

Laboratory	
2	<i>AM, DSBSC, FDM</i>
	Advanced Wireless Lab
TLEN 5830-AWL	

Interfacing USRP with the computer

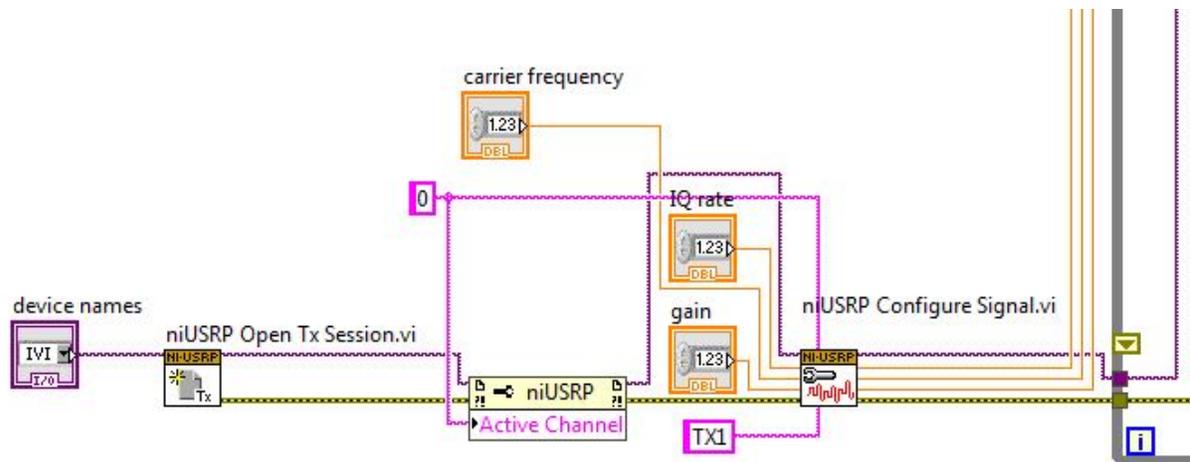
After connecting the USRP to the Ethernet port on the laptop or workstation, configure the computer Ethernet connection to be in the same subnet as that of the USRP.

This is done under Windows-7 in the Network Configuration panel: Configure the onboard (in the PC) network interface card (NIC) to have an IP address of 192.168.10.1 / Netmask 255.255.255.0 / Gateway 192.168.10.1 as the IP address of USRP is configured as 192.168.10.2 .

Note that the DLC-1B20 workstations are connected to the Internet via the 802.11 wireless nterface.

Interfacing with LabVIEW

Setup the connection as shown below:



