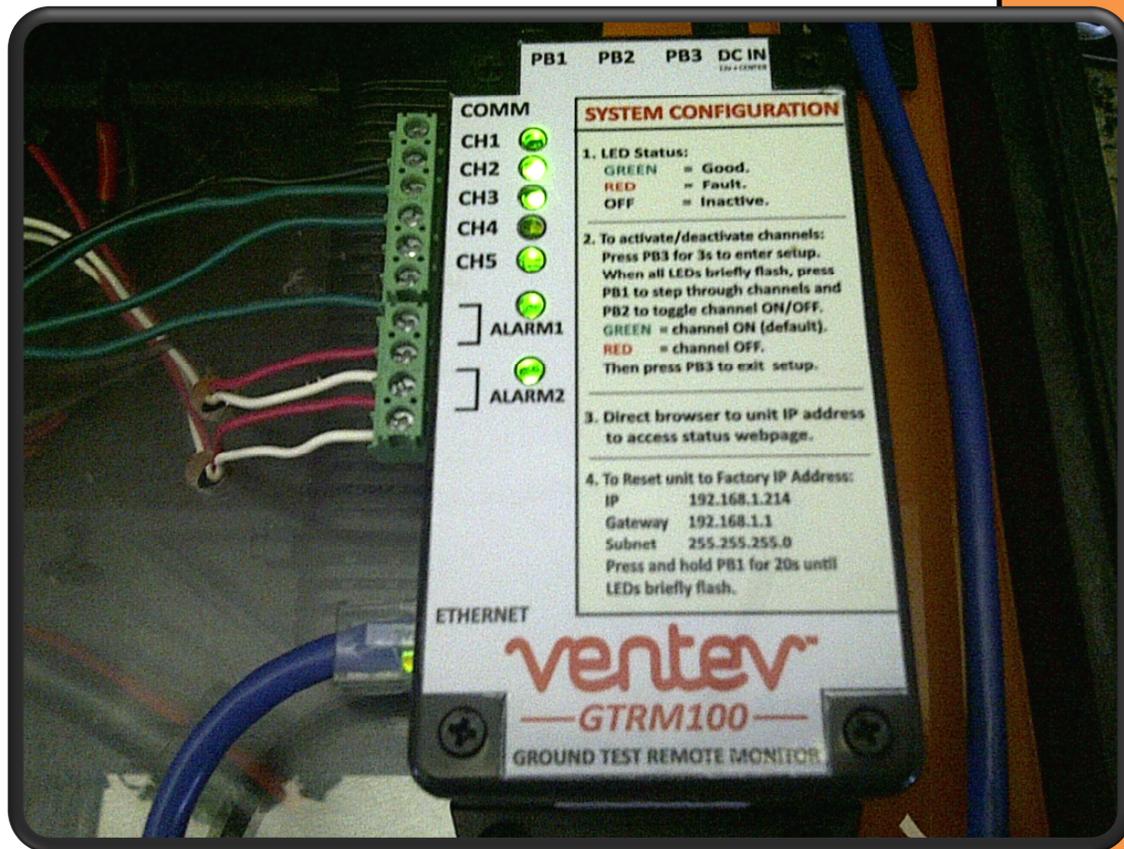


ventev™



GTRM 100 User's Guide

Installation Procedures and Users Guide

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GTRM 100 Installation Guide

Overview

The GTRM 100 was designed to provide an easy and convenient way to remotely monitor ground cabling and components at site locations prone to copper theft.

The GTRM 100 contains everything you need to activate alarms and automatically send alert messages via email or SNMP. Providing you with instant feedback the moment a copper line is cut or a ground bar has been removed that is being monitored by one of the 5 ground monitoring channels on the GTRM.

The procedures in this guide outline the steps you should follow to correctly install and operate the GTRM 100.

****DANGER**** Although the GTRM 100 Monitors grounding components caution should be taken during installation. Live power wires may be in close proximity to the installation location of ground monitor leads or the main unit. Do Not touch or remove any live AC lines during the installation of the GTRM. Serious Injury or Death could occur from electrocution.

GTRM Standard Components

The GTRM is a self-contained unit with AC power adapter. Please verify that you have received everything with your order.

- (1) GTRM unit
- (1) AC Power Adapter
- (1) Toroid Ground Sensor
- (1) 40' 18 gauge wire, black
- (1) 3' Ethernet Cable
- (1) User's Guide

