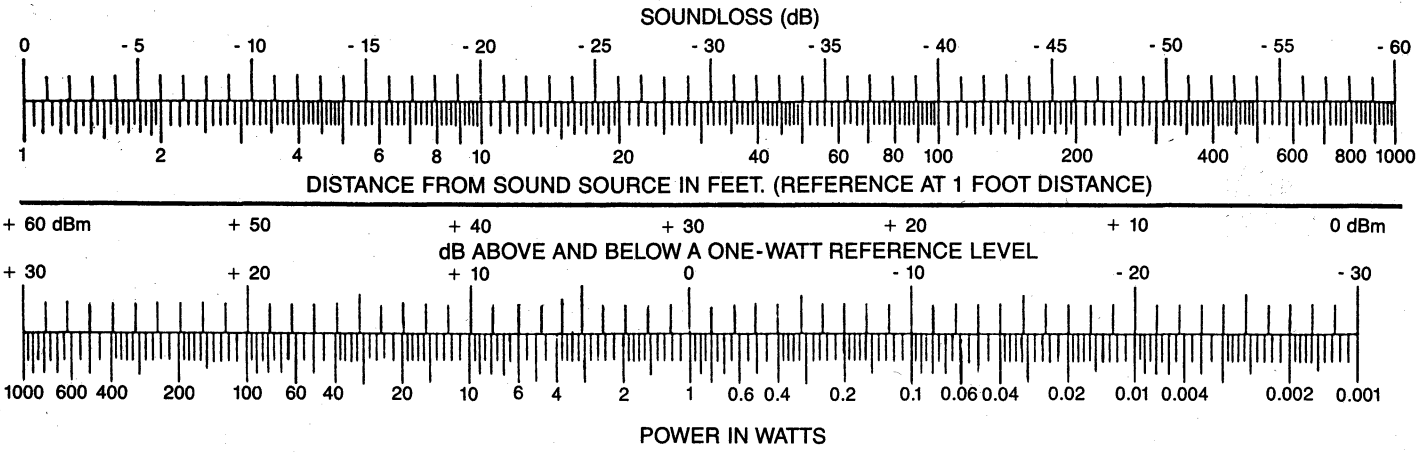
TOA Standard Sound Engineering Data



POWER / LOAD IMPEDANCE FOR 100V, 70.7V, 50V, 25V and 12.5V LINE
LOAD IMPEDANCE OHMS

POWER WATTS	100V LINE	70.7V LINE	50V LINE	25V LINE	12.5V LINE
1	10,000	5,000	2,500	625	156.25
2	5,000	2,500	1,250	312.5	78.125
4	2,500	1,250	625	156.25	39
8	1,250	625	312.5	78.125	19.53
10	1,000	500	250	62.5	15.625
15	666.6	333.3	166.6	41.6	10.41
20	500	250	125	31.25	7.81
25	400	200	100	25	6.25
40	250	125	62.5	15.625	3.9
50	200	100	50	12.5000	3.125
60	166.6	83.3	41.6	10.416	2.6
75	133.3	66.66	33.33	8.333	2.08
100	100	50	25	6.25	1.56
120	83	41.5	20.83	5.2083	1.30
150	66.66	33.33	16.66	4.1666	1.04
200	50	25	12.50	3.125	0.78
250	40	20	10	2.5000	0.625
500	20	10	5	1.25	0.31

LENGTH OF 2-WIRE 70V LINE * DELIVERING VARIOUS VALUES OF POWER AT A 0.5dB (12½%) LOSS

WIRE SIZE AWG	RESISTANCE PER 1000 ft. WIRE PAIR	MAX. SAFE CURRENT	MAX. SAFE POWER	NOMINAL POWER IN THE LOAD									
				10W	15W	20W	30W	40W	60W	100W	200W	400W	1000W
6	.8 ohms	50 amp	3500W	(length of line)				9100	6200	3640	1820	910	360 ft.
8	1.28	35	2450				7800	5700	3900	2280	1140	570	230 ft.
10	2.0	25	1750		9900	7300	5000	3700	2500	1450	730	370	150 ft.
12	3.2	20	1400	9100	6200	4600	3100	2300	1600	910	460	230	90 ft.
14	5.2	15	1000	5600	3800	2800	1900	1400	950	560	280	140	56 ft.
16	8.0	6	420	3600	2400	1800	1200	900	600	370	180	90 ft.	
18	13.0	3	210	2300	1500	1100	750	560	370	230 ft.			
20	20.6	1	70	1400	960	710	480	350	240	110 ft.			
22	32.6	.5	35	900	600	450	300 ft.						

* For 25 - volt Line: Divide all lengths by 8, divide Maximum Safe Power by 2.8