

1 LOCAL OSC FREQUENCY CALCULATION

-1 FCC ID: ADV0908900 formula for 1st, 2nd and 3rd Local oscillation frequencies are as follow :

RECEIVING BAND (FR STEP)	FREQ. STEP (kHz)	RECEIVING FREQ. FR (MHz)	1st LOCAL PLL 1 /VCO 1 or VCO 2 (MHz)	2nd LOCAL PLL 2 /VCO 3 (MHz)	3rd LOCAL X' TAL (MHz)
VHF Low	10	25.0000 ~ 26.9600	$A = (FR + 380.800) / 0.050$ $= A.xxx$ (Cut away decimal) 1st Local = $A \times 0.050$ 1st IF = 1st Local - FR	2nd Local = 1st IF - 10.7	11.150
	10	26.9650 ~ 27.4050			
	5	27.4100 ~ 29.5050			
	5	29.5100 ~ 29.7000			
	10	29.7100 ~ 49.8300			
	5	49.8350 ~ 54.0000			
FM Radio	100	88.0000 ~ 107.9000	FR DENOTES Frequency Received.		
VHF High	8.33	108.0000 ~ 136.99166			
	5	137.0000 ~ 137.9950			
	12.5	138.0000 ~ 143.9875			
	5	144.0000 ~ 147.9950			
	12.5	148.0000 ~ 150.7875			
	5	150.8000 ~ 150.8450			
	7.5	150.8525 ~ 154.4975			
	5	154.5150 ~ 154.6400			
	7.5	154.6500 ~ 156.0450			
		156.0500			
	7.5	156.0525 ~ 156.1725			
		156.1750			
	7.5	156.1800 ~ 156.2475			
		156.2500			
		156.2550			
	25	156.2750 ~ 157.4500			
	7.5	157.4700 ~ 160.8225			
		160.8250			
	7.5	160.8300 ~ 161.5725			
	5	161.6000 ~ 161.9750			
	12.5	162.0000 ~ 174.0000			
UHF Low	12.5	380.0000 ~ 380.6750	$A = (FR + 380.600) / 0.050$ $A = (FR + 380.700) / 0.050$ $A = (FR + 380.800) / 0.050$ "	2nd Local = 1st IF - 10.7	11.150
	"	380.6875 ~ 380.8000			
	"	380.8125 ~ 380.9250			
	"	380.9375 ~ 419.9875			
	5	420.0000 ~ 450.0000			
	6.25	450.00625 ~ 512.0000			
UHF High	12.5	806.0000 ~ 823.9875	$A = (FR - 380.800) / 0.050$ $= A.xxx$ (Cut away decimal) 1st Local = $A \times 0.050$ 1st IF = FR - 1st Local	2nd Local = 1st IF - 10.7	11.150
	"	849.0000 ~ 868.9875			
	"	894.0000 ~ 939.9875			
	6.25	940.0000 ~ 960.0000			
	"	1240.0000 ~ 1300.0000			