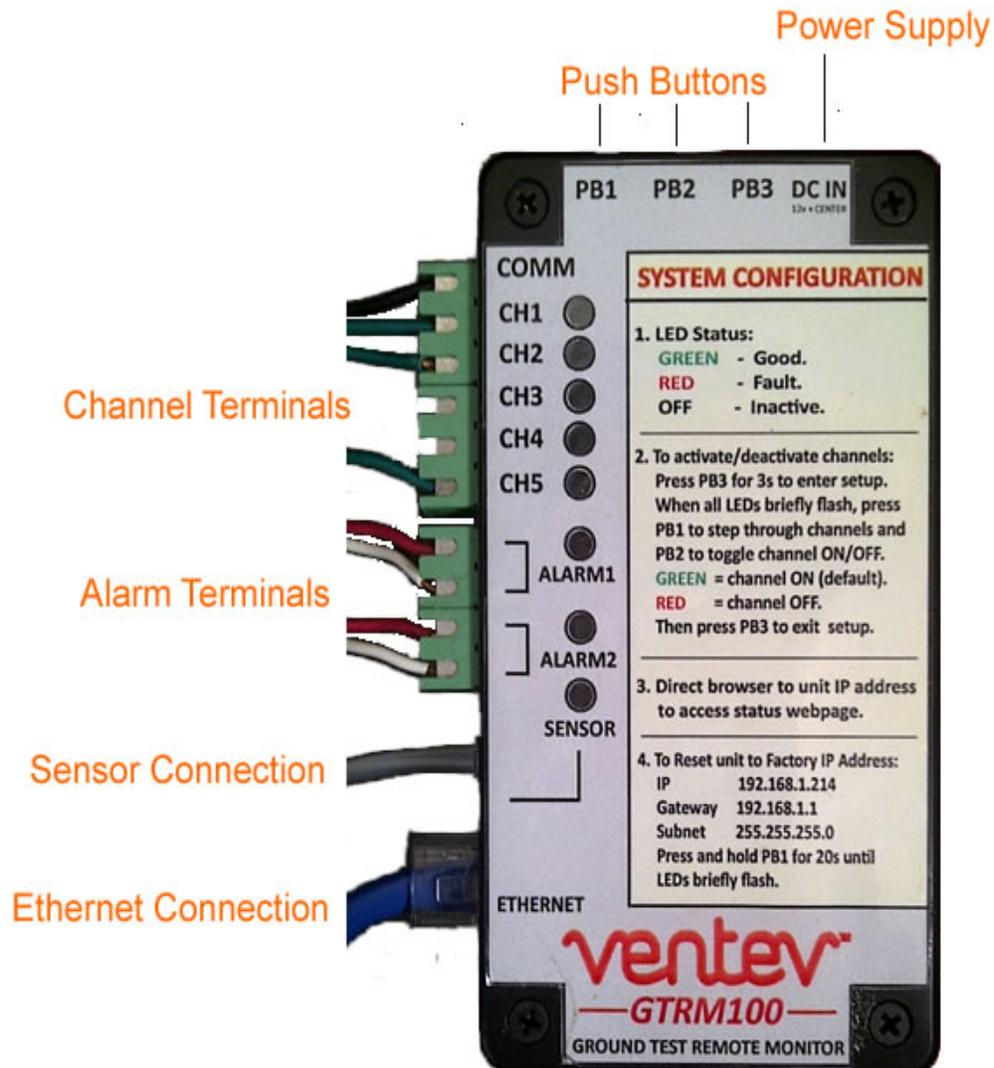
GTRM Optional Accessories

For additional ground monitoring you can purchase a clip-on toroid sensor to provide additional monitoring of ground quality at the site. This accessory plugs into the RJ11 port on the GTRM and clips over any site ground cable you wish to monitor. The sensor is then activated from the web browser configuration interface.

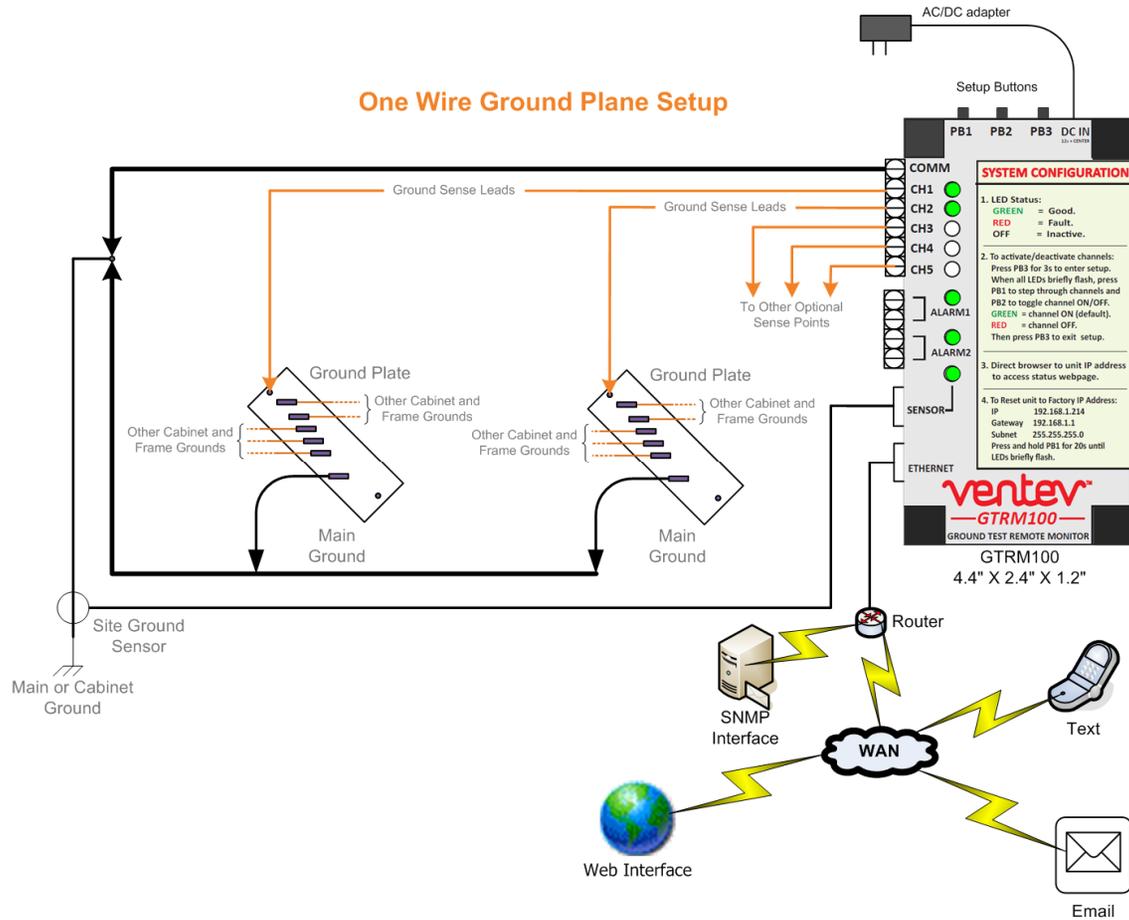
- Toroid Clip-on Ground Sensor

GTRM 100 Overview

Use the Diagram below to familiarize yourself with the GTRM components and features.



GTRM Installation



Because the GTRM can be used in a variety of applications there are many variations on exactly how the GTRM can be installed and connected to ground lines. Please use the steps below as a guideline for installing the GTRM. Proper testing should be done after installation to ensure you receive the desired level of alarming and alert messages.

Installation Steps:

1. **Locate a suitable location to mount the GTRM and mount securely.** GTRM can be easily mounted to plywood or drywall using the screw holes in the housing flanges. The GTRM can also be mounted using Velcro or zip ties.
2. **Plug GTRM Power supply into AC outlet and connect to GTRM to power up unit.**
3. **The LEDs will flash several times as the GTRM powers up.**

GTRM Configuration

The GTRM monitors and senses Ground wires in two different manners. The first is through a ground sensor Toroid to detect the presence of an active ground and the second uses pulse monitoring through up to five different channels to detect connectivity of ground lines to a ground plate.

