

# Tensator ECF Media System

## Tensator Wireless ECF User Guide

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## Version History

Version	Date	By	Changes	Sections
1	14/9/2009	James Austin	Initial document.	

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## 1 Brief

The Tensator Wireless ECF provides both wireless data connection to PDUs and to a new generation of Tensator RF Button.

The Wireless PDU provides mains connected LED PDUs with a wireless data link back to a Tensator Hub. The Tensator hub requires a CTRX (transceiver) unit to be connected. A maximum of 24 units can be connected to any one system. There are 254 different zones that can be used and these zones are used to allow multiple systems to be installed within a shared area.

Wireless RF buttons share the same CTRX as the PDUs. Again, there is a maximum of 24 buttons per zone (1 zone per CTRX).

The estimated operational distance is 100 meters line-of-site. Every site has slightly different RF characteristics and therefore during the installation the CTRX (transceiver) unit should be tried in different locates until the optimum position is found.

## 2 Hardware Configuration

A data connection to the CTRX (transceiver) and the Tensator hub is provided using USB. The unit comes with an A to B USB cable which is connected from the connector on the base of the CTRX and the Tensator hub. The CTRX will show as a serial port on the hub.

There are no zone switches on either the CTRX nor the RF buttons. This is now controlled by software.

### 2.1 PDUs

The PDUs show their serial number and the zone and address settings from switch-on. The serial is used to program the zone and address for each individual unit.

Power is provided for by a two pin terminal on the reverse of the PDU electronic board. A 5V power supply is provided. The PSU comes with UK, EU and US mains adaptors. Mains is required due to the high current usage of the unit. The PDUs can also be powered if connected to a PDU Interface unit. In this case the power is supplied via the CAT5 cabling.

### 2.2 Buttons

The button units are programmed by holding down both buttons on the unit until the left LED goes amber then releasing the buttons. This writes the buttons serial number into the configuration system on the hub. The address is then set using the configuration system and the two RF buttons must be held down again in the same way as before. This is covered in more detail in the software section.

Power is provided using a 9V PP3 battery. This gives a true wireless solution for the RF buttons.

Each button unit has two LEDs. LED 1 is on the top left, LED 2 is on the top right.

#### LED 1 Functions

**Red** - waiting reply  
**Green** - got reply  
**Amber** - ready to send serial  
**Red flashing** for time - low battery

