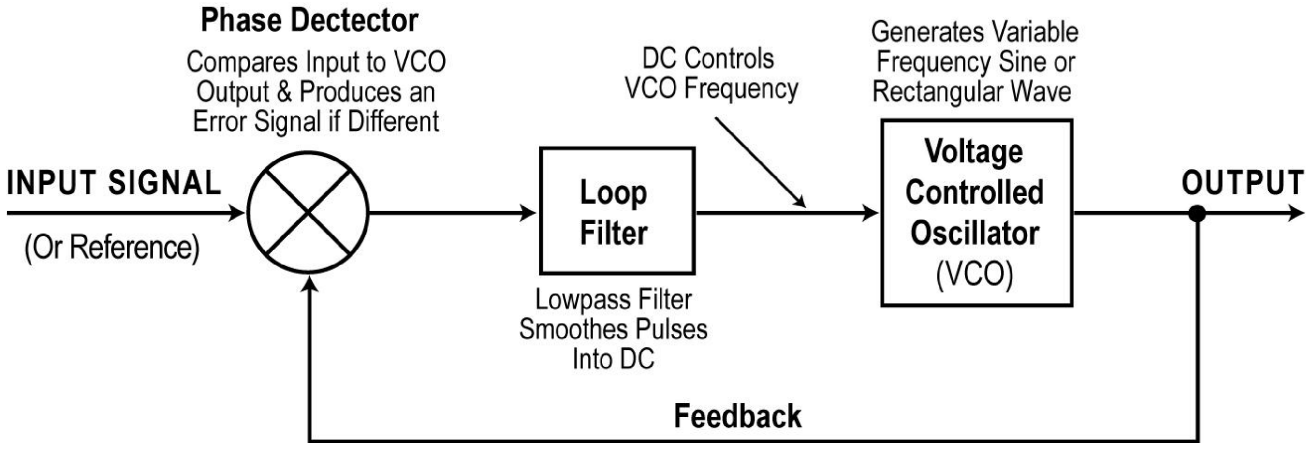
Phase-Locked Loops Troubleshooting

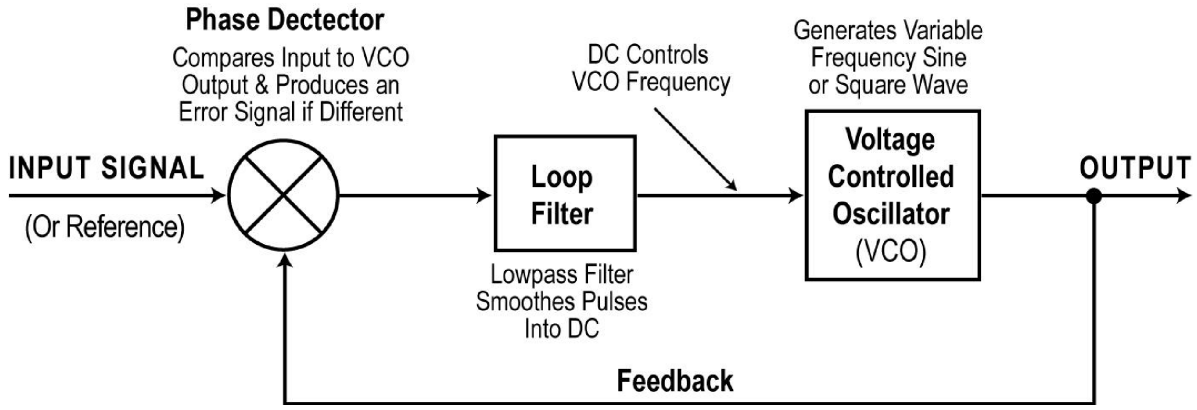
Troubleshooting a PLL



To test an operating PLL, verify the VCO output frequency and the two phase detector inputs with an oscilloscope to see that they are within the operating range specified by the circuit and application.

In testing a PLL chip, it is sometimes necessary to disconnect the feedback loop to evaluate different sections of the circuit. Remove any connection from the VCO back to the phase detector input.

Troubleshooting a PLL



Other things to check during troubleshooting include:

- Determining the free-running frequency of the VCO
- Applying a variable DC input to the VCO to verify that the frequency can be changed
- Verifying the phase detector output waveforms
- When possible, checking for the presence of the input or reference frequency. In some cases, connections to the various inputs and outputs may not be available.

Test your knowledge

Phase-Locked Loops and Applications Knowledge Probe 3

Troubleshooting

Click on Course Materials at the top of the page.

Then choose **Knowledge Probe 3**.