The Toroid Ground Sensor

The Ground sensor uses a clip-on toroid to detect low level currents on the ground wire that generate a magnetic field inside the toroid. The Toroid converts this magnetic field to electrical current and passes it on to the GTRM. If the magnetic field is no longer present, (ground is lost), the current to the GTRM is interrupted causing the GTRM to go into alarm.

When the Toroid Sensor is in alarm, the indication will be displayed through Alarm 2 on the GTRM.

To Install the Toroid Ground Sensor

1. Locate the main ground feed wire that you wish to monitor.
2. Open the clip sensor and place the sensor around the wire.
3. Close the clip sensor around the ground wire.
4. Connect the Ground Sensor wire to the RJ11 jack on the GTRM
5. Enable the Sensor by checking the appropriate box in the Options Menu of the Web interface.



Connecting the GTRM Channel Terminals

The GTRM can monitor up to 5 different channel lead locations. The channel terminal blocks will accept 18 – 24 AWG wire. It is recommended that you use smaller wire to connect directly to the GTRM channel terminal blocks and then use a split-bolt style connector to attach the channel wire lead to a larger wire that will then connect to your ground plate.

1. Using 16 or 18 AWG wire, determine the correct length needed to connect to copper ground wire or to attach directly to the ground plate.
2. Strip off approx. ¼" of coating to expose copper wire and insert into channel terminal. Screw down terminal to secure wire. Repeat for the desired number of channels you wish to monitor.

Note: you do not need to wire all terminals. You can use any of the terminals or all of the terminals. You can activate and deactivate each channel by using the push buttons on top of the GTRM or by accessing the configuration settings through a web browser.

Activating GTRM Channel Monitoring

The GTRM monitors up to 5 separate channels. Each channel operates independently and can be activated or deactivated by either the push buttons on top of the unit or through the configuration menu.

Push Button Configuration: To activate or deactivate channels

1. Press PB3 for 3 seconds to enter setup mode.
2. When All LEDs briefly flash, press PB1 to step through channels
3. Press PB2 to toggle channel on/off
 - a. GREEN LED = channel ON
 - b. RED LED = channel OFF
4. Press PB3 to exit setup and save configuration

The screenshot shows the 'Channel Setup' page of the GTRM100 web interface. On the left is a navigation menu with options: System Status, Channels, Options (highlighted), E-Mail Configuration, E-mail Test, Network Configuration, SNMP Configuration, Help, About, and Factory. The main content area is titled 'Channel Setup' and includes instructions: 'Use the option boxes below to set a channel to:'. It lists two options: 'Active = ON Alarm will be set if contact interrupted' and 'Inactive = OFF No Alarm will be sent (for unused channels)'. Below this is a row of five dropdown menus labeled 1 through 5, with values 'On', 'On', 'Off', 'Off', and 'On' respectively. A 'Save' button is located below the dropdowns. The footer contains the copyright notice: 'Copyright © 2011 Twinfalls Technologies Inc.'

For Factory Reset

1. Hold PB1 down for 15 to 20 seconds until all LEDs blink , then release button.

Webpage Configuration – Use your web browser to connect to the GTRM. Default IP address is: 192.168.1.214.

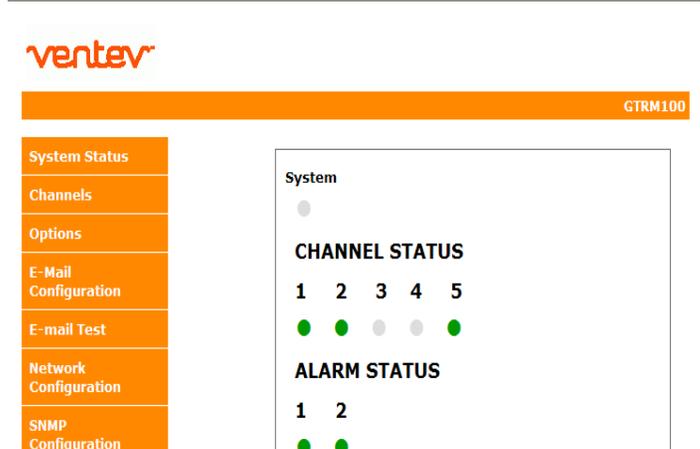
Type this address into your web browser with the GTRM connected to the network or directly to your laptop via an Ethernet cable.

Channels can be toggle on and off through the pulldown selection for each channel.

Click Save button before exiting menu.

Using the Web Interface to Configure the GTRM

1. Before connecting to the GTRM's web interface, supply power to the unit.
2. Connect Ethernet Cable
 - a. Use an Ethernet cable to connect the RJ45 port on the GTRM to the network or you may also connect directly to your PC's Ethernet port.
3. Verify Your Network settings and Connection to the GTRM – You can ping the GTRM to verify connectivity.



For Direct GTRM to PC Connection

For the initial configuration of the GTRM and to change Network setting IP settings for placement in an IP based network you will need to connect the GTRM directly to your PC. Once connected to your PC you will be able to configure the GTRM to match your network settings.

You will need the following information from your network administrator to add the GTRM to your IP Network:

- IP Address – we recommend using a static IP address for the GTRM
- Gateway – what is the IP address of the Gateway of your network
- Subnet Mask – what is the mask of your network
- Primary DNS – IP address of the primary DNS server for your network

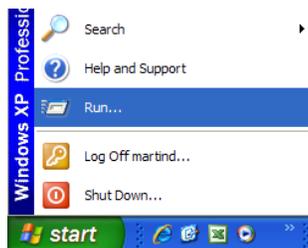
Once you have your connection made to you laptop or PC you will need to record your IP address and verify connection to the GTRM.

NOTE: It may be necessary to give your PC or Laptop a static address to access the GTRM default network.

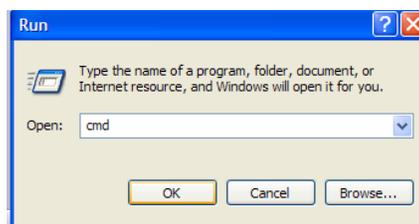
Example: IP Address: 192.168.1.200
 Subnet mask: 255.255.255.0

Use the following screen shots to guide you into finding your IP address and record your address for use later.