Software Configuration

#### LED 2 Functions

reserved for future use

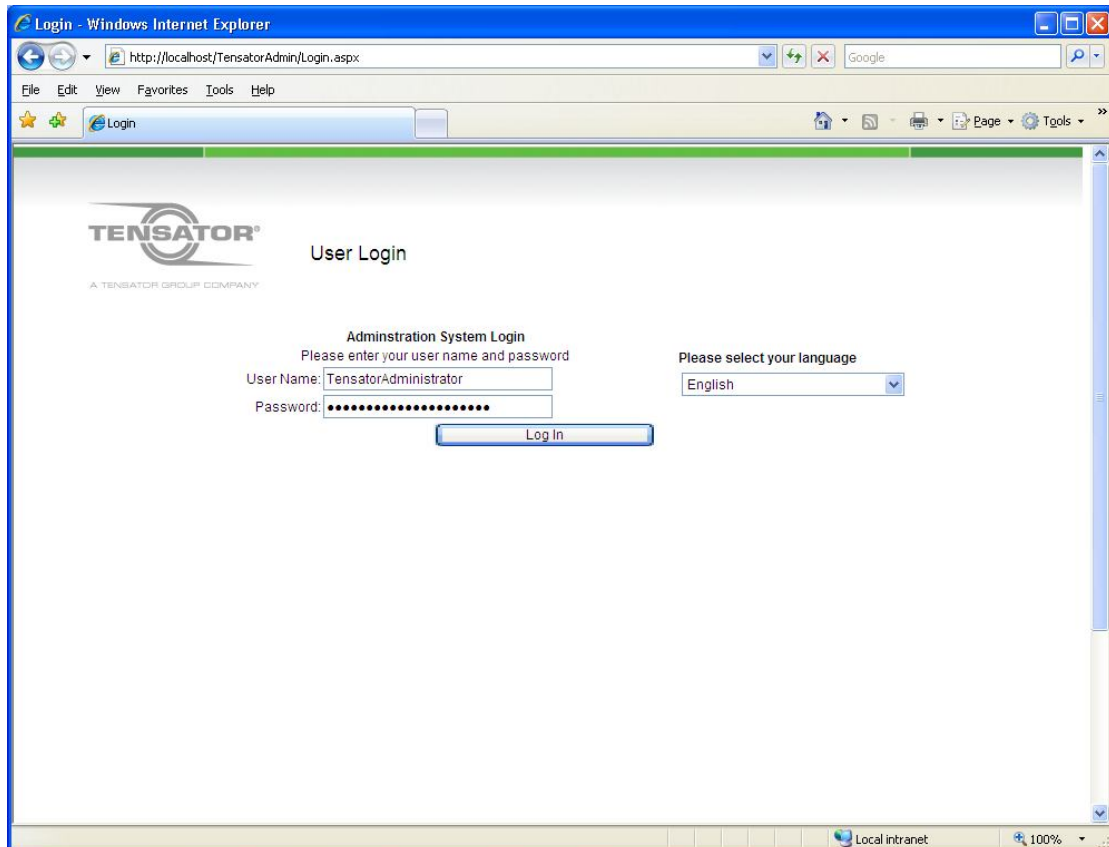
### 3 Software Configuration

1. PDUs and buttons are configured via the web interface. To access the web interface go to:

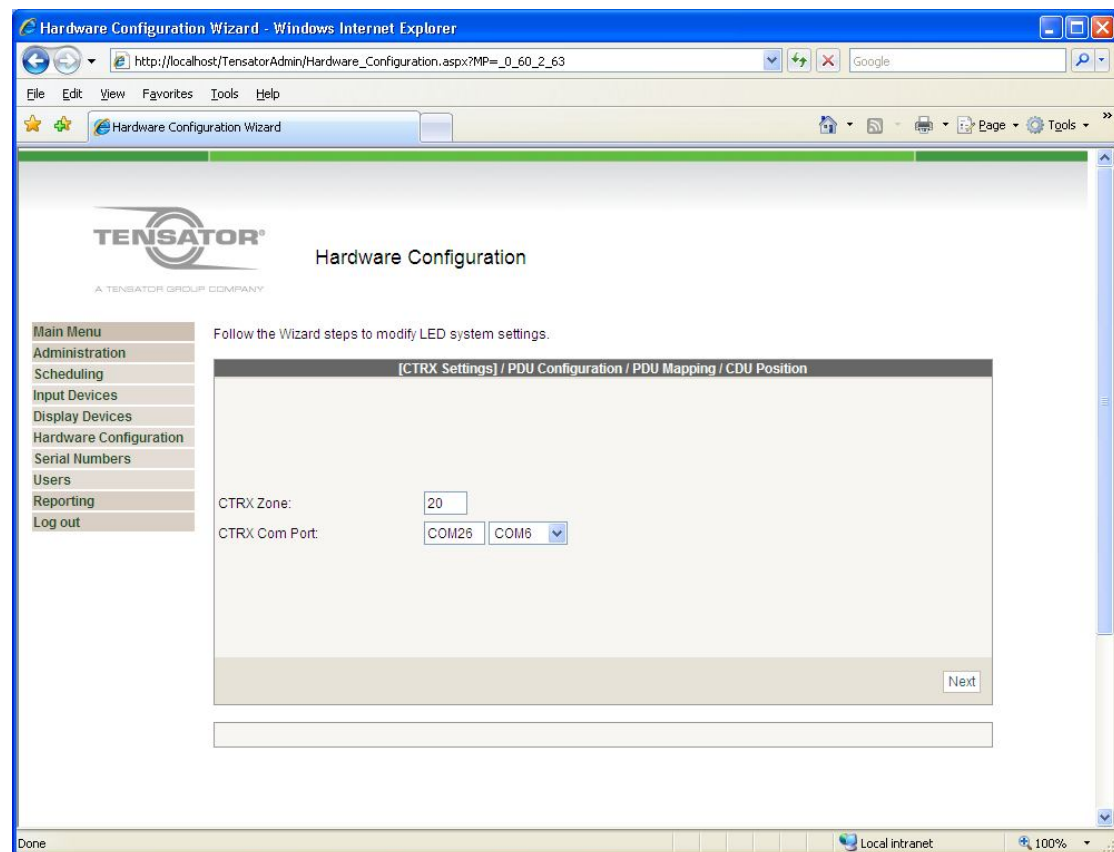
<http://localhost/TensatorAdmin/Login.aspx>

Change 'localhost' to a machine IP address if connecting through a network.

