Creating a Viper Template File

A Viper template file is required when the Viper Route Generator (VRG) application is used to generate the .drp configurations files for a Viper project. The template file contains all the information that is common to all the Vipers in a network such as the frequency, power output, bandwidth/data rate, Data Retries, Random Backoff, Collisions Avoidance, etc…

Most Viper project require only one template file that can be used for both the master or remote configuration files. This procedure will first step the user through setting up a template file that can be used for both.

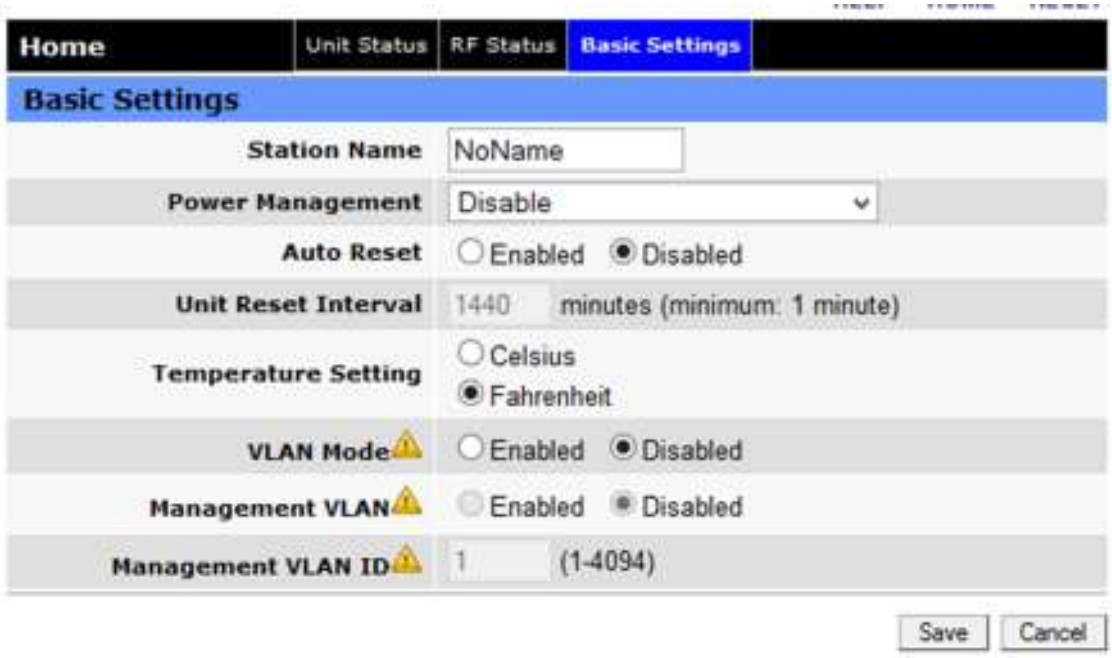
There are some parameters that will be set even though the customer may not require that particular feature. Some features are set because there is not a disadvantage to settings these features.

Ensure you perform a SAVE before navigating to another page.

