

**Supplemental Material S2.** Masker condition signal recognition thresholds (SRTs, dB SNR) in children (ordering of data is consistent across Supplemental Materials S1 and S4).

Steady-state noise	Spectrally modulated	Temporally modulated	Two-talker	Spectral modulation benefit*	Temporal modulation benefit*
-7.37	-17.72	-12.51	-0.38	10.35	5.13
-8.15	-15.49	-12.47	-0.02	7.34	4.32
-7.13	-14.81	-11.49	-0.09	7.68	4.36
-6.50	-14.09	-11.34	-1.28	7.59	4.84
-7.20	-13.22	-11.52	-1.42	6.02	4.32
-7.83	-14.33	-13.97	-0.56	6.50	6.15
-6.85	-11.45	-13.95	-2.37	4.61	7.11
-7.24	-16.00	-11.54	-0.38	8.76	4.31
-7.61	-14.25	-11.94	-1.50	6.65	4.33
-6.12	-16.23	-11.16	-3.66	10.12	5.05
-6.39	-13.70	-10.73	-0.18	7.31	4.35
-6.90	-17.01	-13.19	-2.69	10.11	6.28
-6.97	-15.55	-12.00	-1.60	8.58	5.03
-6.36	-13.88	-11.85	-1.20	7.53	5.50
-7.04	-12.54	-11.99	-0.26	5.50	4.95
-6.70	-13.05	-13.29	-1.01	6.35	6.59
-7.42	-13.58	-12.30	-1.00	6.16	4.88
-6.83	-12.63	-11.26	-1.38	5.81	4.43
-7.71	-14.86	-12.94	-2.10	7.14	5.23
-6.99	-15.22	-12.29	-1.12	8.22	5.30
-7.10	-14.78	-9.96	-2.19	7.68	2.86
-6.70	-13.55	-11.63	-0.36	6.85	4.93
-7.55	-16.03	-14.27	-3.31	8.47	6.72
-6.32	-14.07	-9.79	0.07	7.75	3.47
-6.35	-13.48	-12.00	-0.47	7.14	5.65
-6.03	-12.67	-12.02	-1.71	6.64	6.00
-5.27	-16.28	-10.28	-1.32	11.00	5.00
-8.10	-15.04	-11.51	-1.51	6.94	3.41
-6.82	-14.66	-14.01	-1.99	7.84	7.19
-8.14	-14.61	-12.99	0.00	6.48	4.85
-6.81	-14.59	-13.08	-1.37	7.78	6.27
-7.29	-12.01	-13.24	-0.81	4.72	5.95
-7.72	-17.24	-11.41	-0.74	9.53	3.69
-7.57	-17.41	-11.38	-1.32	9.85	3.82
-6.73	-13.60	-9.12	-0.84	6.86	2.39
-7.53	-15.82	-11.51	1.10	8.30	3.98
-7.90	-15.43	-13.00	-1.92	7.54	5.10
-7.50	-14.94	-13.21	-2.26	7.44	5.71
-6.56	-14.31	-10.28	-1.53	7.75	3.72
-6.29	-14.06	-11.31	-2.17	7.77	5.02
-8.60	-14.21	-13.21	-2.01	5.61	4.61
-6.98	-10.28	-11.53	-0.38	3.30	4.56

\*Benefit is (steady-state noise masker threshold – modulated masker threshold).