2. Login as Tensator Administrator with the same password.



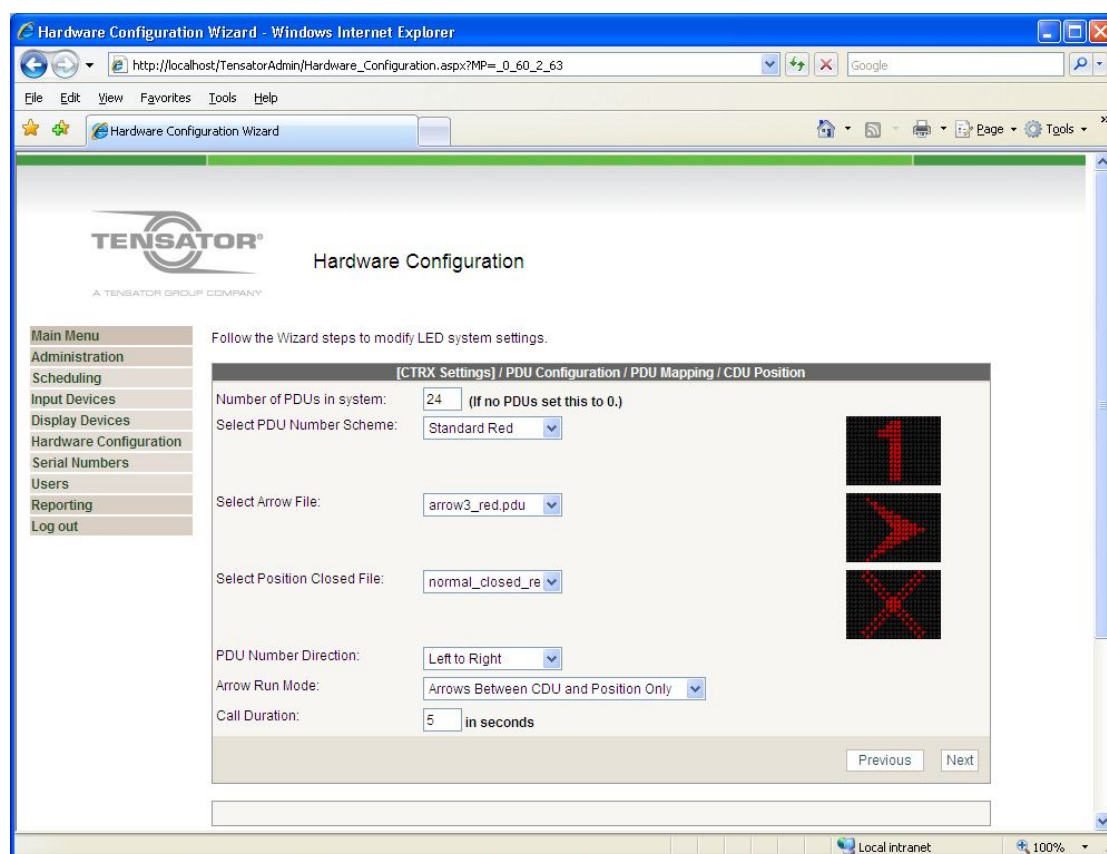
Click on the Administration -> Hardware Configuration.



### 3. CTRX Settings

**CTRX Zone** This is the zone to use for the system. If you are setting up four systems use four different zones across the four systems.

**CTRX Com Port** The COM port can either be manually entered or selected from the list of currently available ports on the remote machine.



#### 4. PDU Configuration

Number of PDUs in system – Must be set to the number of PDUs that will be used for this specific configuration.

PDU Number Scheme – Lists available number designs from:

c:\inetpub\wwwroot\TensatorAdmin\Library\Numbers

Please ensure that there are the correct number of files for the number of PDUs required.

