VistaMax OBR3650HP Professional Installation Guide

Purpose:

The purpose of this guide is to instruct the professional installer on how to set the transmit power on the OBR3650HP to ensure FCC EIRP limits for the 3.65GHz band is not exceeded.

General:

Only qualified personnel should be allowed to install, replace, and service the equipment.

The device cannot be sold retail, to the general public or by mail order. It must be sold to dealers.

Installation must be controlled.

Installation must be performed by licensed professionals.

Installation requires special training

The VistaMAX radio and antenna should be installed ONLY by experienced installation professionals who are familiar with local building and safety codes and, wherever applicable, are licensed by the appropriate government regulatory authorities. Failure to do so may void Vecima's product warranty and may expose the end user or the service provider to legal and financial liabilities. Vecima and its resellers or distributors are not liable for injury, damage or violation of regulations associated with the installation of outdoor units or antennas
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FCC EIRP:

The allowed EIRP for 3.5MHz bandwidth is 3.5watts or 35.4dBm
The allowed EIRP for 7.0MHz bandwidth is 7.0watts or 38.5dBm

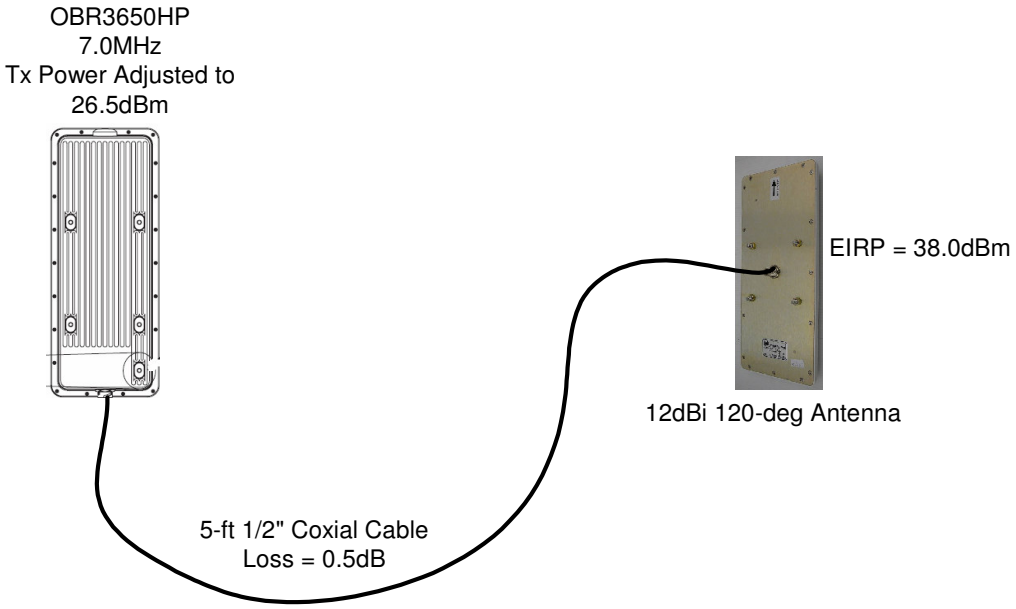
Power Adjustment on OBR3650HP:
Transmit power of the OBR3650HP is adjusted in 0.5dB steps via the Web Browser interface. Vecima has provided head room in the OBR transmitter to allow the professional installer to use different RF cable types and lengths.

Installation Scenarios:

