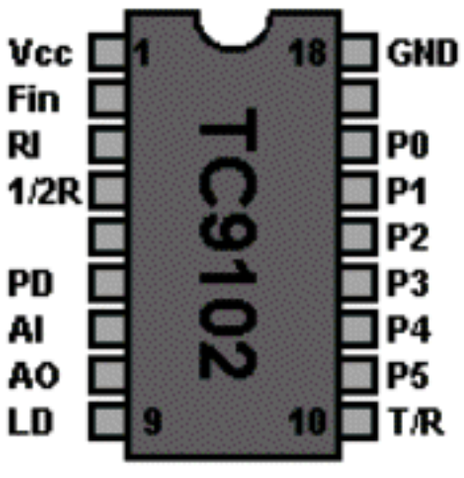
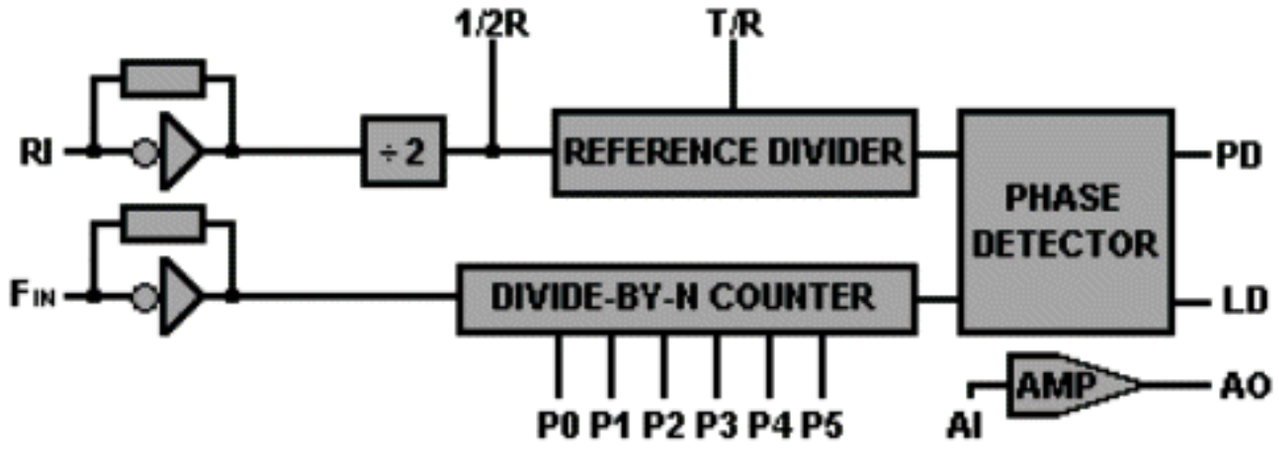
TC9102 PLL Frequency Synthesizer

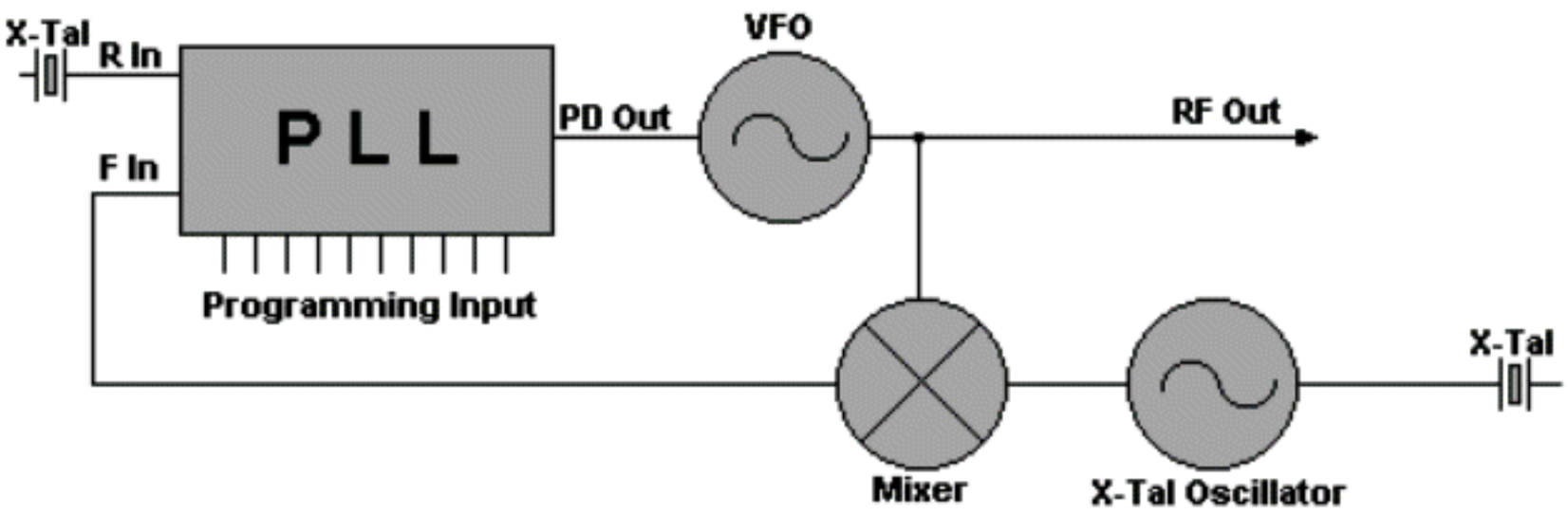




Overview

This PLL-circuit use a 7 bit BCD binary programmable divide-by-N counter.

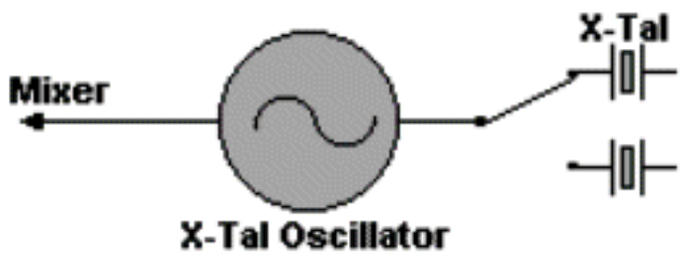
Down-converting of the frequency to the divider



This PLL Circuit use a Mixer and a X-Tal Oscillator to convert the output frequency f_{OUT} to the f_{IN} to the PLL Circuit.

The X-Tal frequency is $f_{XTAL} = f_{OUT} - f_{IN}$

The output frequency can be changed by changing the mixing-xtal or add a new mixing-xtal to the oscillator.



Pin	Name	Description
1	Vcc	Positive Supply Voltage
2	F in	VCO Frequency Input
3	RI	Referency Oscillator Input
4	1/2 R	Reference OSC frequency divide by 2 output
5		Connect to GND
6	PD	Phase Detector Output
7	AI	Amp. Input
8	AO	Amp. Output
9	LD	Loop Detect - Unlocked=LOW Locked=HIGH
10	T/R	Transmit=HIGH Receive=LOW
11	P5	Programmable input 5
12	P4	Programmable input 4
13	P3	Programmable input 3
14	P2	Programmable input 2
15	P1	Programmable input 1
16	P1	Programmable input 0
17		
18	GND	Ground