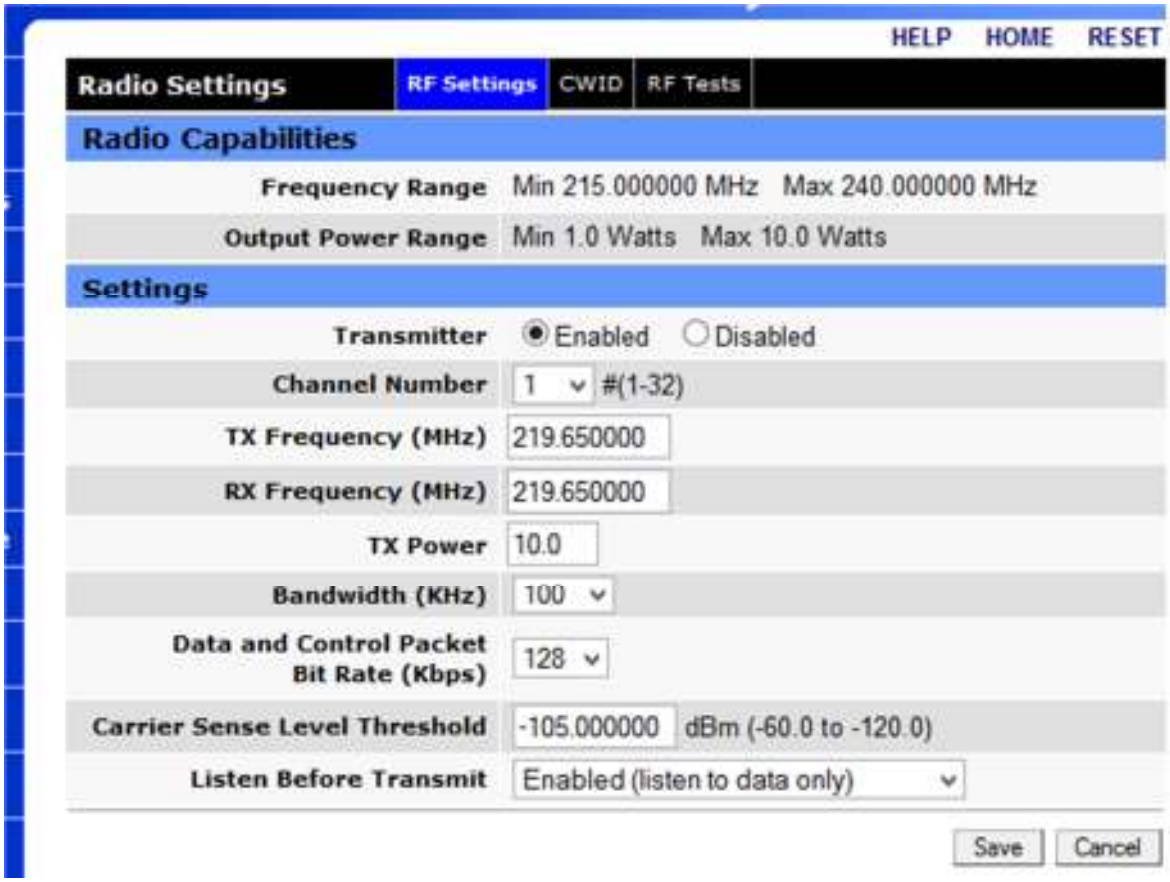
Set a Viper back to factory default values. Then startup a web browser and navigate to the Viper's home page.

Navigate to the Home >> Basic Settings tab

Set the Temperature Setting to Fahrenheit. All other settings are default values. The Station Name will be populated by the VRG application.



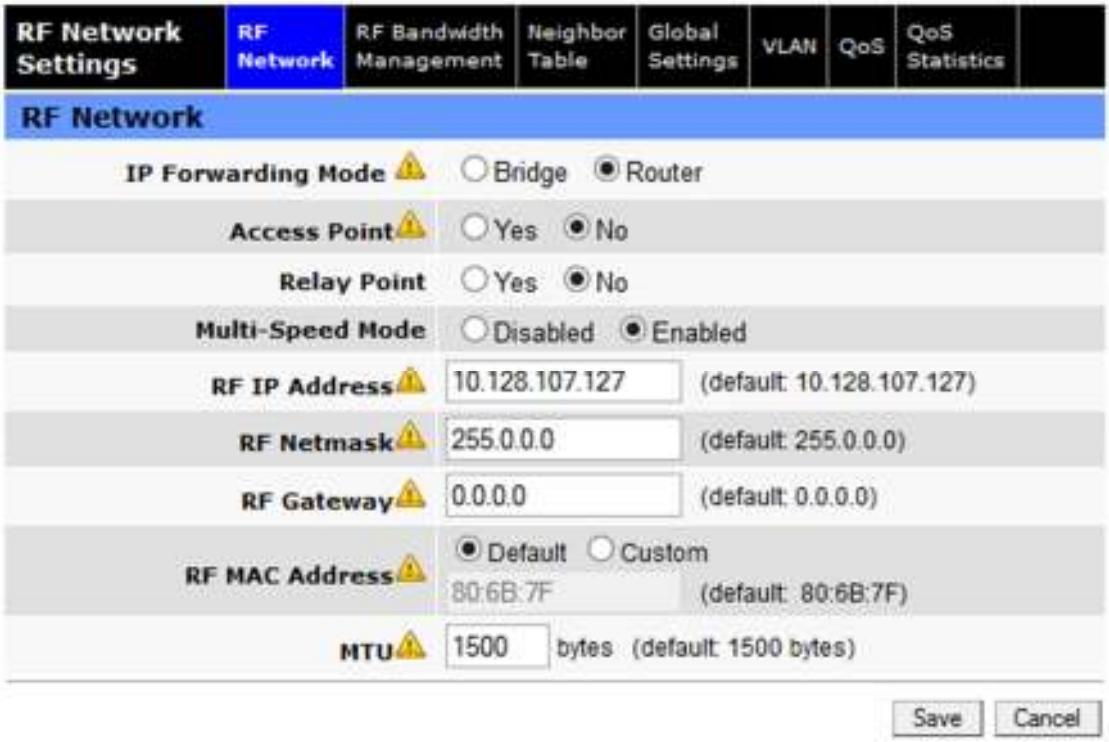
Navigate to the Radio Settings >> RF Settings tab.