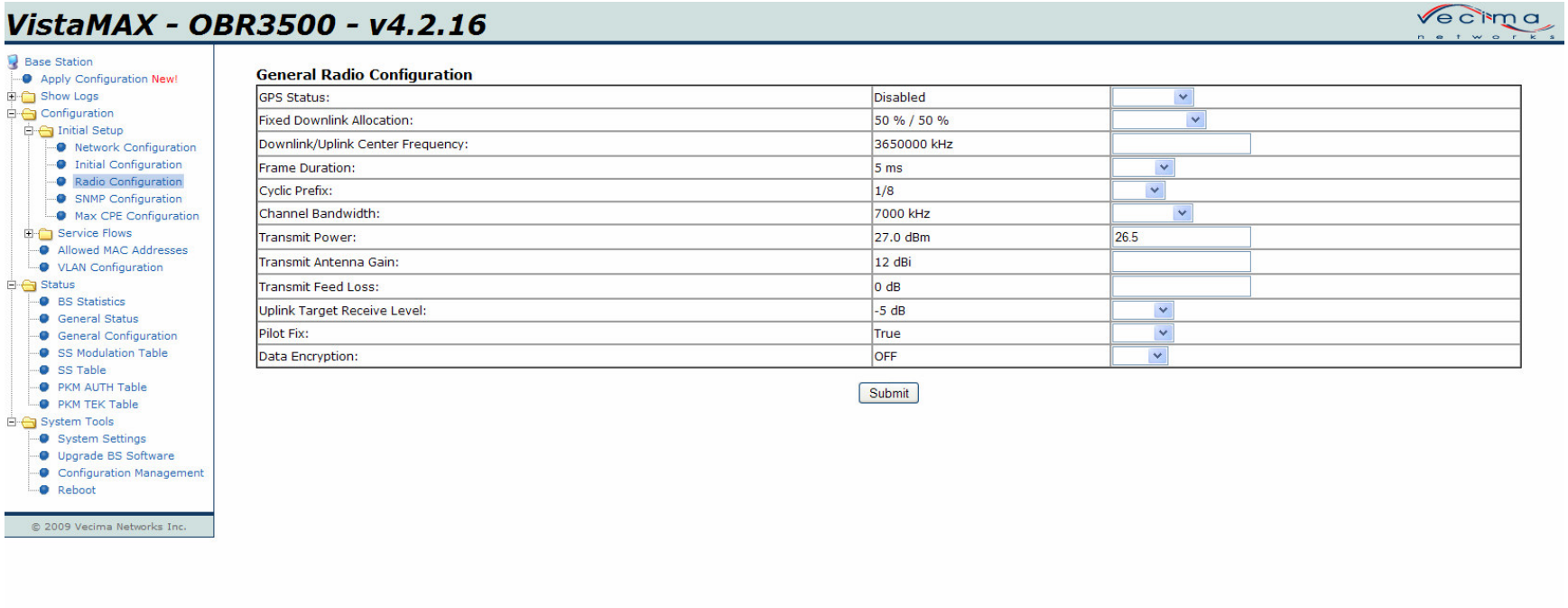
Vecima OBT3650HP consists of the following items:
1 – OBR3650HP + mounting accessories and PoE surge suppressor.

A sample installation with antenna is as follows:

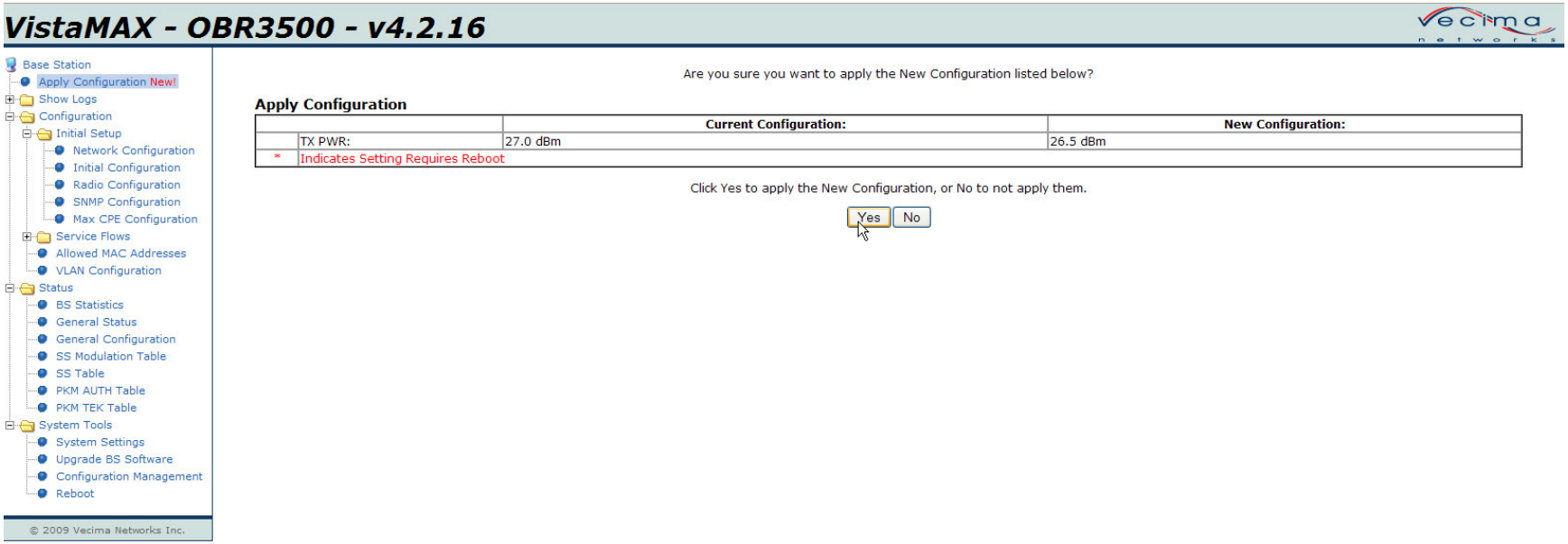
120-deg Sector:
The diagram below is shows the gains and losses in the RF chain for the calculated EIRP of 38.0dBm.



