

Table S1. Threshold determinations for single target acuity with different contrast levels to background for each individual fish.

Single target acuity [deg]
for single targets with Weber/Michelson contrast of
 $C1 = 0.98/0.97$

Threshold determination	1	2	3	4
Roy	0.24	0.13	0.13	0.16
Hanna	0.13	0.13	0.14	0.13
Anna	0.32	0.31	0.32	0.34
Frida	0.15	0.12	0.13	0.13
Luigi	0.17	0.19	0.19	0.19
Lina	0.15	0.12	0.12	0.12

Single target acuity [deg]
for single targets with Weber/Michelson contrast of
 $C2 = 0.67/0.5$

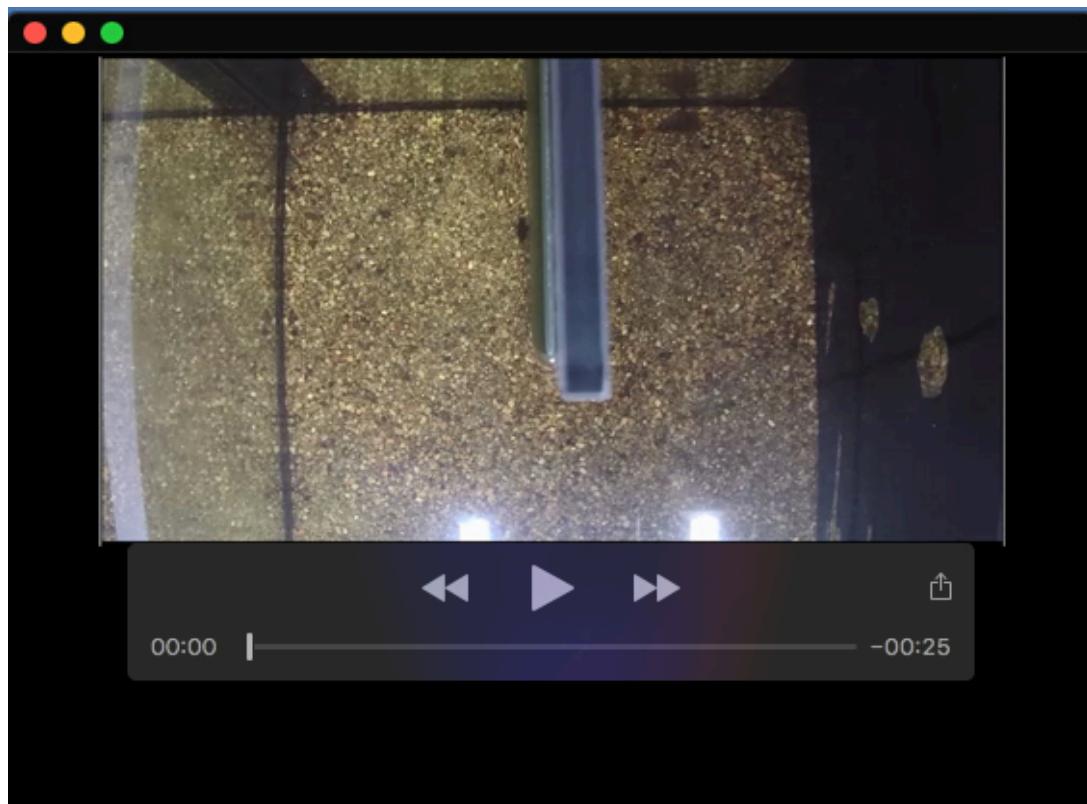
Threshold determination	1	2	3	4	5
Roy	0.51	0.32	0.31	0.35	
Hanna	0.40	0.36	0.36	0.34	0.35
Anna	0.35	0.34	0.37	0.36	
Frida	0.65	0.36	0.33	0.37	
Luigi	0.99	0.64	0.37	0.37	0.37
Lina	0.35	0.31	0.31	0.31	

Single target acuity [deg]

for single targets with Weber/Michelson contrast of

$$C_3 = 0.41/0.25$$

Threshold	1	2	3	4	5	6	7	8
determination								
Roy	1.01	0.67	0.65	0.40	0.34	0.33	0.36	
Hanna	0.62	0.59	0.40	0.44	0.43			
Anna	0.55	0.48	0.45	0.50	0.56			
Frida	0.55	0.51	0.58	0.54	0.45	0.37	0.37	0.40
Luigi	1.06	0.65	0.67	0.56	0.51	0.55		
Lina	0.55	0.34	0.32	0.34				



Movie 1. Experimental trials.