

# Antenna Tuning

An antenna can be any loop of wire that has an inductance between 8 and 80 microHenries. Inductance can be increased by adding loops or using thicker cable.

After a coil is wound, the wire ends are attached to an inductance meter to read the value in microHenries. The inductance determines the antenna capacitance value needed to tune the antenna.

The jumper chart shows the capacitor selection jumpers by inductance value. The setting that is nearest the measured inductance is selected.

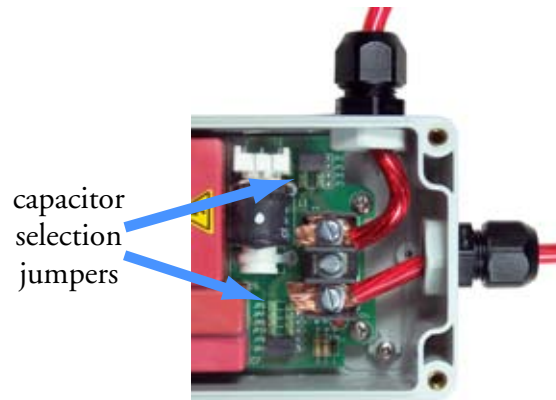
Jumper Settings	
μH	JP
81	8
65	9
62	10
52	11
48	12
43	13
39	14
36	15
35	16
34	17
30	18
28	19
25	20
21	21
17	22
15	23
13	24
12	25
8	26
	27
	28
	29
	30
	31
	32
	33
	34
	35
	36
	37
	38
	39
	40
	41
	42
	43
	44
	45
	46
	47
	48
	49
	50
	51
	52
	53
	54
	55
	56
	57
	58
	59
	60
	61
	62
	63
	64
	65
	66
	67
	68
	69
	70
	71
	72
	73
	74
	75
	76
	77
	78
	79
	80
	81

If IN then try      If OUT then try

Oregon RFID (c) 2005

Step-by-step instructions are on the back of the jumper chart inside the tuner box.

The jumpers select combinations of capacitors. Each combination results in a different total capacitance value.



After the jumper settings are made, the Tuning Indicator is used for fine tuning. The ATI plugs into connector J2 near the corner of the reader board.



The Tuning Indicator shows the antenna tuning status during fine tuning with three LEDs.



- OUT turn the fine tuning screw out
- OK it's in tune!
- IN turn the fine tuning screw in

The fine tuning adjustment is accessed via the rubber plug in the side of the tuner box.

If the fine tuning is all the way in or out, step to the next higher/lower jumper setting and try again.