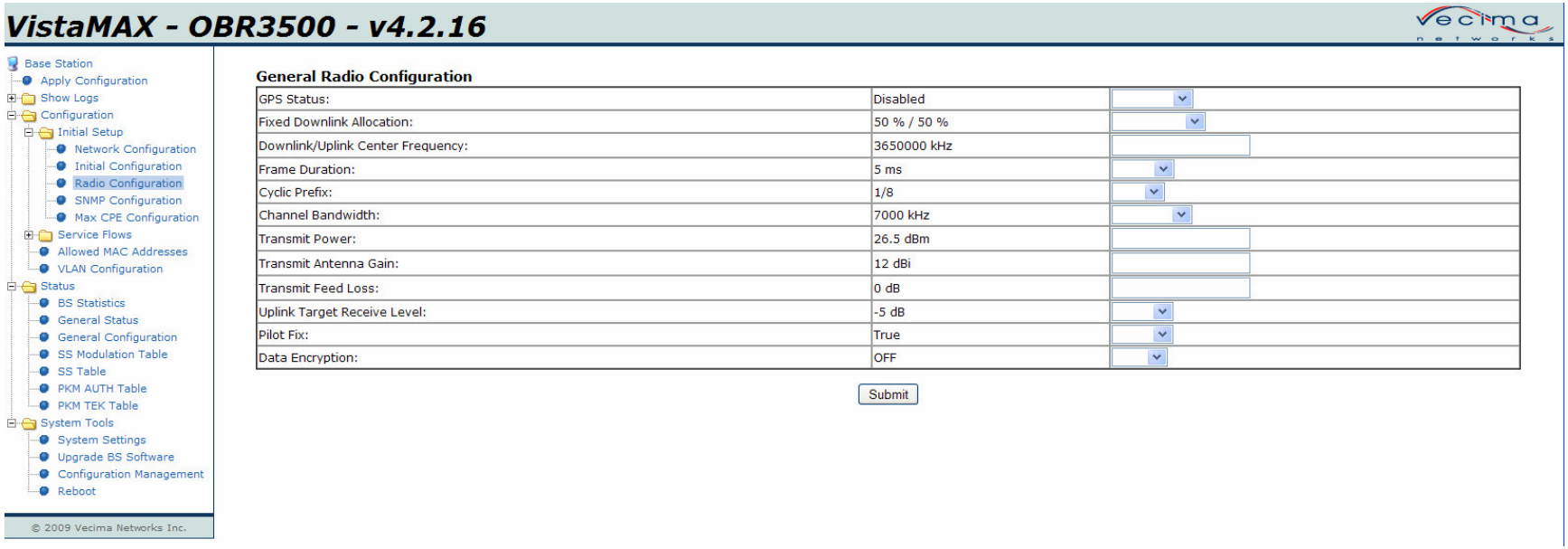
Adjusting the power of VistaMax OBR3650HP 7.0MHz bandwidth



The transmit power can be adjusted by 0.5dB steps. Enter the new power setting in the right hand field then click on the “Submit” button as per the above screen shot.

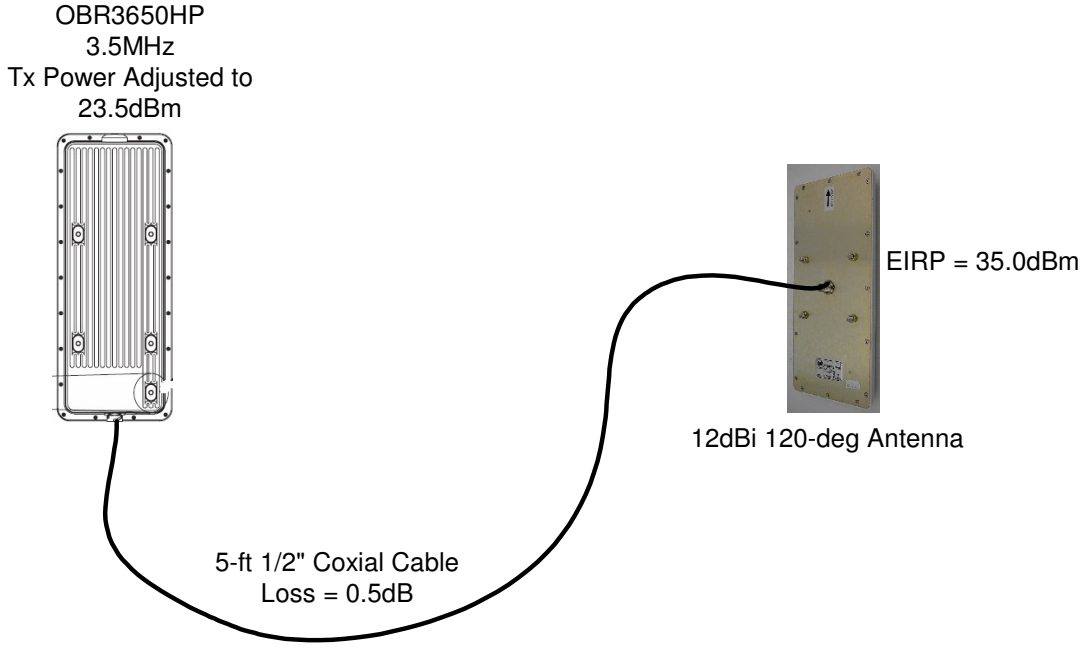


To apply the new power setting, the OBR needs to be rebooted under the “Apply Configuration” screen, see above screen shot.