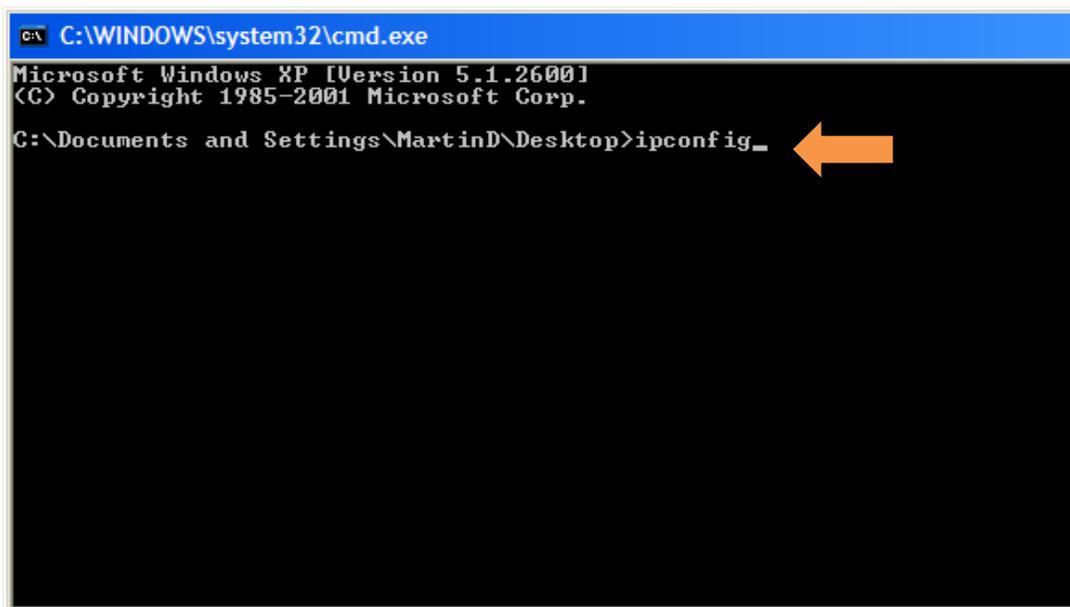
1. Click Start and then Run



2. In the window type cmd and click OK



3. Type ipconfig then <Enter>



- Record your IP Address

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\MartinD\Desktop>ipconfig

Windows IP Configuration

Ethernet adapter Wireless Network Connection:

    Media State . . . . . : Media disconnected

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix . : ESR9855G
    IP Address. . . . . : 192.168.1.199
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1

C:\Documents and Settings\MartinD\Desktop>_
```

- Verify connectivity to the GTRM by sending a Ping command to the GTRM's default IP address: PING 192.168.1.214 <Enter> you should receive four REPLY messages from the GTRM.

```
C:\WINDOWS\system32\cmd.exe

    Media State . . . . . : Media disconnected

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix . : ESR9855G
    IP Address. . . . . : 192.168.1.199
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1

C:\Documents and Settings\MartinD\Desktop>ping 192.168.1.214

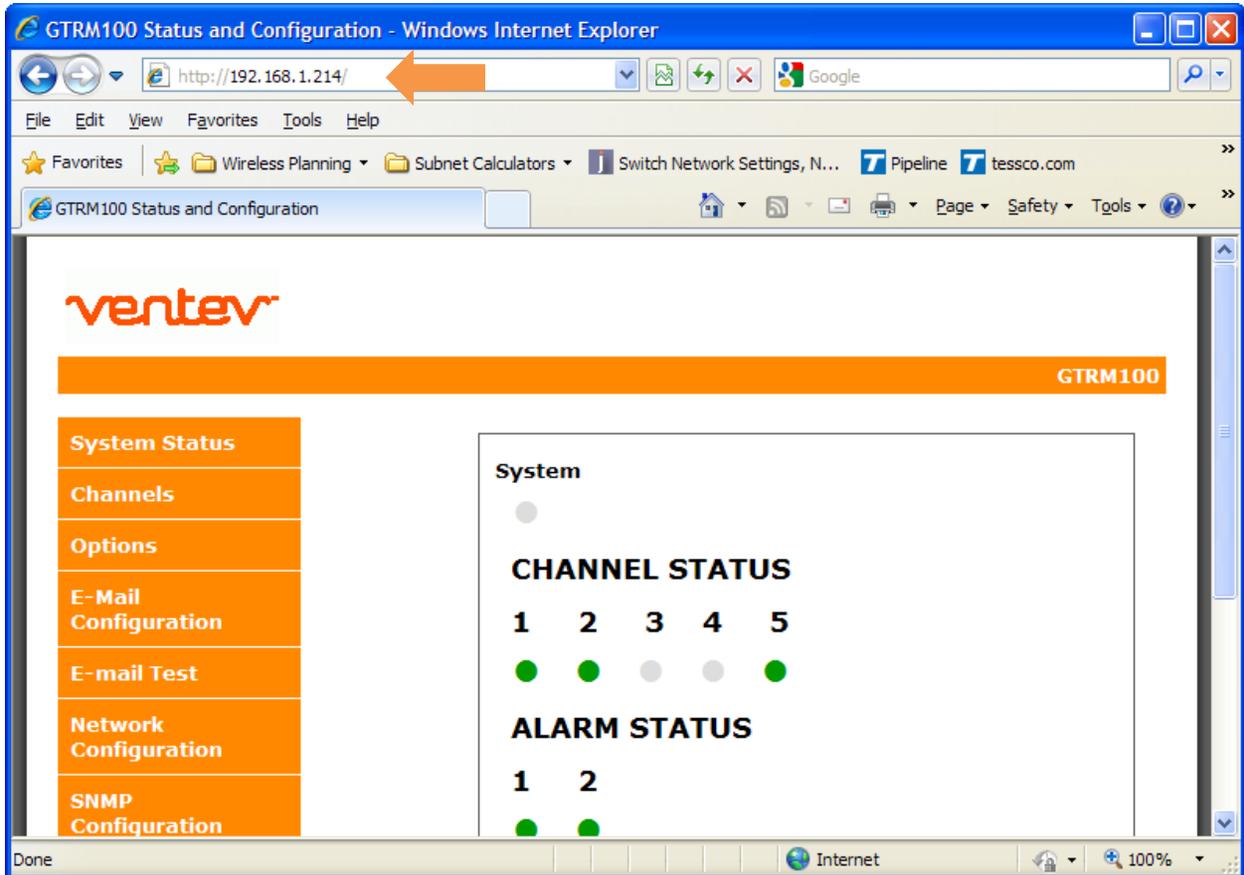
Pinging 192.168.1.214 with 32 bytes of data:

Reply from 192.168.1.214: bytes=32 time=1ms TTL=100
Reply from 192.168.1.214: bytes=32 time<1ms TTL=100
Reply from 192.168.1.214: bytes=32 time<1ms TTL=100
Reply from 192.168.1.214: bytes=32 time<1ms TTL=100

Ping statistics for 192.168.1.214:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\Documents and Settings\MartinD\Desktop>
```

6. Open a New Web Browser Session (Internet Explorer, Firefox or Google Chrome) and type in the address of the GTRM (default is 192.168.1.214) and click go or <enter>. If everything is set up correctly you should see the System Status of the GTRM. **Note:** The Status light blinks when the GTRM is active.



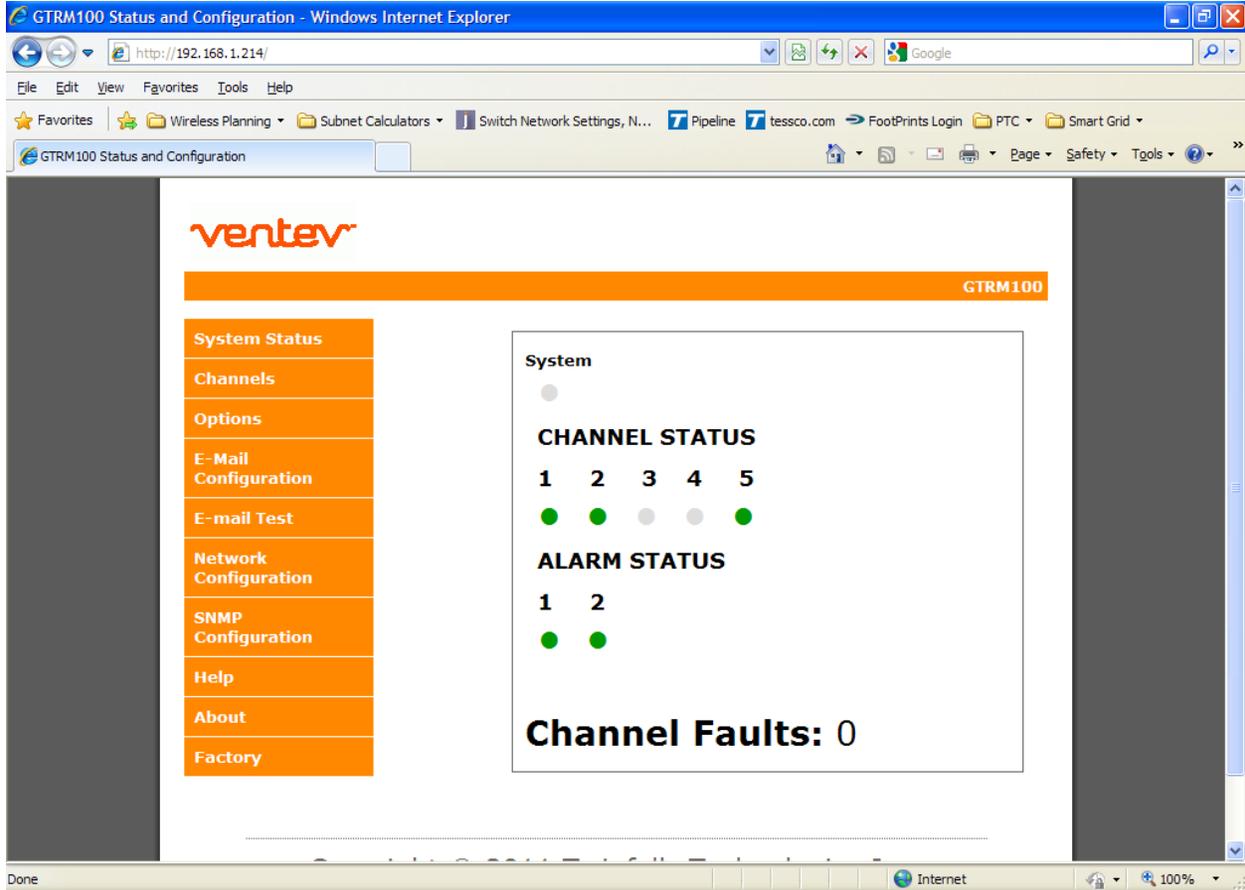
GTRM Web Interface Menus

The GTRM will need to be configured to match your network settings as well as your email and SNMP notification if those features are to be used.

The following Screenshots will explain the different menus of the GTRM user interface. This interface allows you to remotely configure and change settings across the network.

System Status

This screen displays an overview of the channel status on the GTRM. You can quickly see any alarms occur by watching this screen. You can show the alarms on this screen by removing any one of the three ground leads to cause an alert on the GTRM.



Channel Setup

This screen walks your through the channel setup. You can turn on or off any of the channels at anytime. If you only want to monitor two or three channels then turn those channels on while the others remain off.

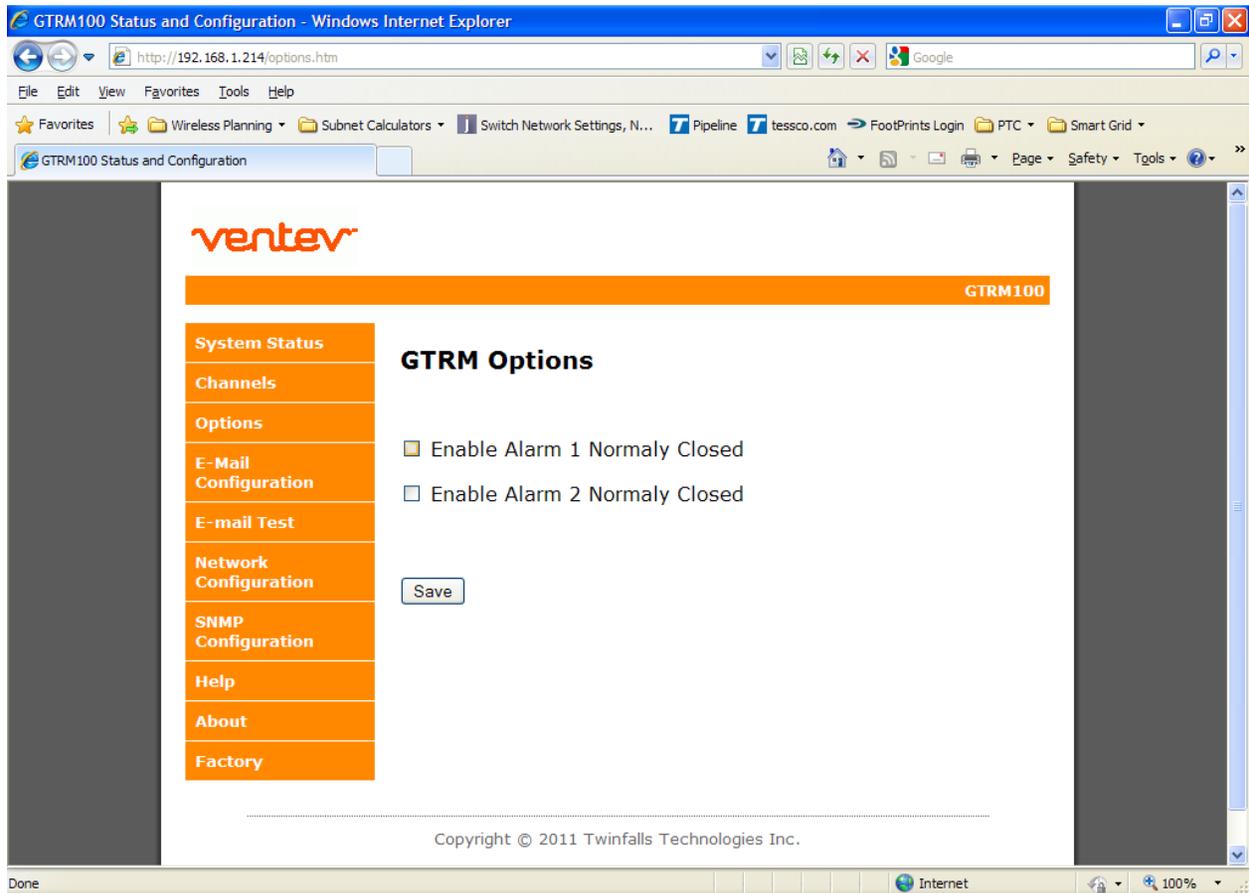
The screenshot shows a web browser window titled "GTRM100 Status and Configuration - Windows Internet Explorer". The address bar shows "http://192.168.1.214/forms.htm". The browser's menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The Favorites bar contains several items like "Wireless Planning", "Subnet Calculators", and "tessco.com". The main content area features the "ventev" logo and a navigation sidebar with options: "System Status", "Channels", "Options" (highlighted), "E-Mail Configuration", "E-mail Test", "Network Configuration", "SNMP Configuration", "Help", "About", and "Factory". The "Channel Setup" section is active, displaying instructions: "Use the option boxes below to set a channel to:" followed by a list: "Active = ON Alarm will be set if contact interrupted" and "Inactive = OFF No Alarm will be sent (for unused channels)". Below this, it says "Click on the save button to update GTRM100 settings:" and shows a form with five dropdown menus labeled "1: On", "2: On", "3: Off", "4: Off", and "5: On", along with a "Save" button. The footer of the page reads "Copyright © 2011 Twinfalls Technologies Inc." The browser's status bar at the bottom shows "http://192.168.1.214/options.htm" and "Internet".

Options

The options screen provide you access to the Alarm contacts. You can toggle between normally open or normally closed contacts.

You can set the Alarm contacts up independently of each other enabling you many possibilities for external alarm notifications.

