

Table 1: HALS 0402- #09 ELEVATION PATTERN UNIFORMITY in 1/3 Octave Bands: Nominal outdoor SPL at 1.0 meter radius. 5vac Pink noise drive. HALS laid on flat asphalt surface																							
BARE HALS on hard surface 1.0 meter radius										March 2012 #09 Test 90°	HALS + Azimuth Ramp on hard surface (Ramp Under Survey Line)												
Freq Hz	Elevation Angle above the horizon, degrees Sound Pressure Level, dB re 20 uPa.										Elevation Angle above the horizon, degrees Sound Pressure Level, dB re 20 uPa.												
	5	10	15	20	30	40	50	60	70	80	90		5	10	15	20	30	40	50	60	70	80	90
50.0	-2	3	2	-2	-1	-3	-3	-3	-2	-2	0	51.0	-1	1	-1	-1	-1	2	2	-1	1	0	
63.0	-2	2	-2	-1	0	-2	-3	-2	-2	-3	0	56.0	1	5	-1	0	0	1	0	-1	1	0	
80.0	-1	4	5	-1	-1	0	-1	2	-1	1	0	56.8	-1	-1	-1	-3	-2	-2	-2	-3	0	0	
100	-1	0	2	0	0	-1	0	0	0	1	0	60.2	-1	0	-1	-1	-1	0	-1	-1	-1	-1	0
125	0	0	0	0	0	0	0	0	0	0	0	63.8	0	0	-1	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	-1	-1	0	64.5	1	0	1	1	1	1	0	0	0	0	0
200	1	0	1	0	0	0	0	0	0	0	0	63.7	1	1	0	1	1	0	0	0	0	0	0
250	2	1	1	1	1	1	0	0	0	0	0	61.3	2	1	1	1	1	1	0	0	0	0	0
315	2	2	2	2	1	1	0	0	0	-1	0	56.8	3	2	2	2	2	1	0	0	0	0	0
400	4	4	4	4	4	3	2	2	1	1	0	58.9	5	5	4	5	4	3	3	2	1	1	0
500	7	7	7	6	5	4	3	1	0	0	0	61.9	9	8	8	7	6	4	2	-1	-1	-1	0
630	5	5	4	3	1	-1	-2	-2	-2	-1	0	71.1	-3	-3	-4	-5	-7	-5	-2	0	0	1	0
800	0	0	-1	-2	-5	-6	-6	-4	-2	-1	0	73.1	-2	-2	-4	-4	-5	-2	0	1	1	1	0
1.00k	-3	-4	-5	-6	-9	-9	-6	-3	-2	-1	0	66.4	-5	-6	-7	-6	-4	-2	-1	-1	-1	-1	0
1.25k	-5	-6	-7	-9	-12	-9	-5	-2	-1	-1	0	60.8	-5	-6	-7	-7	-4	-2	-2	-1	-1	0	0
1.60k	-5	-6	-8	-11	-8	-5	-1	0	0	0	0	56.0	-3	-4	-5	-5	-2	-1	-2	-1	-1	-1	0
2.00k	-2	-3	-6	-6	-1	1	2	1	0	0	0	53.4	1	-1	-2	0	2	0	0	-1	-1	0	0
2.50k	-4	-5	-10	-7	-2	-2	-3	-3	-2	-1	0	59.2	0	-2	-3	-2	-3	-4	-4	-3	-2	-1	0
3.15k	0	-2	-8	-1	2	1	-1	2	2	1	0	59.2	3	1	-1	1	-2	-1	0	1	1	1	0
4.00k	-5	-9	-6	-1	-4	-2	0	-2	0	0	0	57.8	0	-5	-3	-3	-2	-2	-1	0	1	0	0
5.00k	-6	-12	-2	-1	-1	1	-1	0	0	0	0	67.6	0	-5	-2	-4	-3	0	1	0	0	0	0
6.30k	-9	-11	-1	-3	0	-1	0	-1	-1	0	0	71.3	-2	-4	-3	-3	-2	0	0	0	-1	0	0
8.00k	-14	-8	-3	-4	-3	-1	-1	-2	-1	-1	0	73.7	-6	-4	-7	-4	-2	0	-1	-1	-1	0	0
10.0k	-12	-5	-8	-3	-3	-3	-2	-2	-2	-1	0	67.3	-10	-5	-5	-4	-2	-2	-2	-2	-2	0	0
12.5k	-9	-6	-6	-7	-5	-5	-3	-3	-2	-1	0	62.7	-11	-9	-7	-5	-4	-4	-2	-3	-2	0	0
16.0k	-9	-10	-9	-8	-7	-7	-5	-5	-3	-1	0	55.7	-11	-11	-9	-7	-6	-5	-4	-4	-3	0	0
20.0k	-8	-11	-10	-8	-7	-7	-5	-5	-4	-2	0	48.9	-8	-9	-9	-6	-7	-5	-5	-4	-3	0	0
.dBA	2	3	3	3	4	4	3	1	1	0	0	79	2	3	3	3	2	1	0	0	0	0	0
Linear	1	1	2	2	3	3	2	2	1	1	0	83	1	1	2	2	1	1	1	1	0	0	0

HALS 0402 AZIMUTH PATTERN UNIFORMITY DATA:													
[All Data taken with pink noise outdoors, at a one meter radius on a flat asphalt surface]													
NOMINAL PERFORMANCE: dB SPL ref Zenith SPL @ 40 degrees Elevation ---> dB re 20uPa													
Azimuth	N 0°	30°	60°	E 90°	120°	150°	S 180°	210°	240°	W270°	300°	330°	N 360°
100 Hz	0	0	0	0	0	0	0	0	0	0	0	0	0
1,000 Hz	0	0	0	0	-1	-1	0	-1	-1	-1	-1	0	0
5,000 Hz	0	0	0	0	0	-1	0	-1	0	-1	0	0	0
10,000 Hz	0	0	0	0	0	-1	-1	-1	-1	0	-1	-1	0
dBA	0	0	0	0	0	0	0	0	0	0	0	0	0