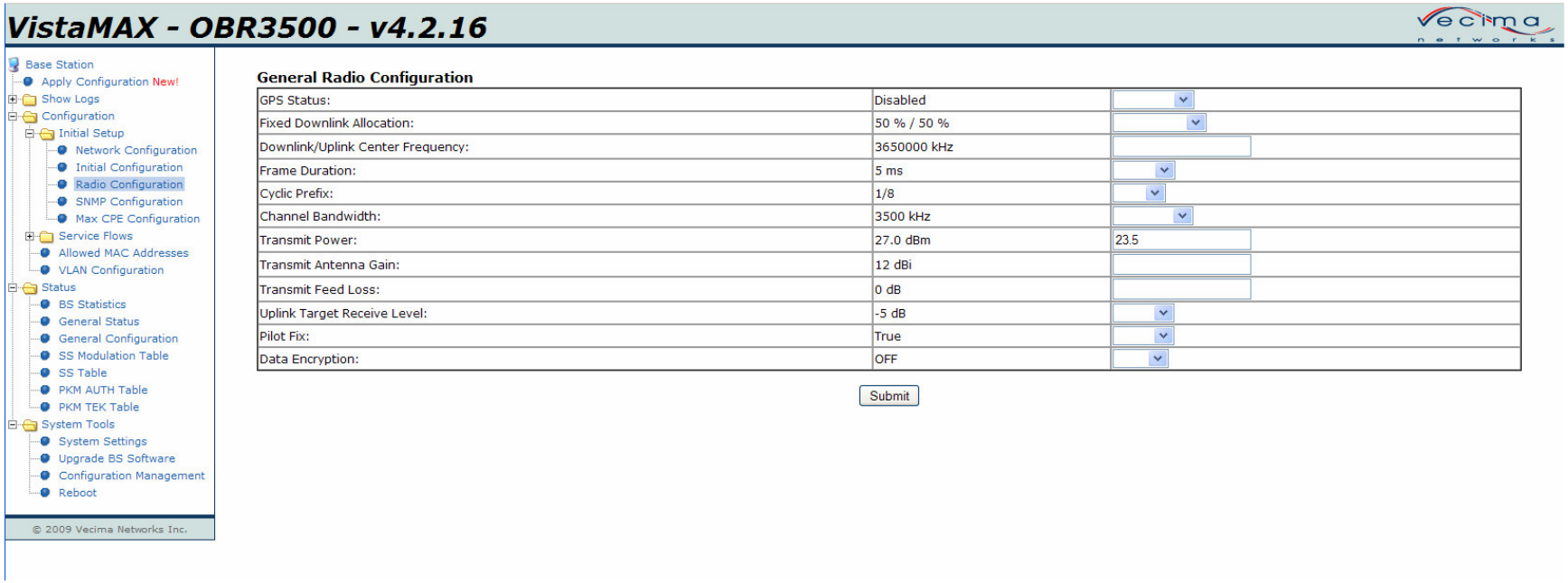


The above screen shot shows the new transmit power now set to 26.5dBm.

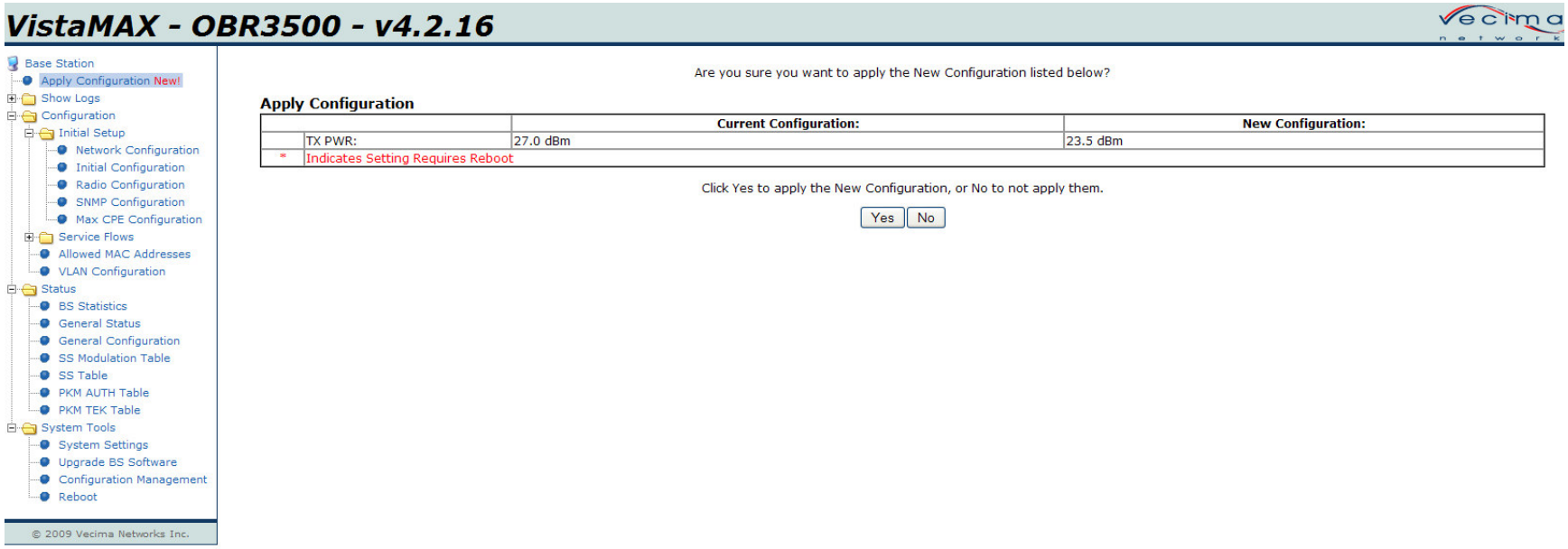
The diagram below is shows the gains and losses in the RF chain for the calculated EIRP of 35.0dBm.