UPDATE: The Options screw now contains a check box to enable the Ground Sensor.



Email Configuration

The email configuration screen is where you setup the contact information of the person you want to alert when the GTRM goes into alarm.

Contact: Enter the name of the contact person responsible for the site.

Location: Enter a short description of the site location the GTRM is monitoring

The following information should be obtained from your Network Administrator to setup the SMTP server.

Port: Enter the Port number the SMTP server uses, select SSL if it uses Secure Socket Layer

Username: username for the SMTP server account

Password: Enter the password for the account

Server Address: enter the SMTP server address (example: smtp.gmail.com)

Email address: Enter the email address of the person you want the email alert to be sent to.

The screenshot shows a web browser window titled "GTRM100 Status and Configuration - Windows Internet Explorer". The address bar shows "http://192.168.1.214/protect/econfig.htm". The browser's Favorites bar includes "Wireless Planning", "Subnet Calculators", "Switch Network Settings, N...", "Pipeline", "tessco.com", "FootPrints Login", "PTC", and "Smart Grid". The main content area features a sidebar with orange buttons for "System Status", "Channels", "Options", "E-Mail Configuration", "E-mail Test", "Network Configuration", "SNMP Configuration", "Help", "About", and "Factory". The "E-Mail Configuration" page has a header "GTRM100" and a title "Email Configuration". Below the title is a description: "This page allows the configuration of the GTRM Email settings." and a note: "Note: Fields are currently limited to 22 characters with 32 for Email Addr". A list of bullet points provides examples: "Contact: 'Who to Contact in an Alarm Condition'", "Location: 'The Location of the GTRM'", "SMTP Server: Typically in the form 'xxx.xxx.com'", and "To: Typically in the form 'xxx@xxx.com'". Below this, it says "Enter the settings below:". The configuration form includes fields for "Contact" (Dale Martin), "Location" (GTRM Demo Kit 001), "Port" (465), "Use SSL (usually port 465)" (checked), "User name" (gtrmdemo@gmail.com), "Password" (masked with dots), "Server Addr" (smtp.gmail.com), and "Email Addr" (martind@tessco.com). A "Save" button is at the bottom. Two orange arrows point to the "Contact" and "Email Addr" fields.

Email Test

When you have everything set up correctly, use the Email Test screen to send a test email to your account. This will verify the settings.

Note: You must have a direct connection to the Internet in order for the email alerts to work. If you are connected to a corporate network or behind a firewall the email alert may not work. A network administrator will need to configure the GTRM to be part of the network and give it access to the Internet to ensure the email configuration works properly.

If everything is setup correctly, click "Send Test Message" and in a few seconds you should receive an email from the GTRM. If it works, you are setup properly and you will now receive alert messages anytime the GTRM goes into alarm.

