

Sheet1

Sound Power Level Chart	dB SPL	Power of 10	dBm	<Example of changing		S-Units	dBm
	ref to TOH	for SPL	(ref to 1 mW)	reference point for		HF (IARU)	(of S units)
				Decibels (dBm)		(6 dB/S unit)	
Saturn V Rocket	200	10 20	110				
(Hearing Damage Levels) >	140	10 14	50				
Machine Gun	130	10 13	40				
Threshold of Pain	120	10 12	30				
Rock Concert	110	10 11	20				
	100	10 10	10				
	90	10 9	0	one milliwatt			
Diesel Truck	80	10 8	-10			S9 + 60	-13
	70	10 7	-20		Typical RX distortion level	S9 + 50	-23
Normal Conversation	60	1000000	-30			S9 + 40	-33
	50	100000	-40			S9 + 30	-43
	40	10000	-50	(spurious free)		S9 + 20	-53
Quiet Conversation	30	1000	-60	Receiver Dynamic Range		S9 + 10	-63
Whisper	20	100	-70	Typical 100 dB (70-120 dB)		S9 (0 dB)	-73
	10	10	-80			S8	-79
Threshold of Hearing (TOH)	0	1	-90			S7	-85
						S6	-91
						S5	-97
			-100			S4	-103
			-110			S3	-109
						S2	-115
						S1	-121
			-120	Typical Receiver Sensitivity			
			-130	Range -140 to -120 dBm		<Minimum Useable signal	
			-140	<Typical RX noise floor		<Minimum Discernable Signal	
			-150			(signal equal to noise level)	
			-160				
			-170				
			-174	<Thermal Noise Floor			