Set the parameters on this page according to the FCC license

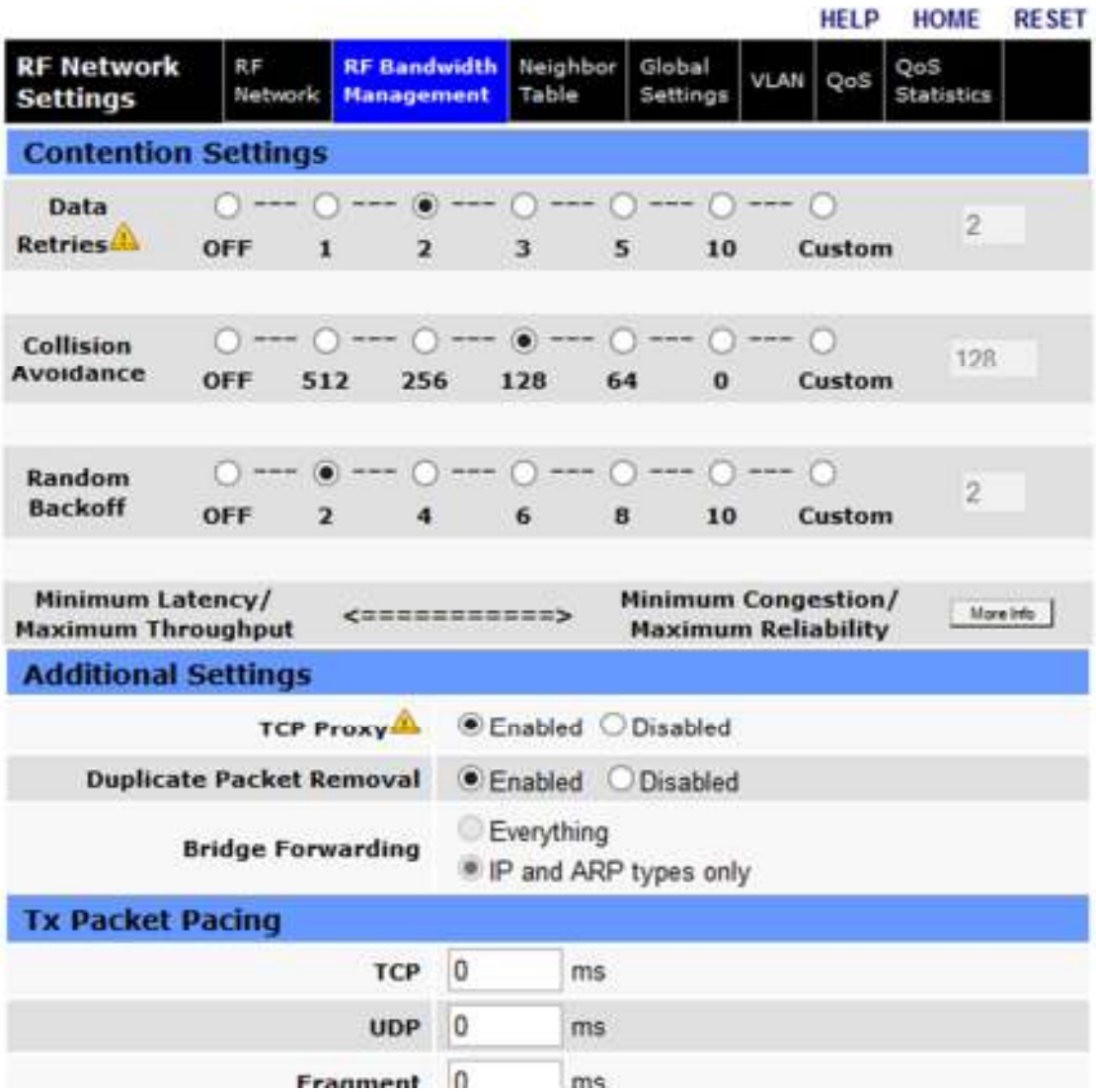
The settings on this Viper page will generally be defined by the projects FCC license. Listen Before Transmit should always be set to Enabled (listen to data only). The Carrier Sense Level Threshold is generally set to -105 dBm which is the levels for 4 FSK modulation. Data and Control Packet parameter should be set to 4 FSK (which is the second slowest speed of the modulations).