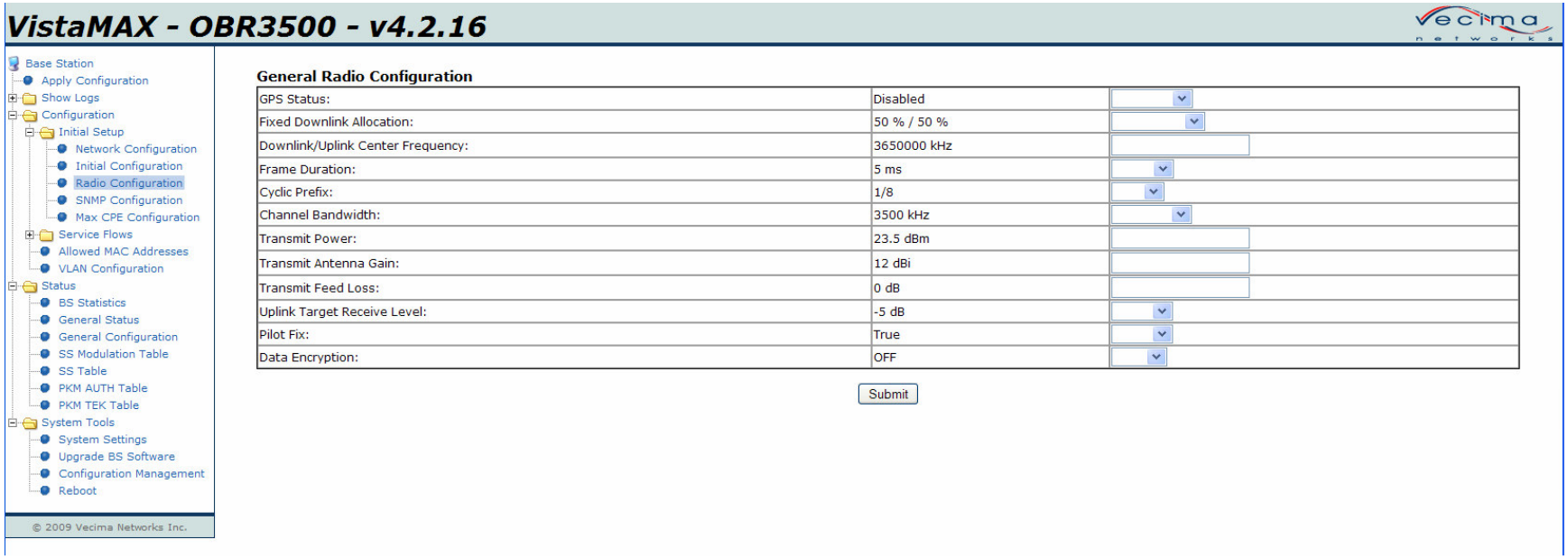
Adjusting the power of an installed OBR3650HP for 3.5MHz bandwidth



The transmit power can be adjusted by 0.5dB steps. Enter the new power setting in the right hand field then click on the “Submit” button as per the above screen shot.



To apply the new power setting, the OBR needs to be rebooted under the “Apply Configuration” screen, see above screen shot.

