5015 Quick Start Guide

Step 1: Power Supply Connection

You are going to need a 5V to 15V power supply capable of supplying 5Watts. Use the supplied red-black Hirose cable to connect to your power supply. Connect it and you should see two blue LEDs illuminating through the label just near the USB connector. Your 5015 will now be set to 2440MHz at a power level of +1dBm (1mW).   See *"Hints and Kinks – Power Supplies"* on back of this document.

Step 2: Heat Sink

The 5015 heat dissipation is approximately 5 Watts in normal operation. Due to its small physical size and bright metal surfaces, it will not be able to radiate much heat and the case temperature will rise 20 degrees Celsius or more in still air. A small amount of additional heat sinking will be required. Simply placing the synthesizer on a heating conducting surface (metal, dense wood, etc.)is usually sufficient.

Step 3: USB connection

Connect the provided USB cable to your 5015 and host computer. Your computer should recognize it as a new FTDI Virtual Com Port. If you have trouble, then it is likely you do not have the correct VCP (virtual com port) driver. (Download FTDI CDM v2.12.00 WHQL Certified.zip from the link below, unzip and run).

Step 4: Terminal Program

You will need a terminal program to change your 5015 settings. Just about any terminal program will work. You can download our custom 5000term from the web: http://valontechnology.com/5015users/5015.htm. **5000term.zip** .   Unzip and running 5000term.exe will automatically find the correct Virtual Com Port. If you use a different terminal program, your port settings are 9600, 8, None, 1, None.

Step 5: Synthesizer Settings

After launching your terminal program, press the Enter key a few times and check to see that you get a cursor like this: "-1->", if you do, you have successfully established communications with your 5015. Type **help** to get the help menu

control-c will exit program.
control-f will increase the baud rate to 115200.
control-r will reset the synthesizer to factor default settings..

Consult the **Valon 5015 Operations Manual** for more information on the use of these commands.

Note that as of this date, not all commands in the Operations Manual may be available. As these commands become available, we will notify you and you will be able to download the updated *.bin files. You can also use the 5000term.exe terminal program to load the *latest*.bin files.

For the latest 5015 Downloads: http://www.valontechnology.com/5015users/5015.htm

5015 Hints and Kinks – Power Supplies

If you are experiencing trouble with the 5015 often the problem is due to the power supply or the power supply connections.

Follow these suggestions to make sure you don't run into start up problems:

1. Current limit set too low. Make sure the current limit is set well above the required current for the voltage you are operating at. For example if you are using a 6V supply the current will be 5W/6V = 0.84A. Best to set the current limit to about 1.5A.
2. If you are using a 5V power supply, make sure it can provide the necessary current . If you are using a laboratory instrument bench power supply set it a skosh above 5V. If you have a fixed output 5V power supply then verify the voltage and minimize the power cable length as much as possible. Avoid using additional clip leads with power supply voltages less than 6V as the extra voltage drop in the cable can be significant.
3. If you are using a laboratory instrument bench power supply, use on/off switch to power on the 5015. Biggest problem with erratic 5015 performance with lab supplies is the user "dialing up" the voltage slowly from 0V. This will sometimes confuse the power-on-reset circuitry resulting in an unlocked synthesizer**. Best to just adjust the output voltage first and then power-cycle the power supply or plug the power cable into the powered on power supply.**

> CAUTION: Ensure the RF output is not connected to any load that can provide more than +20dBm reverse power or > 0 Vdc

Above all, if you have trouble or need help just contact us.

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