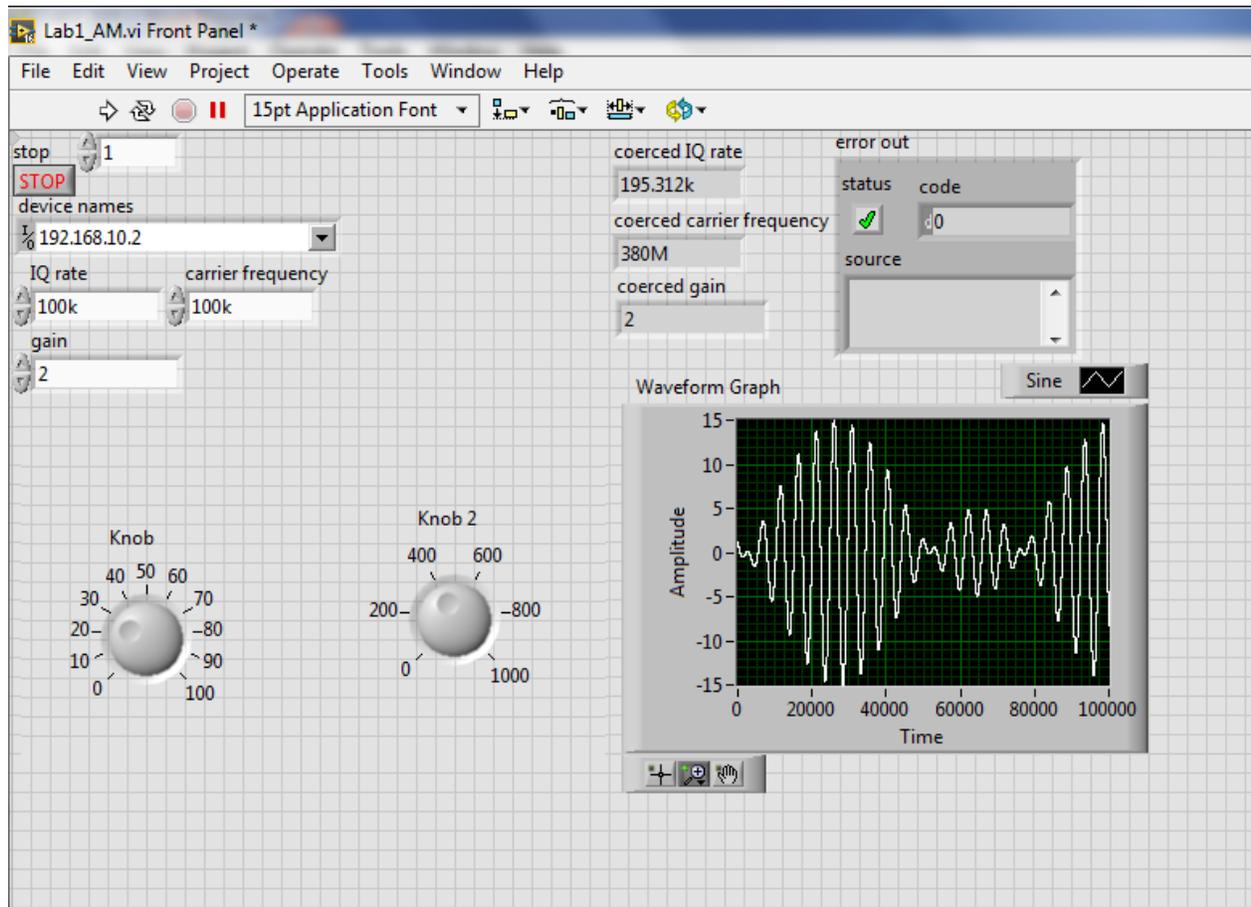
- 1) USRP transmission session needs to be initiated. It is then connected to the niUSRP property node.
- 2) Set the active channel on the property node ('0' in this case).
- 3) Connect the channel to the niUSRP Configure signal block and create a constant block for 'TX1' (note: TX1, TX2, RX1, RX2 are keywords).
- 4) The purple wire is to keep the session alive. It must be connected to all of the niUSRP blocks as shown.



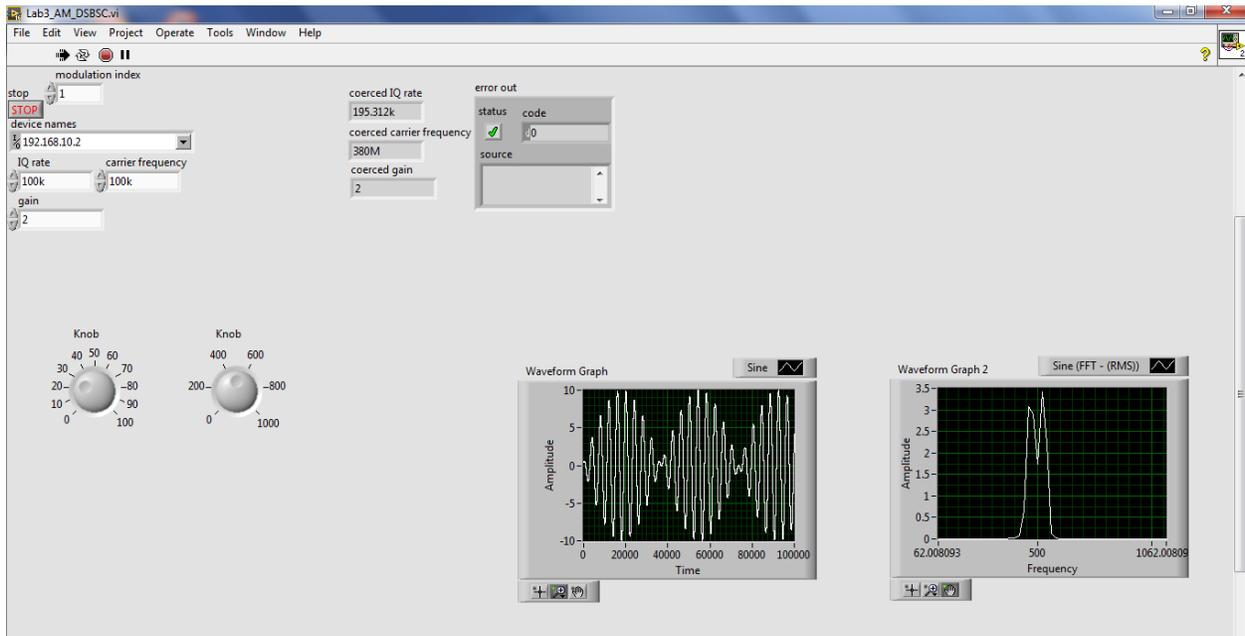
- 5) The yellow wire is to check and display the errors if any (it is connected to an 'error out' block).