-2 IF FREQUENCY

1st IF : 380.56250 ~ 380.84380MHz

2nd IF : 10.700MHz

3rd IF : 450kHz

-3 Example

RECEIVING BAND (FR STEP)	FREQ. STEP (kHz)	RECEIVING FREQ. FR (MHz)	1st LOCAL PLL 1 /VCO 1 or VCO 2 (MHz)	2nd LOCAL PLL 2 /VCO 3 (MHz)	3rd LOCAL X' TAL (MHz)
VHF Low	5.0	25.0000	$A : 8116.000 = (25.0000 + 380.800) / 0.050$ $= 8116.000$ (Cut away decimal) $1st\ Local : 405.800 = 8116 \times 0.050$ $1st\ IF : 380.800 = 405.800 - 25.0000$	$370.100 = 380.800 - 10.7$	11.150
	10.0	41.0000	$8436.000 = (41.0000 + 380.800) / 0.050$ $= 8436.000$ (Cut away decimal) $421.800 = 8436 \times 0.050$ $380.800 = 421.800 - 41.0000$	$370.100 = 380.800 - 10.7$	11.150
	5.0	54.0000	$8696.000 = (54.0000 + 380.800) / 0.050$ $= 8696.000$ (Cut away decimal) $434.800 = 8696 \times 0.050$ $380.800 = 434.800 - 54.0000$	$370.100 = 380.800 - 10.7$	11.150
FM Radio	100	88.0000	$9376.000 = (88.0000 + 380.800) / 0.050$ $= 9376.000$ (Cut away decimal) $468.800 = 9376 \times 0.050$ $380.800 = 468.800 - 88.0000$	$370.100 = 380.800 - 10.7$	11.150
	100	107.9000	$9774.000 = (107.9000 + 380.800) / 0.050$ $= 9774.000$ (Cut away decimal) $488.700 = 9774 \times 0.050$ $380.800 = 488.700 - 107.9000$	$370.100 = 380.800 - 10.7$	11.150
VHF High	8.33	108.0000	$9776.000 = (108.0000 + 380.800) / 0.050$ $= 9776.000$ (Cut away decimal) $488.800 = 9776 \times 0.050$ $380.800 = 488.800 - 108.0000$	$370.100 = 380.800 - 10.7$	11.150
	8.33	136.9916	$10355.832 = (136.9916 + 380.800) / 0.050$ $= 10355.832$ (Cut away decimal) $517.750 = 10355 \times 0.050$ $380.7584 = 517.750 - 136.9916$	$370.0584 = 380.7584 - 10.7$	11.150
	5.0	137.0000	$10356.000 = (137.0000 + 380.800) / 0.050$ $= 10356.000$ (Cut away decimal) $517.800 = 10356 \times 0.050$ $380.800 = 517.800 - 137.0000$	$370.100 = 380.800 - 10.7$	11.150
	7.5	154.1000	$10698.000 = (154.1000 + 380.800) / 0.050$ $= 10698.000$ (Cut away decimal) $534.9 = 10698 \times 0.050$ $380.800 = 534.900 - 154.1000$	$370.100 = 380.800 - 10.7$	11.150
	12.5	174.0000	$11096.000 = (174.0000 + 380.800) / 0.050$ $= 11096.000$ (Cut away decimal) $554.800 = 11096 \times 0.050$ $380.800 = 554.800 - 174.0000$	$370.100 = 380.800 - 10.7$	11.150

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UHF Low	12.5	380.0000	$15216.000 = (380.0000 + 380.800) / 0.050$ $= 15216.000$ (Cut away decimal) $760.800 = 15216 \times 0.050$ $380.800 = 760.800 - 380.0000$	$370.100 = 380.800 - 10.7$	11.150
	5.0	451.0000	$16636.000 = (451.0000 + 380.800) / 0.050$ $= 16636.000$ (Cut away decimal) $831.800 = 16636 \times 0.050$ $380.800 = 831.800 - 451.0000$	$370.100 = 380.800 - 10.7$	11.150
	6.25	512.0000	$17856.000 = (512.0000 + 380.800) / 0.050$ $= 17856.000$ (Cut away decimal) $892.800 = 17856 \times 0.050$ $380.800 = 892.800 - 512.0000$	$370.100 = 380.800 - 10.7$	11.150
UHF High	12.5	806.0000	$8504.000 = (806.0000 - 380.800) / 0.050$ $= 8504.000$ (Cut away decimal) $425.200 = 8504 \times 0.050$ $380.800 = 806.000 - 425.200$	$370.100 = 380.800 - 10.7$	11.150
	12.5	860.0000	$9584.000 = (860.0000 - 380.800) / 0.050$ $= 9584.000$ (Cut away decimal) $479.200 = 9584 \times 0.050$ $380.800 = 860.000 - 479.200$	$370.100 = 380.800 - 10.7$	11.150
	6.25	960.0000	$11584.000 = (960.0000 - 380.800) / 0.050$ $= 11584.000$ (Cut away decimal) $579.200 = 11584 \times 0.050$ $380.800 = 960.000 - 579.200$	$370.100 = 380.850 - 10.7$	11.150
	6.25	12400.0000	$17184.000 = (12400.0000 - 380.800) / 0.050$ $= 17184.000$ (Cut away decimal) $859.200 = 17184 \times 0.050$ $380.800 = 1240.000 - 859.200$	$370.100 = 380.800 - 10.7$	11.150
	6.25	1300.0000	$18384.000 = (1300.0000 - 380.800) / 0.050$ $= 18384.000$ (Cut away decimal) $919.200 = 18384 \times 0.050$ $380.800 = 1300.000 - 919.200$	$370.100 = 380.800 - 10.7$	11.150