Navigate to the RF Network Settings >> RF Network page. In this example the Router radio button was enabled to enable the RF IP network parameters. These parameters will be set by the VRG application when the configuration files are generated. Enable Multi-Speed Mode. **The Access Point and Relay Point features will be abled by the VRG app as needed.**



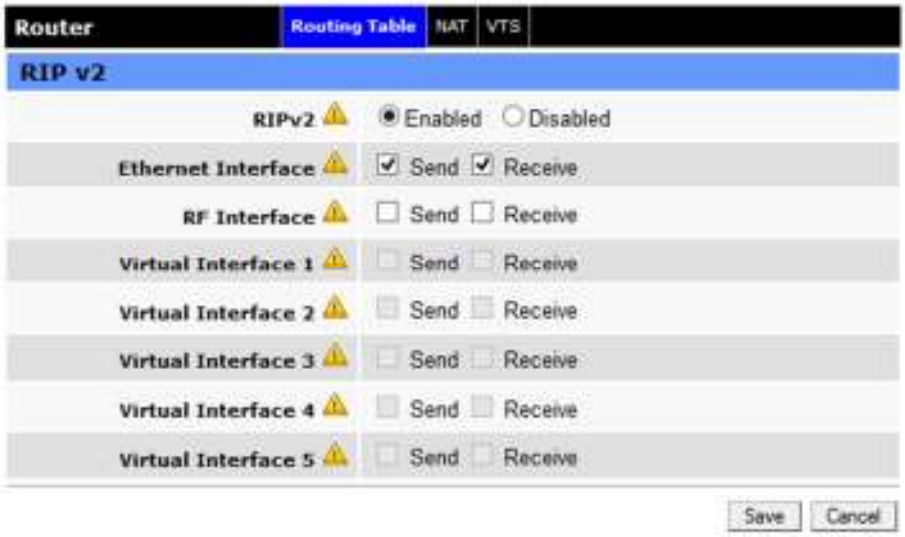
The RF IP settings will be set by the VRG application for each Viper

Navigate to the RF Settings >> RF Bandwidth Management. Set the parameters as shown on the screenshot below.



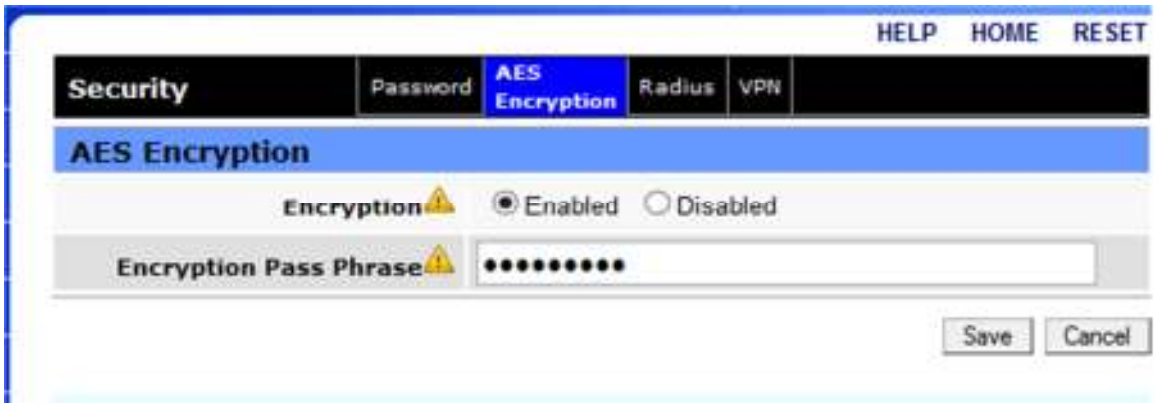
These settings will work for 99% of the Viper project.

