALTEC LINE TRANSFORMERS AND AUTOTRANSFORMERS WITH EUROPEAN 100-VOLT SPEAKER DISTRIBUTION SYSTEMS

By

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USING ALTEC 70-VOLT LINE TRANSFORMERS IN 100-VOLT SPEAKER DISTRIBUTION SYSTEMS

The ALTEC 70-volt line transformers described in Catalog Sheet AL-1438, "70 & 25 Volt Line Transformers", may be used in 100-volt speaker distribution systems if the appropriate taps are selected for the 3 dB voltage increase (from 70 to 100 volts). Wattage available at the 100-volt level is approximately twice that for wattage at 70 volts. Tables I and II identify leads and associated wattage rating at 100 volts for various ALTEC 70-volt line transformers. For some transformers, when using the maximum-wattage tap, low-frequency limits must be increased to prevent exceeding the maximum flux density of the transformer (see Table II).

Table I

Wattage and Cutoff Frequencies for ALTEC 15045A Line Transformer When Used in 100-Volt Speaker Distribution Systems

Transformer Model	Lead Color	Watts at 100 Volts	Low-Frequency Cutoff (Hz)
15045A	Red	60	300
	Orange	80	300 or 500
	Blue	120	300 or 500
	Brown	160	350 or 500
	Gray	---	---

Table II

Wattage and Low-Frequency Limits for ALTEC 70-Volt Line Transformers Used in 100-Volt Speaker Distribution Systems

Transformer Model	Lead Color	Watts at 100 Volts	Low-Frequency Limit (Hz)
15064	Red	0.5	60
	Purple	1	60
	Orange	2	60
15065	Red	4	30
	Purple	8	30
	Orange	16	50
15066	Red	16	30
	Purple	32	30
	Orange	64	50
15074	Red	2	60
	Purple	4	60
	Orange	8	80
15075A	Blue	7.5	200
	Brown	15	200
	Red	30	200
15132	Green	1	100
	Blue	2	100
	Brown	4	100
	Red	8	150
15313	Blue	7.5	150
	Red	15	150
	Orange	30	150
	Gray	60	150

USING ALTEC 15067 AUTOTRANSFORMER IN 100-VOLT SPEAKER DISTRIBUTION SYSTEMS

The ALTEC 15067 Autotransformer may be used in 100-volt speaker distribution systems in step-up or step-down applications, within the maximum allowable power limit specified in Table III.

Table III

Specifications and Connections for ALTEC 15067 Autotransformer When Used in 100-Volt Speaker Distribution Systems

Application	Source Voltage (input)	Load Voltage (output)	Min. Freq.	Max. Power	Max. Load Current	Source Terminals (input)	Load Terminals (output)
Step Up	70V	100V	45 Hz	220W	2.2A	1 and 3	1 and 4
Step Down	100V	70V	45 Hz	220W	3.1A	1 and 4	1 and 3