GTRM100 Status and Configuration - Windows Internet Explorer

http://192.168.1.214/email/index.htm

File Edit View Favorites Tools Help

Wireless Planning Subnet Calculators Switch Network Settings, N... Pipeline tessco.com FootPrints Login PTC Smart Grid

GTRM100 Status and Con... Internet Explorer cannot dis...

Options

- E-Mail Configuration
- E-mail Test**
- Network Configuration
- SNMP Configuration
- Help
- About
- Factory

- **SMTP Server:** Typically in the form "xxx.xxx.com"
- **To:** Typically in the form "xxx@xxx.com"
- **User:** Your Email Account
- **Message:** Your Email Password

(Note Your SMTP server may not require a server name or password.)

(Note SLL currently not implemented.)

SMTP Server: smtp.gmail.com

Port: 465

Use SSL (usually port 465)

User Name: gtrmdemo@gmail.com

Password:

To: martind@tessco.com

Subject: GTRM Demo Kit 001

Message: Dale Martin

Send Test Message

Copyright © 2011 Twinfalls Technologies Inc.

/email/index.htm Internet 100%

Network Configuration

This screen allows you to configure the Network settings on the GTRM. **DO NOT** change any of the settings here unless you know what you are doing. These settings should be configured under the direction of your network administrator.

Multiple GTRM's could be active in the network at the same time. Each will have its own IP address to allow for remote access and monitoring.

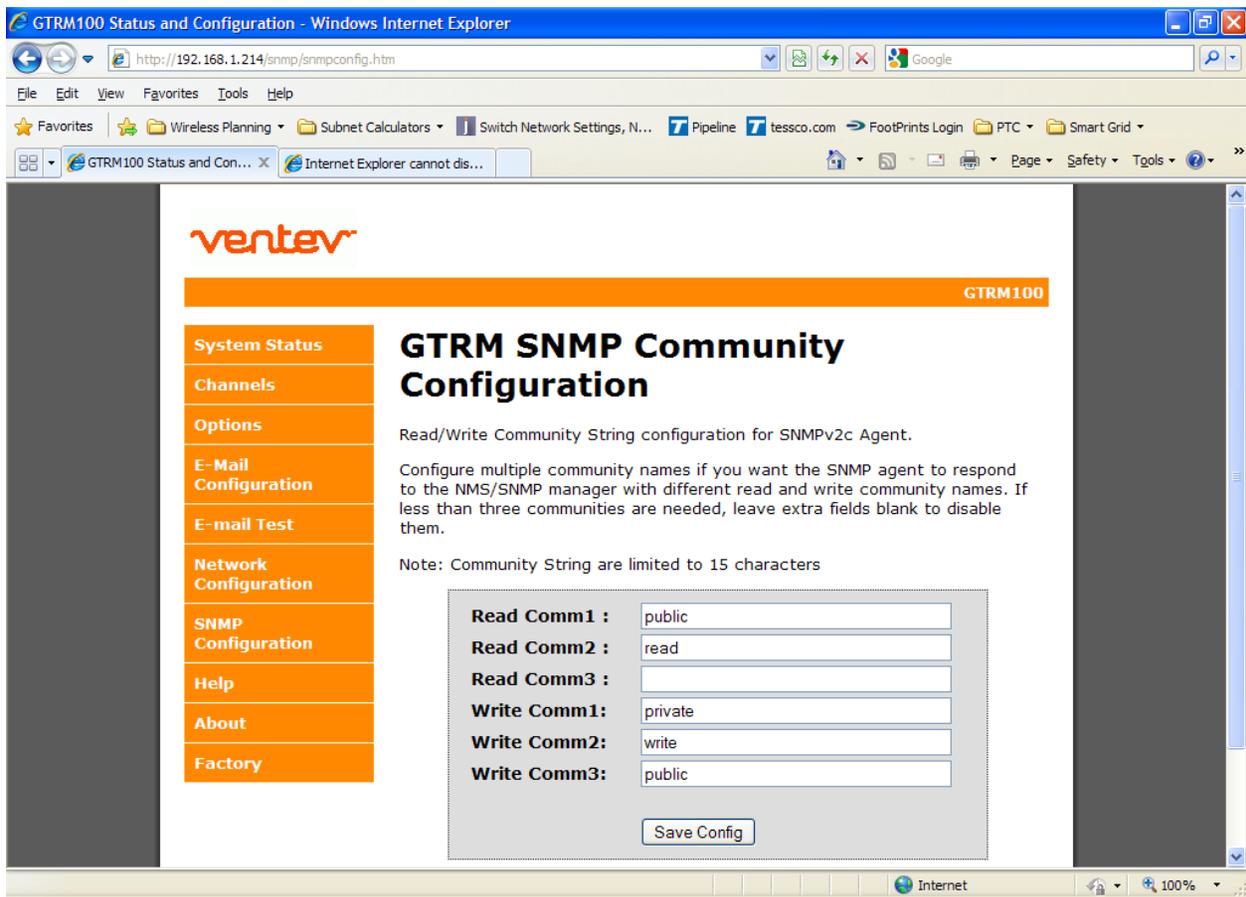
To access any GTRM in the network, open a web browser and type the IP address of the GTRM into the address bar. Each GTRM should have their own unique address when they are part of the same network.

The screenshot shows a web browser window titled "GTRM100 Status and Configuration - Windows Internet Explorer". The address bar shows the URL "http://192.168.1.214/protect/config.htm". The browser's menu bar includes File, Edit, View, Favorites, Tools, and Help. The Favorites bar contains several folders and links, including "Wireless Planning", "Subnet Calculators", "Switch Network Settings, N...", "Pipeline", "tessco.com", "FootPrints Login", "PTC", and "Smart Grid". The main content area features the "ventev" logo at the top left and a navigation menu on the left with items: System Status, Channels, Options, E-Mail Configuration, E-mail Test, Network Configuration, SNMP Configuration, Help, About, and Factory. The main heading is "Board Configuration" with a sub-heading "GTRM100". Below the heading, a message states: "This page allows the configuration of the board's network settings." A red-bordered box contains a "CAUTION" message: "Incorrect settings may cause the board to lose network connectivity. Recovery options will be provided on the next page." Below this, it says "Enter the new settings for the board below:". A form contains the following fields: "MAC Address:" (00:50:C2:AB:7D:13), "Host Name:" (GTRM100), "IP Address:" (192.168.1.214), "Gateway:" (192.168.1.1), "Subnet Mask:" (255.255.255.0), and "Primary DNS:" (192.168.1.1). There is an unchecked checkbox for "Enable DHCP" and a "Save Config" button. The browser's status bar at the bottom shows "Done, but with errors on page." and "Internet" with a 100% zoom level.