Navigate to the Router >> Routing Table page. Enable RIPv2 if the master is connected to another router and needs routing protocol.



Enable RIPv2 if the master is connected to another router and needs routing protocol.

Navigate to Security >> AES Encryption tab. Enable Encryption if required in the project. Also enter the Encryption Pass Phrase. This AES encryption key will be enabled for all Vipers in the project.



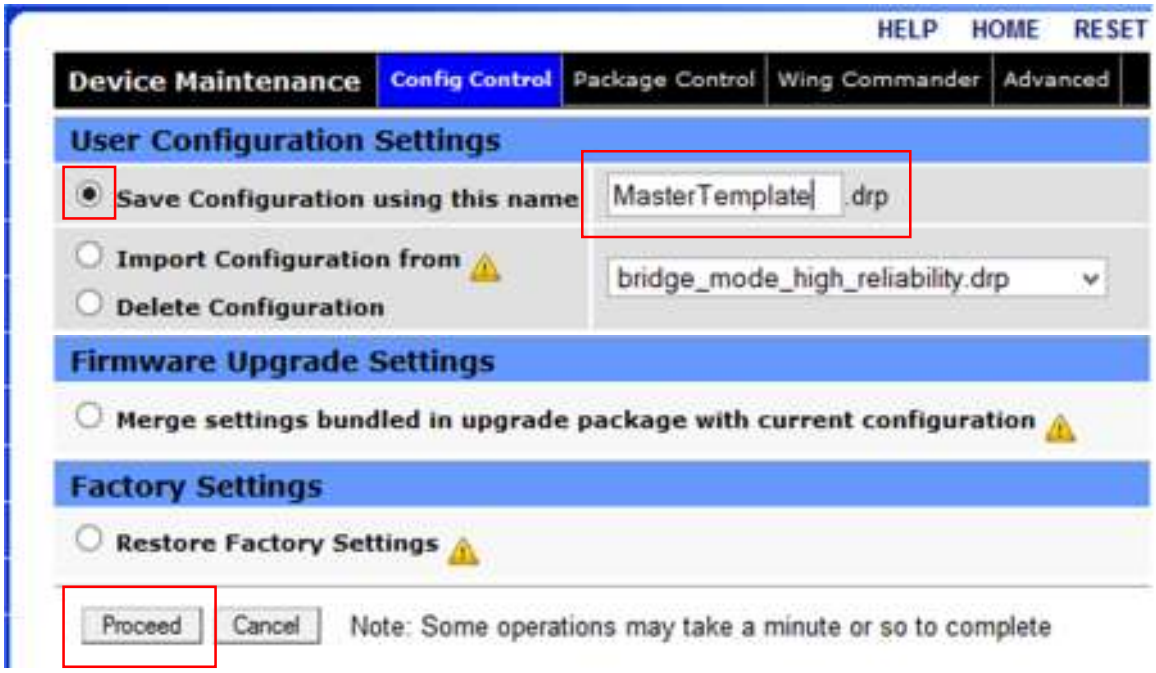
Enable AES Encryption and Set Pass Phrase

Navigate to the Diagnostics >> Online Diagnostics page. Set the Measurements as shown below.