Output waveforms (with tunable parameters):

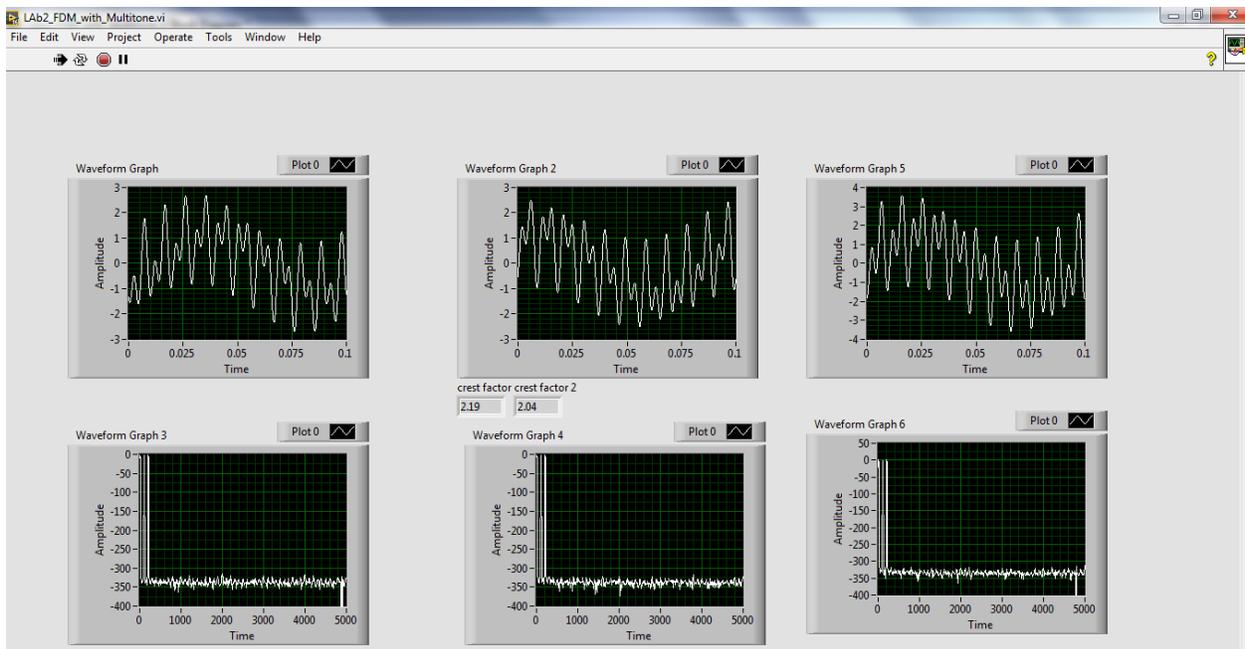
AM output:



AM-DSBSC output:



FDM output:



Lab-02 submission: Submit your vi's and screenshots to the instructors prior to the due date.