Arrow File – Lists available arrow designs from:

c:\inetpub\wwwroot\TensatorAdmin\Library\Arrows

Position Closed File – Lists available closed designs from:

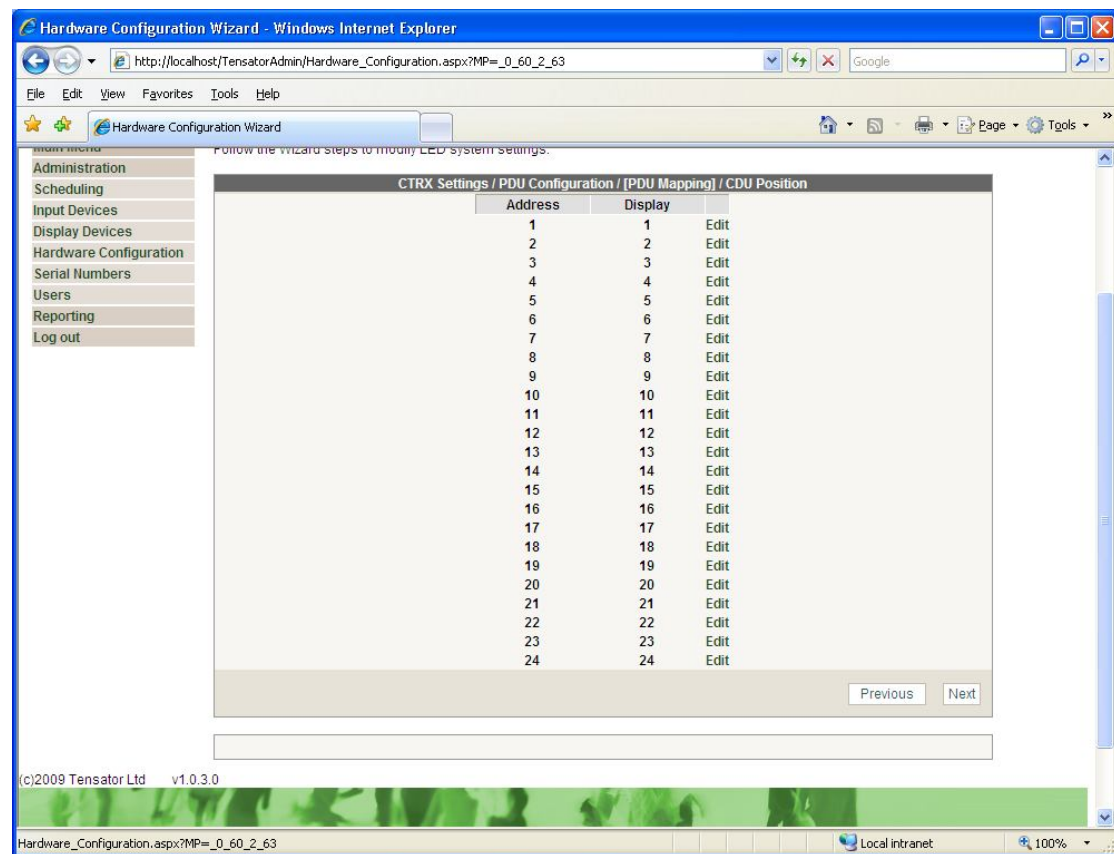
c:\inetpub\wwwroot\TensatorAdmin\Library\ClosedSigns

PDU Number Direction – Select either Left to Right or Right to Left (from the perspective of the end customer).

Arrow Run Mode – There are three modes to choose from as follows:

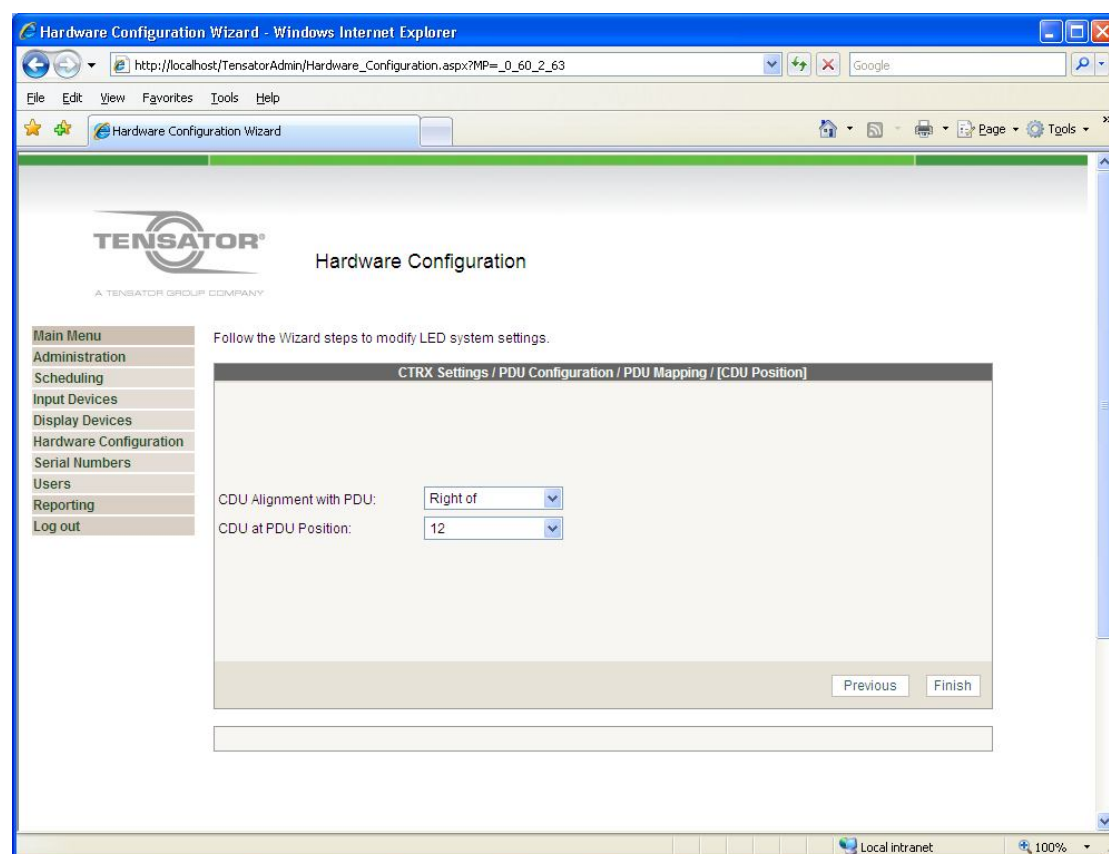
- No Arrows
- Arrows from All Positions
- Arrows Between CDU and Position Only

Call Duration – (In seconds) The length of time to display arrows and flashing number on the PDUs. Note that this is interrupted by additional calls.



## 5. PDU Mapping

The PDU mapping allows PDUs to have a different number graphic assigned. So if there are 24 units but they are numbered from 25 onwards then these new numbers can be entered in the map.