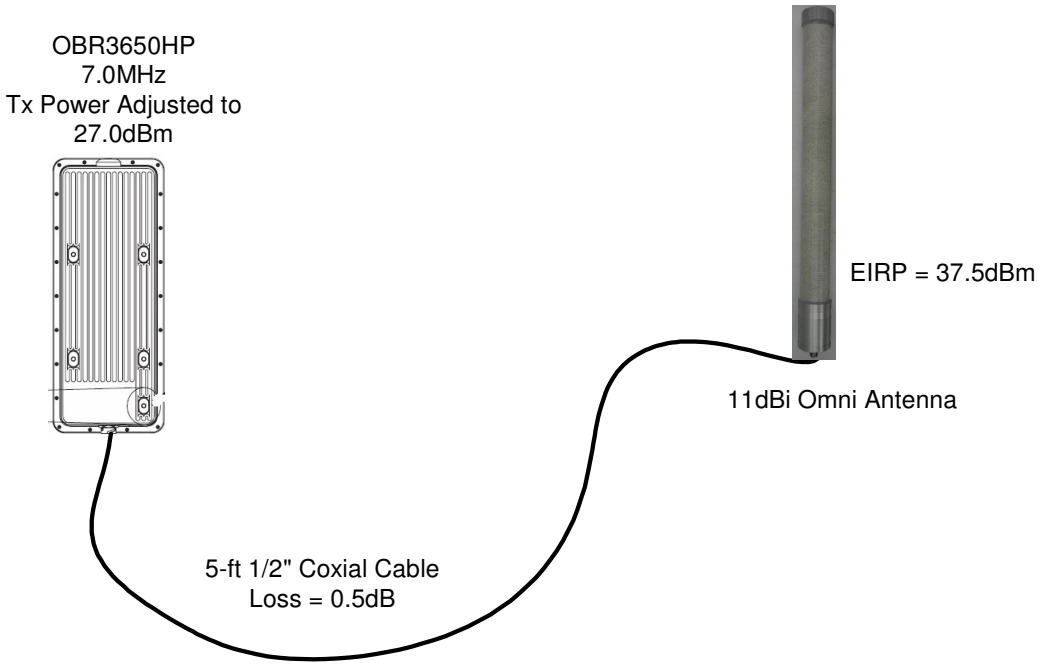


The above screen shot shows the new transmit power now set to 23.5dBm

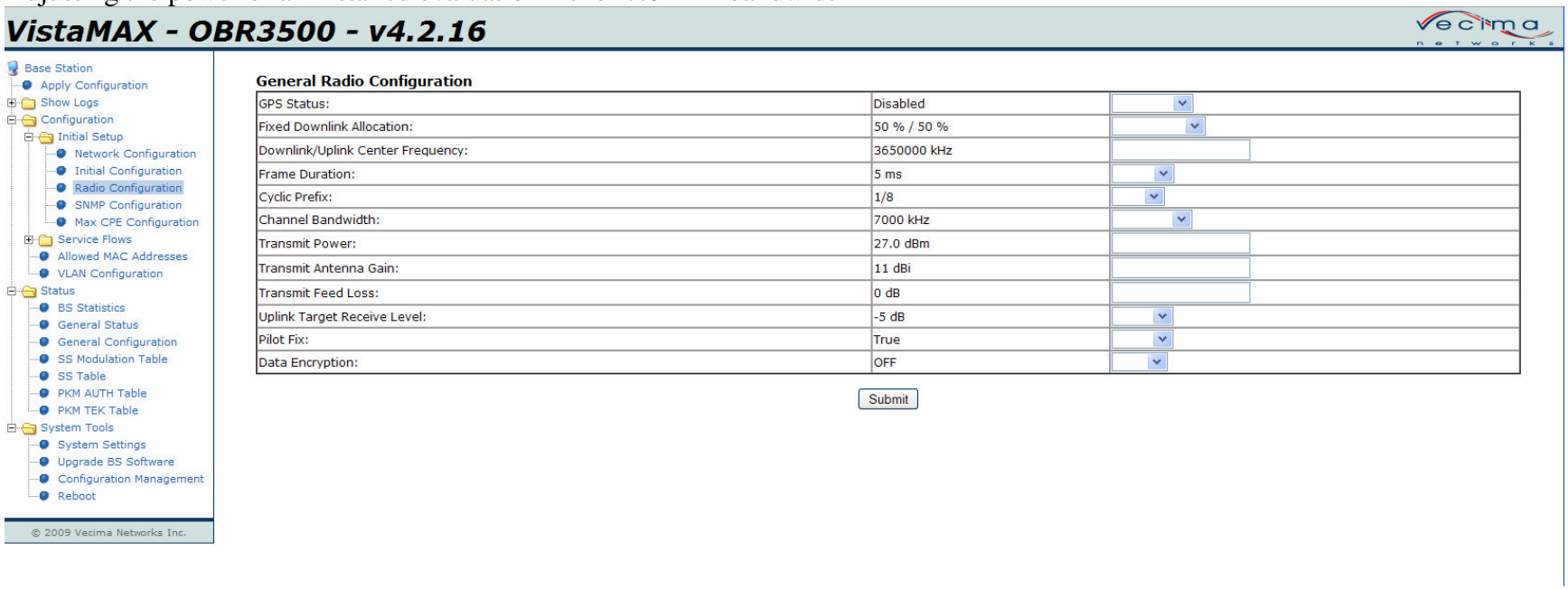
Omni Antenna:

Since the Omni antenna is 1dB lower in gain then the transmit power of the OBR can increased by 1dB.

