

Table 1: measurement for one sonar sensor in different conditions

Sonar Servo degree	Obstacle straight ahead	Obstacle 45 degree on the right side of robot	90 degree Corner Straight ahead	90 degree corner 45 degree right side of robot	Wall straight ahead	Wall 45 degree on the right side of robot	Steep Corner straight ahead	Steep corner 45 degree on the right side of robot
0	200	350-138-143	400	349-173-160	122	77-75-538	109	588
18	180	36	270	256-254	104-151-100	30	129	254
36	156	37	128	241-79-94	97-105-102	29-30	119	118-194-253
54	27-29-30	38	250-94	299-184-179	32	30-29	47-90-47-526-83	533—362
72	27-74-407-272	37	36-278-120	39-40	31	30	310-354-265-361	184-340
90	27	203-67-62	194-147-218	295-114	29	241-210	178-135-218-142	141-187
108	27	-----	128-531-29	-----	29-30	331-257	387-534-408	281-117-299
126	105-117	-----	60-107-70	-----	81-126	113-182	109-122	102-105-108
144	105	-----	494-133-161	-----	165	-----	126	-----
162	111	-----	128	-----	156	-----	150	-----
180	-----	-----	112	-----	200	-----	170	-----

Critical decision making contains are high lighted as red.

Chaotic decision making is high lighted as green.