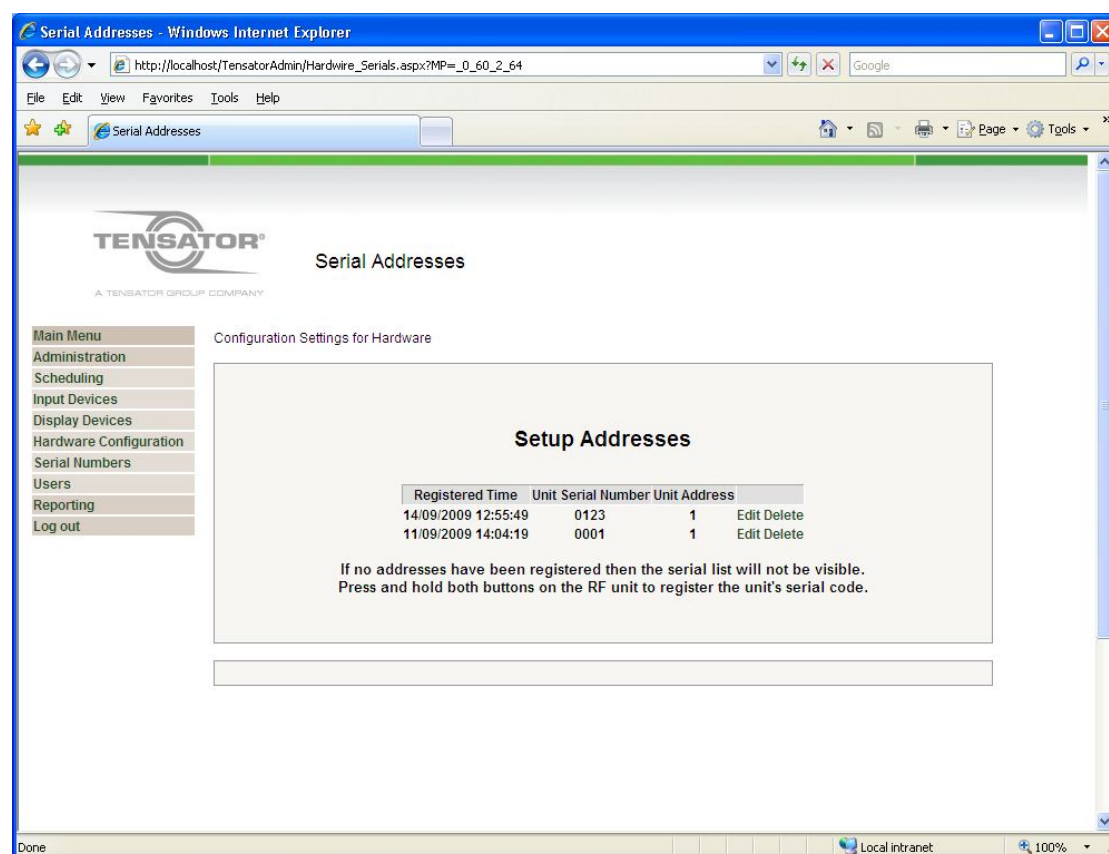


## 6. CDU Position

**CDU Alignment with PDU** - This is to indicate where the CDU is placed in relation to the position selected below.

**CDU at PDU Position** - This is to indicate where the CDU is placed in the queue and is used by the CDU to Position arrow mode.





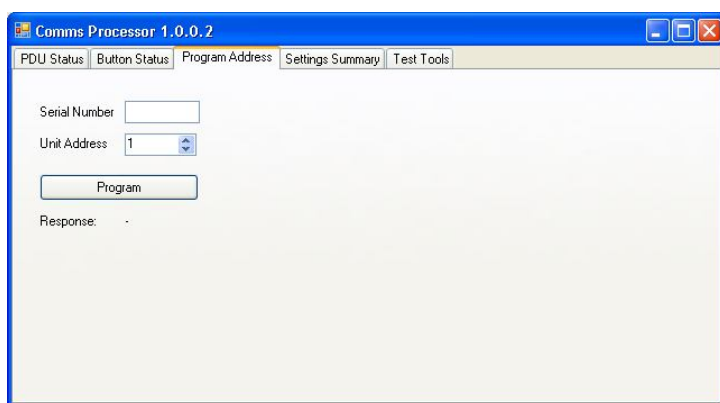
The 'setup addresses' list displays unit serial numbers for the RF buttons the currently selected address (default is 0) and the registered date/time. The registered date and time is updated when ever the system receives a button serial the list is sorted in order of most recent registered time so that it is easy to identify which button serial was the last one to be sent.

### 3.1 Programming a Button Address

When both buttons on a RF button are held down for about 5 seconds the top left LED will go amber. Releasing the buttons triggers a serial number to be sent to the hub. This serial number will appear in the list as per the above screen shot. Using the 'Edit' option change the 'Unit Address' field to the desired address of the button. Press and hold the buttons on the RF unit again and the system will send the new address to the button unit. The zone is handled automatically by the system and is set to the zone number selected under the 'Hardware Configuration' options.

### 3.2 Programming a PDU Address

The PDU addresses are programmed from the 'Comms Processor' application.



Enter the serial number of the PDU into the Serial Number box. Select the unit address in the 'Unit Address' selector. Click 'Program'. The response should be the serial number followed by 'OK'.

Note: to find the serial number of a PDU turn the PDU off then wait a couple of seconds and turn it on again. The serial number follows the 'SN' characters. DO not include SN in the box. As with buttons the zone is handled by the system automatically.

## Notes on FCC and CE approval.

1. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
2. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
3. Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.