The diagram below is shows the gains and losses in the RF chain for the calculated EIRP of 37.5dBm.

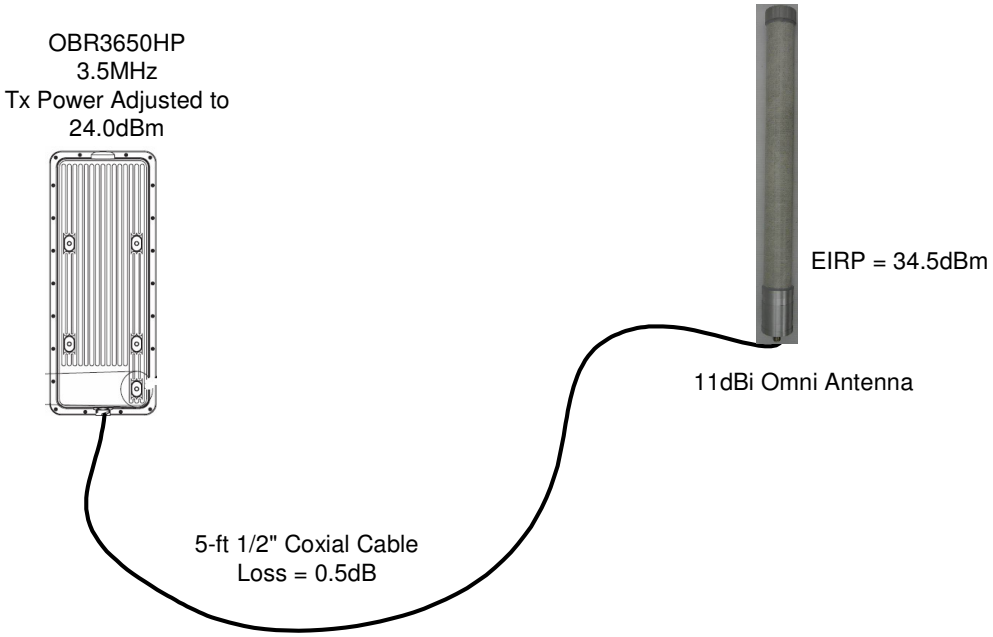


Adjusting the power of an installed evaluation kit for 7.0MHz bandwidth



The maximum transmit power of the OBR3650HP can be used when using the 11dBi Omni antenna. If a shorter RF cable is used, then the transmit power will need to be adjusted down. The diagram b

elow is shows the gains and losses in the RF chain for the calculated EIRP of 37.5dBm.