Set Measurements as Shown

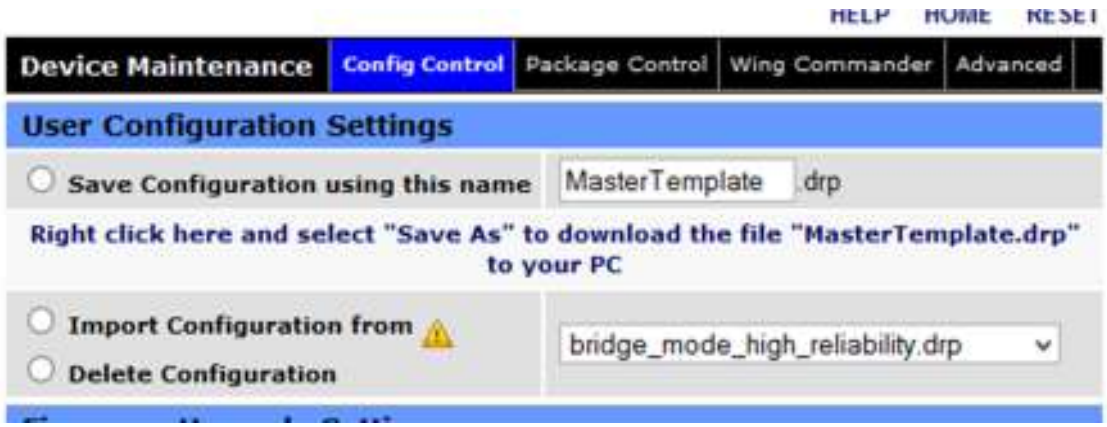
Double check all the settings on each page that have been saved. Then Reset the Viper. This is important because some parameters are implemented in the saved configuration until the unit has been Reset.

Navigate to the Device Maintenance >> Config Control page.



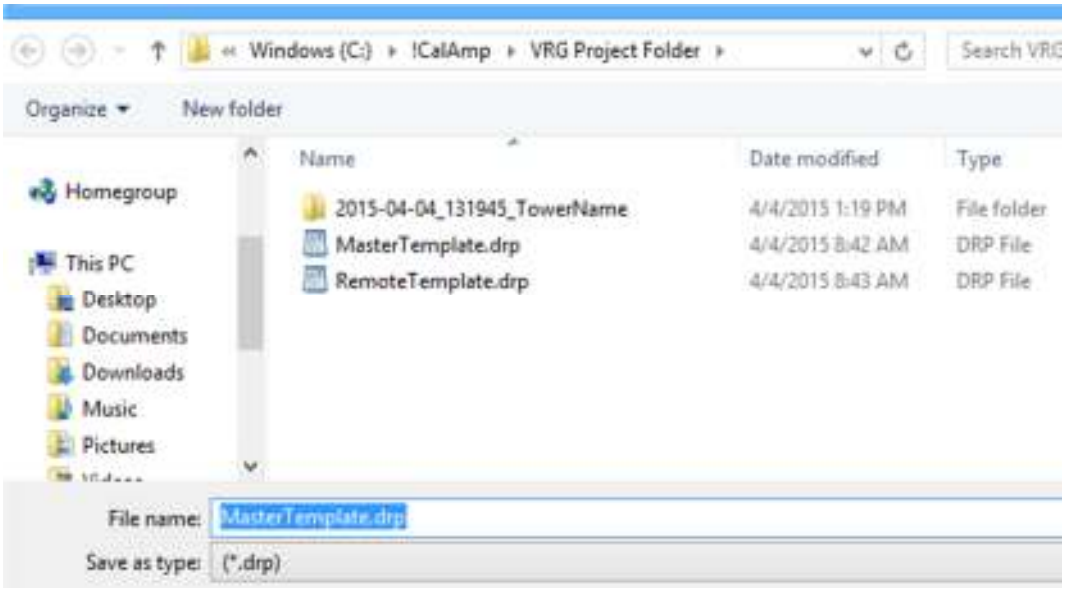
Set as shown above

Click the Radio Save button and enter MasterTemplate as the .drp file name. Then click the Proceed button. The user will notice a blue link prompting the user to right click.



Right Click on blue link

Right clicking on the link the user will be prompted to Save Link As. The user should save the MasterTemplate.drp file in the VRG Project folder that will be used.



Save the MasterTemplate.drp file in the VRG Project Folder

The MasterTemplate file should be saved as a read only file, then a copy should be edited for other projects. The user can edit the MasterTemplate file with WordPad for other projects by changing only a few parameters.

