

**ELECTRO-VOICE  
PROFESSIONAL SOUND REINFORCEMENT PRODUCTS  
TL SERIES LOW-FREQUENCY  
SPEAKER SYSTEMS SPECIFICATION SUMMARY**

The Electro-Voice TL Series low-frequency loudspeaker systems are of direct-radiator (vented box) and folded-horn design and utilize EV's high-power EVM® speakers. Each system's low-frequency response is quite well behaved with no low-frequency peaking. All systems can handle full rated input power down to system cutoff. Further detailed information and construction plans are available.

All the single-driver direct-radiator TL systems have roughly the same efficiency and power handling capacity but have different low-frequency limits and box volumes. The larger boxes extend to lower frequencies. Two different low-frequency response curves on the direct-radiator systems can be selected by the use of a port cover and the addition of a simple low-level equalizer (step-down mode).<sup>5</sup> Two equalizer alternatives are described in E.V. Form 1582-530. Systems may be used either singly or in stacked arrays to increase efficiency and output power (note "Quad" TL806Q and TL606Q, which are essentially 2 x 2 arrays in a single enclosure). The direct-radiator quad arrays approximately equal the efficiency of the two-speaker folded-horn systems while occupying less space with better low-frequency response.

The two folded-horn systems are best suited if high levels are desired in the 200 Hz to 500 Hz band or when the systems are mounted permanently in the outdoors. Their particular design protects the drivers from the weather.

**NOTE:**

1. System can generate one-half acoustic watt or more down to this frequency (8 acoustic watts for the TL806Q, TL606Q, TL5050, and TL4050).
2. Note that equalization has no effect on maximum output.
3. System is reasonably flat and exhibits a beamwidth no less than 80° up to this frequency (40° for the TL806Q, TL606Q, TL5050, and TL4050).
4. Equalizer is a second-order under-damped high-pass filter with a Q of 2 that provides a 6 dB peak boost at the listed frequency and rolls off at 12 dB per octave at lower frequencies.
5. SEE: D.B. Keele, Jr., "A New Set of Sixth-Order Vented-Box Loudspeaker System Alignments," J. Audio Eng. Soc., Vol. 23, pp. 354-360 - June 1975, (Reprint available from Electro-Voice.)

**VENTED DIRECT-RADIATOR**

**FOLDED-HORN**

	TL303	TL405	TL505	TL606	TL806	TL806Q	TL606Q	TL4050	TL5050
<b>LOW FREQUENCY 3 dB DOWN POINT</b>									
Normal	26 Hz	38 Hz	48 Hz	63 Hz	83 Hz	80 Hz	55 Hz	54 Hz	70 Hz
Step-down (without Eq)	30 Hz	51 Hz	56 Hz	78 Hz	130 Hz	125 Hz	73 Hz	--	--
Step-down (with Eq)	17.5 Hz	27 Hz	34 Hz	42 Hz	58 Hz	56 Hz	38 Hz	--	--
<b>USABLE LOWER LIMIT FREQUENCY<sup>1</sup></b>									
Normal	20 Hz	29 Hz	36 Hz	45 Hz	62 Hz	60 Hz	42 Hz	44 Hz	55 Hz
Step-down <sup>2</sup>	18 Hz	24 Hz	33 Hz	39 Hz	52 Hz	50 Hz	36 Hz	--	--
<b>USABLE UPPER LIMIT FREQUENCY<sup>3</sup></b>	600 Hz	1100 Hz	1100 Hz	1300 Hz	1600 Hz	800 Hz	600 Hz	700 Hz	850 Hz
<b>EFFICIENCY (Half space)</b>	5%	5%	5%	6%	6%	17%	18%	21%	20%
<b>POWER HANDLING CAPACITY (continuous thermal limit)</b>	60 W	100 W	100 W	100 W	100 W	400 W	400 W	200 W	200 W
<b>MAXIMUM MIDBAND ACOUSTIC OUTPUT POWER</b>	3 W	5 W	5 W	6 W	6 W	68 W	72 W	42 W	40 W
<b>MAXIMUM SPL AT 10 FEET, FULL POWER (Avg. from 100 to 800 Hz)</b>	112 dB	109 dB	109 dB	110 dB	109 dB	121 dB	123 dB	121.5 dB	121.5 dB
<b>SPL AT 10 FEET, 1 WATT INPUT (Avg. from 100 to 800 Hz)</b>	92 dB	89 dB	89 dB	90 dB	89 dB	95 dB	97 dB	98.5 dB	98.5 dB
<b>BEAMWIDTH (-6 dB)</b>									
400 Hz (Horizontal)	92°	120°	112°	121°	190°	91°	65°	71°	88°
800 Hz (Horizontal)	57°	83°	100°	90°	100°	42°	37°	35°	43°
400 Hz (Vertical)	92°	120°	112°	121°	190°	71°	50°	36°	52°
800 Hz (Vertical)	57°	83°	100°	90°	100°	32°	34°	15°	23°
<b>BOX RESONANCE FREQUENCY</b>									
Normal	23 Hz	35 Hz	45 Hz	55 Hz	75 Hz	75 Hz	53 Hz	Horn Loaded	Horn Loaded
Step-down	18 Hz	27 Hz	33 Hz	40 Hz	53 Hz	53 Hz	40 Hz		
<b>DRIVER</b>									
Type	30 W	EVM 18B	EVM 18B	EVM 15L	EVM 12L	EVM 12L	EVM 15L	EVM 15L	EVM 12L
Diameter	30 in.	18 in.	18 in.	15 in.	12 in.	12 in.	15 in.	15 in.	12 in.
Quantity	1	1	1	1	1	4	4	2	2
<b>IMPEDANCE</b>									
Nominal	8 ohms	4 ohms	4 ohms	8 ohms	8 ohms	8 ohms	8 ohms	5 ohms	5 ohms
Minimum	5.0 ohms	3.9 ohms	3.9 ohms	6.5 ohms	6.4 ohms	6.4 ohms	6.4 ohms	4.0 ohms	4.0 ohms
<b>BOX PHYSICAL CHARACTERISTICS</b>									
Gross Internal Volume	76 cu. ft.	13 cu. ft.	7.1 cu. ft.	3.2 cu. ft.	1.3 cu. ft.	5.2 cu. ft.	12.8 cu. ft.	32.3 cu. ft.	11.9 cu. ft.
External Height	96 in.	37 in.	30.5 in.	23.75 in.	17.75 in.	34 in.	46 in.	60 in.	40.75 in.
External Width	48 in.	32.25 in.	24.5 in.	19.25 in.	14.5 in.	27.5 in.	37 in.	35 in.	27.75 in.
External Depth	32 in.	23.75 in.	21.5 in.	17.0 in.	13.5 in.	13.5 in.	17 in.	30 in.	21.5 in.
Net Weight	550 lb	114 lb	77 lb	54 lb	37 lb	140 lb	200 lb	325 lb	170 lb
<b>EQUALIZER<sup>4</sup></b>									
6 dB Peak Frequency	19 Hz	29 Hz	35 Hz	45 Hz	60 Hz	60 Hz	45 Hz	--	--
Presently Available Equalizers	--	SEQ	INT-A	--	--	--	--	--	--

