

Quick Start Guide

Plug-N-Play Synthesizer NB Evaluation Kit Quick-Start Guide

EVAL Kit Contents: 1 ea CD ROM with PNP Software and Synthesizer Data Sheets, 1 ea Plug-N-Play EVAL Board with on-board 20 MHz reference, 1 ea USB cable, 1 ea 9V battery and 1 ea Parallel to USB Adapter.

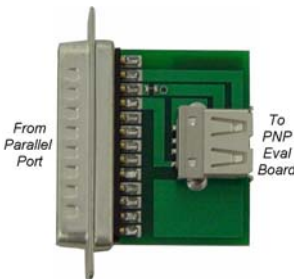
STEP 1: Install the Plug-N-Play (PNP) Evaluation Software by inserting the supplied CD into your CD-ROM drive. If the installation does not begin automatically, browse to your CD-ROM drive and run the executable file named **SETUP**. Follow the on-screen instructions to complete the installation.



STEP 2: Unpack the PNP Evaluation Board and the 9V battery (supplied). The battery must be installed for proper operation.



STEP 3: Connect a high quality coaxial cable from the RF OUT of the EVAL Board to your spectrum analyzer's RF IN. When using an External Reference, **AC coupling must be used for sine wave sources**. Square waves may be DC coupled.



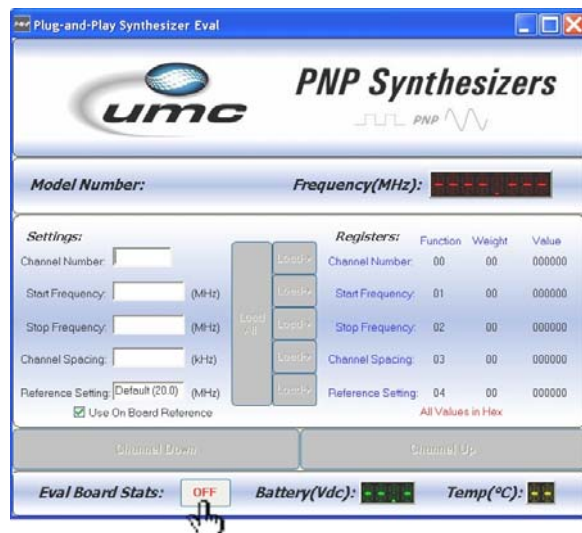
Parallel to USB Adapter

STEP 4: The PNP Evaluation Board can communicate with your computer via a USB port or a parallel

(printer) port. It is recommended that the USB connector of your computer be used for controlling the Plug-n-Play EVAL board. However, if no USB port is available, the parallel (printer) port can be used. Both methods utilize a USB cable (provided), however, using the parallel port requires the connection of the supplied Parallel to USB Adapter. Connect one end of the USB cable to the Evaluation Board and the other end to an available USB port on your computer or to the Parallel to USB Adapter which in turn plugs into the parallel (printer) port on your computer.

STEP 5: Start the PNP Evaluation Software by double-clicking the PNP icon on your desktop. The software will now attempt to communicate with the Evaluation Board. If the board is not connected correctly or if the batteries are not installed properly, you will receive an error message on the screen. If you receive an error, return to Step 2.

STEP 6: Turn the PNP Evaluation Board on by clicking the **ON/OFF** button as shown:



The PNP Synthesizer should now be locked at its center frequency. This status is reported on the frequency counter display. When locked, the output frequency is displayed. When the synthesizer fails to lock, the display will read '**UNLOCKED**'. Check the batteries, cables and that the external reference (optional) is providing an adequate signal. When using the on-board Reference, make sure that the software is not set up to use an External Reference.

STEP 7 (Optional): The Plug-n-Play EVAL board comes with an on-board Reference. It is not necessary to supply an external reference. However, if supplying an External Reference, connect a high quality coaxial cable from the External Reference Input of the EVAL Board to the output of a low noise crystal reference. Be sure that the external reference being used provides a waveform that is consistent with the requirements of the Plug-n-Play device (see Data Sheet). If an external reference is to be used, the **USE ON-BOARD REFERENCE** box must be unchecked and the frequency of the reference to be used must be entered into the **REFERENCE SETTING** input box. This new value must then be loaded into the PNP Synthesizer by clicking on the "Load" button corresponding to the Reference Setting or by clicking the "Load All" button.

STEP 8: You may now manipulate any of the PNP Synthesizers registers by entering new values into the input boxes and clicking on that register's **LOAD** button. Multiple register changes can be loaded simultaneously by clicking the **LOAD ALL** button. After modifying the contents of an input box with a new value, the corresponding **LOAD** button will flash to remind you to update the register. The **STEP UP** and **STEP DOWN** button increment or decrement the **CHANNEL** register by one step, effectively stepping the frequency by the programmed **CHANNEL SPACING**. The **REGISTERS** section of the window displays the data values associated with each register setting. Please consult the Plug-N-Play data sheet for more information on register settings.

UPDATES

Software updates will be made available online from our website at www.vco1.com. By selecting the **TOOLS** button from the left-hand nav-bar, updates can be obtained automatically. This will provide you with the most current release of the PNP software and UMC Product Catalogs. Be sure to check out **What's New**. For special applications you can fill out a custom VCO/Synthesizer Request Form.

CD Contents

The enclosed CD contains the Graphical User Interface for controlling the EVAL board by using your computer as a means of communicating to the PNP device. The CD also has a folder labeled PNP Data Sheets which contains all of the synthesizer data sheets that are available in the PNP series as of the date of this CD's release. There is also a folder containing a Short Form Catalog of all UMC products.

Web Site

Be sure to check out our comprehensive offering of signal source products including the latest in Plug-n-Play Synthesizer technology by navigating to our website at www.vco1.com. A full complement of VCOs and synthesizers are available from UMC. If you can't find what you need on the web-site or if you have any questions regarding the operation of the EVAL board, contact our Worldwide Customer Support Center located at:

UMC Worldwide Customer Support Center
4703 S. Lakeshore Drive, Suite 2
Tempe, AZ 85282
1.877.UMC.Xtreme or 1.480.756.6070.

About UMC

Universal Microwave Corporation, headquartered in Odessa Florida, has established itself as a world leader in signal source technology, specializing in the development of high performance VCOs and synthesizers for wireless handsets and infrastructure applications. Produced in medium to high volume, these compact modules support a wide range of wireless markets from 10MHz to over 14GHz including: ISM bands, Spread Spectrum, GSM, AMPS, TDMA, CDMA, PCS, MMDS and WLL. We offer custom products that are based on customer requirements with every design available in surface mount packaging and on tape and reel. UMC is devoted to providing the most advanced technology available anywhere. At the core of our operations, our engineering team has demonstrated a penchant for excellence in providing customers with design solutions that often times exceed expectations. With extensive industry experience and in depth knowledge of system requirements our development team has excelled in creating new standards for signal source performance. We are determined to give our customers every advantage, with outstanding performance, competitive prices and on-time deliveries.