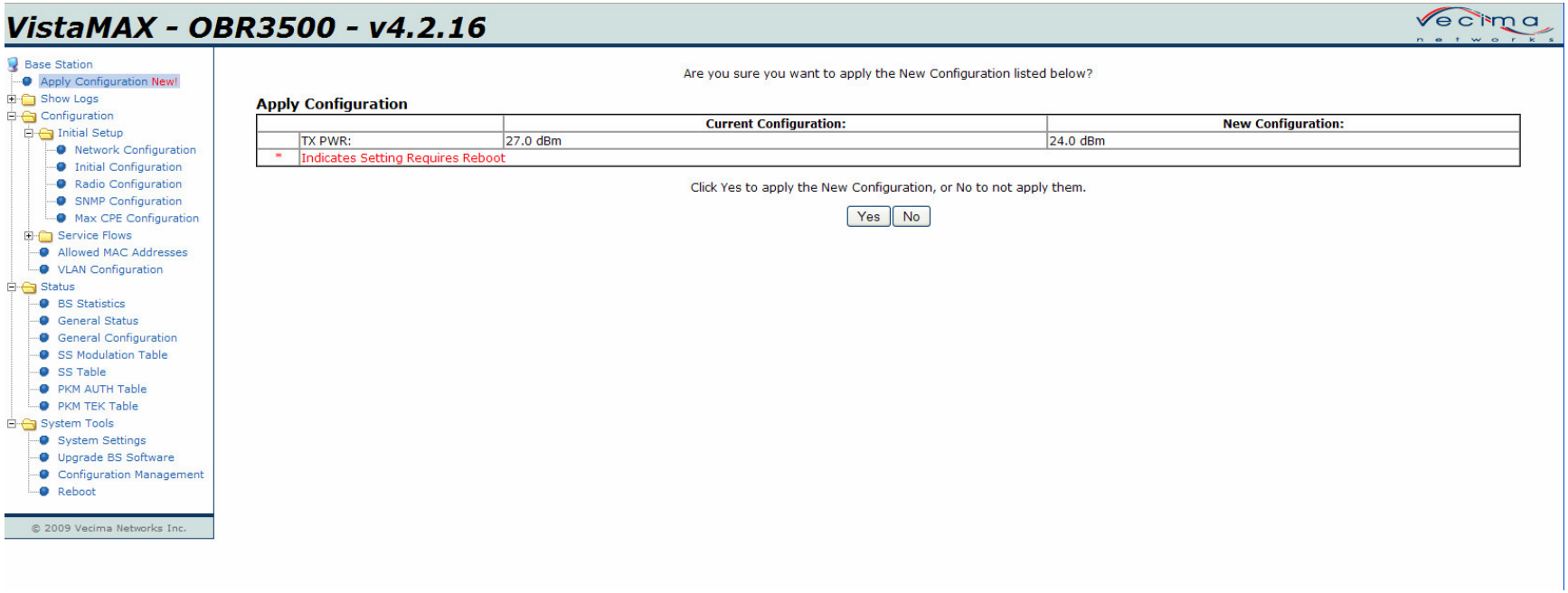
VistaMAX - OBR3500 - v4.2.16

- Base Station
  - Apply Configuration New!
- Show Logs
- Configuration
  - Initial Setup
    - Network Configuration
    - Initial Configuration
    - Radio Configuration
    - SNMP Configuration
    - Max CPE Configuration
  - Service Flows
  - Allowed MAC Addresses
  - VLAN Configuration
- Status
  - BS Statistics
  - General Status
  - General Configuration
  - SS Modulation Table
  - SS Table
  - PKM AUTH Table
  - PKM TEK Table
- System Tools
  - System Settings
  - Upgrade BS Software
  - Configuration Management
  - Reboot

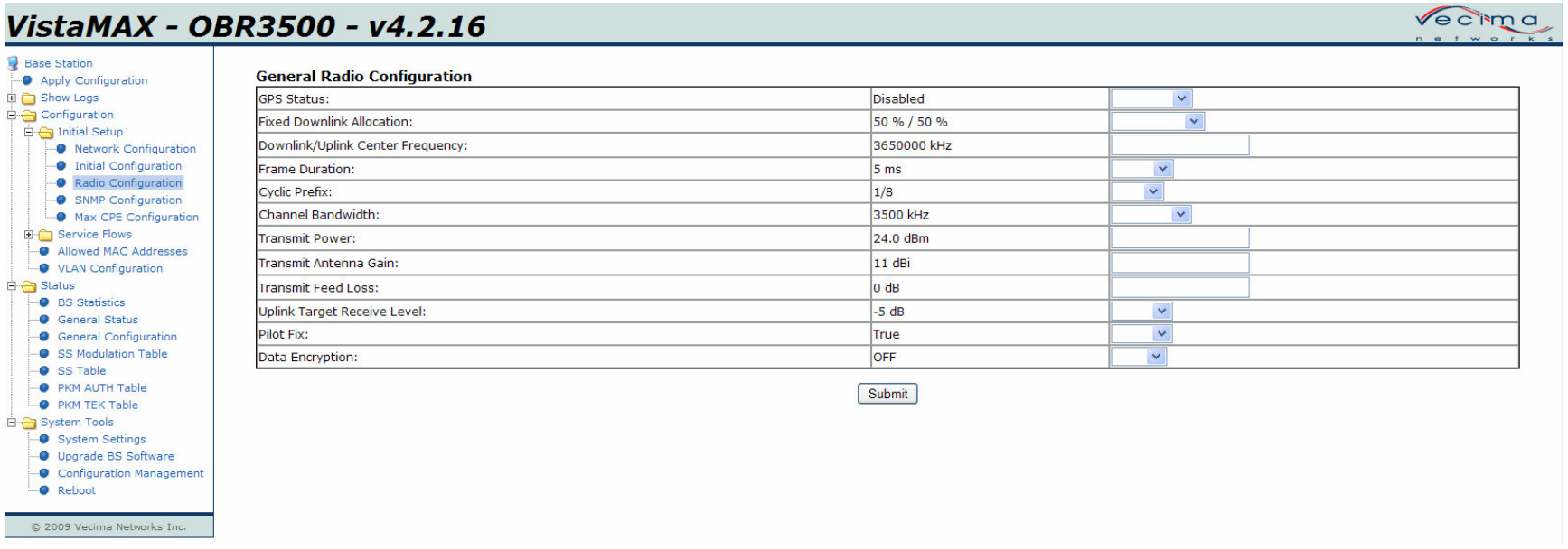
General Radio Configuration

GPS Status:	Disabled	
Fixed Downlink Allocation:	50 % / 50 %	
Downlink/Uplink Center Frequency:	3650000 kHz	
Frame Duration:	5 ms	
Cyclic Prefix:	1/8	
Channel Bandwidth:	3500 kHz	
Transmit Power:	27.0 dBm	24.0
Transmit Antenna Gain:	11 dBi	
Transmit Feed Loss:	0 dB	
Uplink Target Receive Level:	-5 dB	
Pilot Fix:	True	
Data Encryption:	OFF	

Submit



The transmit power can be adjusted by 0.5dB steps. Enter the new power setting in the right hand field then click on the “Submit” button as per the above screen shot.



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