Note:
If the user intends to configure another Viper project the user should select a new project folder and modify the template file for the new frequencies, bandwidth setting (channel type) and power output. See below. A master template file should be kept in a read only folder and copies of the master template .drp file be used. The channelType dictates the bandwidth and data rate for the Viper. Typically the 4 FSK modulation is used as the standard default. In this example 27 is 4 FSK for a 100 kHz channel radio which is 128 kbps.

```
radio.alarm.revPwr.enabled= 1
radio.alarm.revPwr.off.db= 5.000000
radio.alarm.revPwr.on.db= 3.000000
radio.channel.01.channelType= 27
radio.channel.01.ctrlColor= 1
radio.channel.01.rxFreq= 219.650000
radio.channel.01.txFreq= 219.650000
radio.channel.01.txPowerLevel= 10.0
radio.channel.01.txPowerLevelBin= 100
radio.channel.02.channelType= 3
radio.channel.02.ctrlColor= 1
radio.channel.02.rxFreq= 0.000000
radio.channel.02.txFreq= 0.000000
```

Refer to the CLI rev F pdf manual to determine channelType for the particular Viper project.
The user may also want to check the security phrase used for each district to ensure it is correct as well.

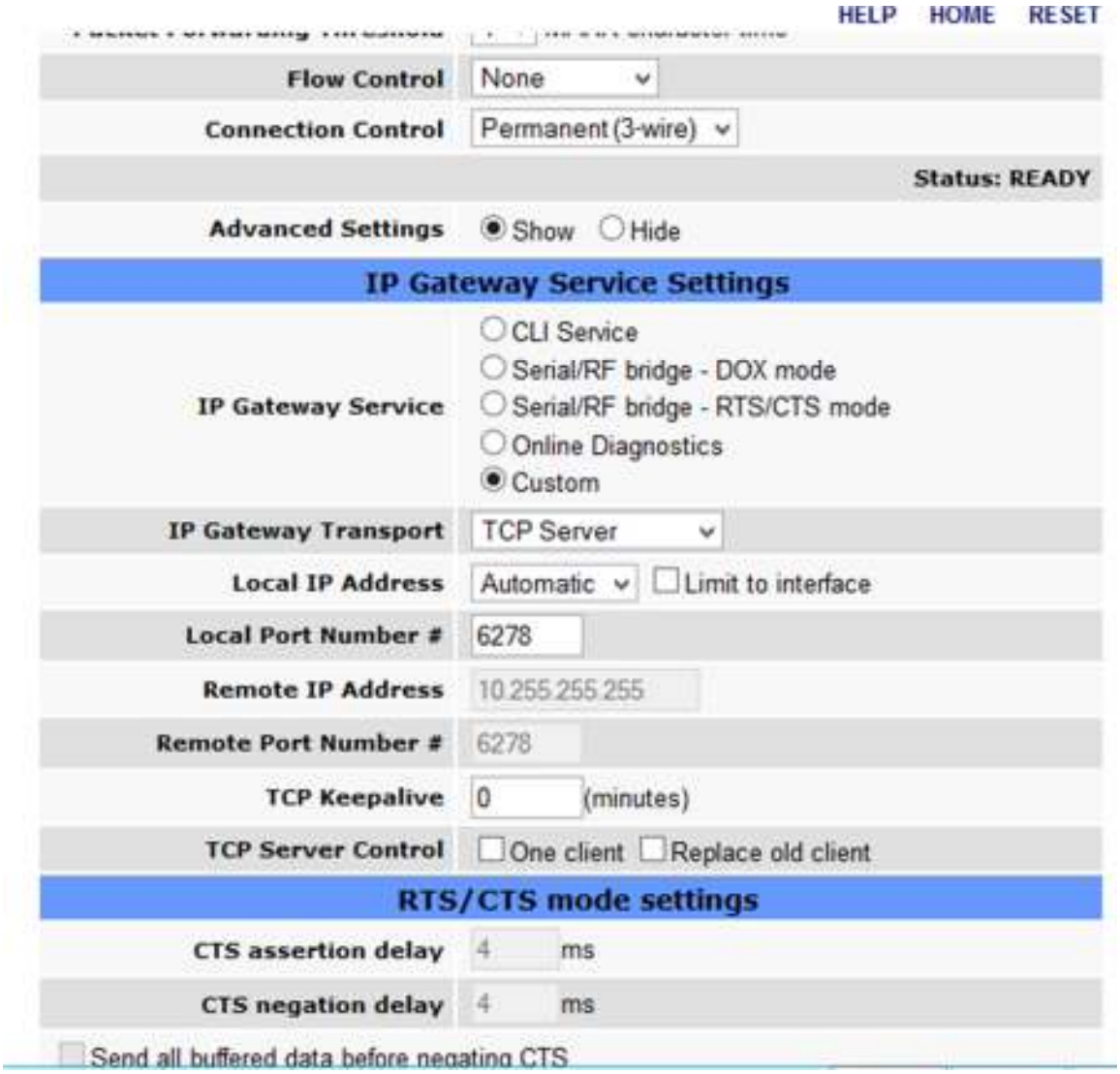
```
oip.defaultGateway.enable= 1
oip.duplicate.detection.enable= 1
oip.encryption.enable= 0
oip.encryption.phrase= Dataradio
oip.nar.enable= 0
oip.tcp.proxy.enable= 1
```

This ends the procedure for one MasterTemplate file.

Some Viper Projects the remote Vipers require a different configuration file than what the master Viper uses. Typically the difference is the serial com port parameters. In the previous MasterTemplate file the serial com port was left at default values. However in some project the remote viper's serial ports are configured as a terminal servers. This would require a RemoteTemplate file.

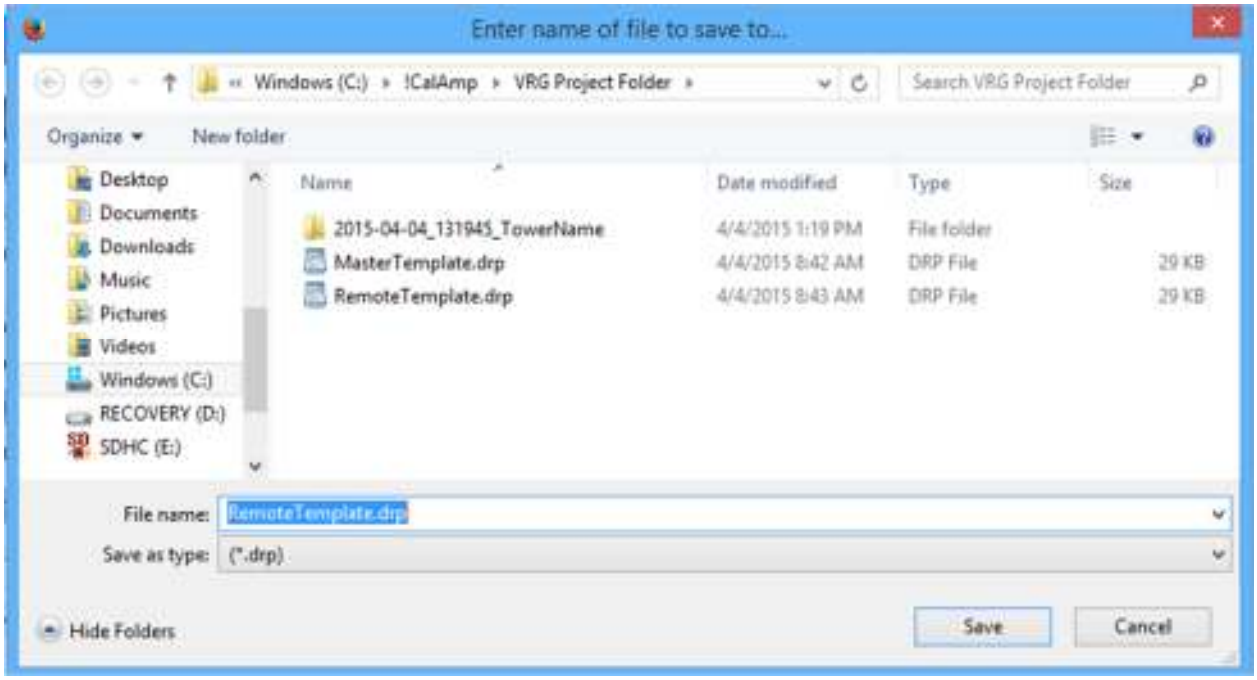
Navigate to the Serial >> Com Port tab. Click on the Show Radio button to display advanced parameters.

The default settings that are shown above will be used by the MasterTemplate file. The RemoteTemplate file will use a customized terminal server setting shown below. The one shown below is a typical customized terminal server setting, however other customized settings can be used.



Typical Terminal Server Settings for RemoteTemplate.drp file

The user should save the parameters and perform a Reset before saving the RemoteTemplate file to the VRG Project folder as previously done with the MasterTemplate file.



Save the RemoteTemplate.drp file to the VRG Project folder

This completes the Two Template file process.