SNMP Configuration

This screen provides access to the SNMP settings. If you wish to use SNMP alerts the Read and Write strings will need to be configured to match your network. These settings should only be changed by a Network Administrator or by someone who understands the proper settings for your network.

NOTE: SNMP configurations may be confusing. Please consult your Network Administrator to assist you in the SNMP configuration and setup.



Help

The Help screen provides you with the Default settings for the GTRM and instructions on how to configure the major options on the GTRM. It explains in detail how to manually configure the GTRM using the configuration buttons on the top of the unit.

The screenshot shows a Windows Internet Explorer browser window displaying the GTRM100 Status and Configuration page. The address bar shows the URL <http://192.168.1.214/help.htm>. The page features the Ventev logo at the top left and a navigation menu on the left side with options: System Status, Channels, Options, E-Mail Configuration, E-mail Test, Network Configuration, SNMP Configuration, Help, About, and Factory. The main content area is titled 'Help' and contains the following information:

Default GTRM IP Addressing

- **Unit IP:** 192.168.1.214
- **Gateway:** 192.168.1.1
- **Subnet:** 255.255.255.0
- **Primary DNS:** 192.168.1.1

To reset to Default IP: Hold Button PB1 15 to 20 seconds - LEDs will flash when reset complete

Notes on GTRM System Configuration

- Channels (if active) now arm automatically - so ignore sections 2. and 3. on the GTRM label

GTRM Channel Setup Mode

- Accessible from the GTRM Pushbuttons, allows unused channels to be made inactive (also available via Webpage access)

To Enter Channel Setup Mode:

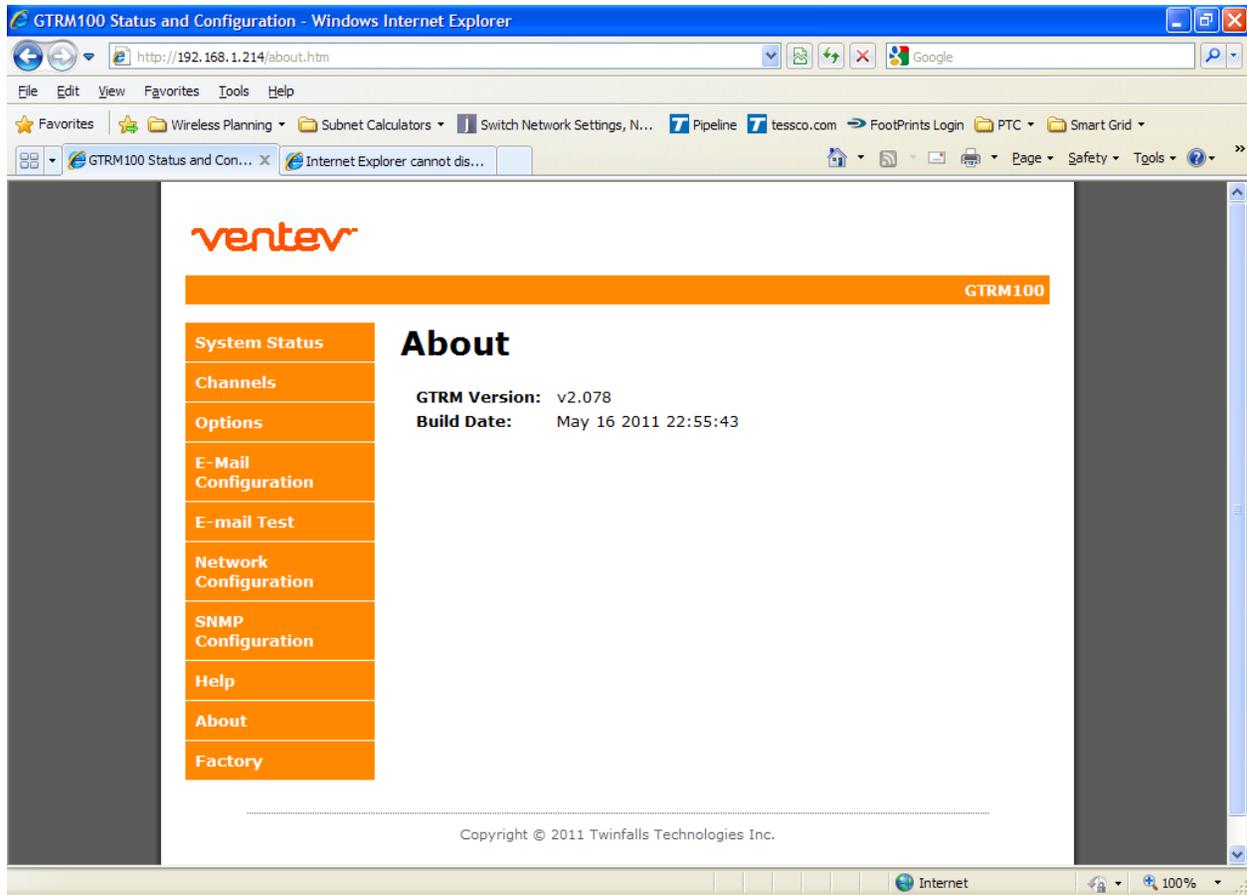
- Hold PB1 5 seconds to enter channel setup mode (channel Lights flash Green)
- PB2 Toggles channel LED Active = (Green) Inactive = (Red)
- PB3 advances to the next channel

To Exit Channel Setup Mode:

- Hold PB1 5 seconds to exit channel setup mode (Channel Lights flash Red)

About and Factory

The About and Factory Screens provide you with software version information and provide access to restore the GTRM to factory defaults.



SNMP Functionality

In order to accept SNMP messages being sent from the GTRM you will need to have an SNMP monitoring system in your network or a MIB browser loaded onto your laptop.

Network SNMP Monitoring

For Network SNMP functionality, consult your network administrator for SNMP setup and configuration parameters and how the GTRM should be configured for your specific SNMP requirements and trap receivers.

A MIB browser can be used to capture SNMP traps in place of a network SNMP trap receiver. The MIB Browser can be loaded onto a PC or Laptop for monitoring of GTRM SNMP Traps. The MIB browser will need to be on the same network as the GTRM in order to receive the messages.

SNMP Monitoring through a MIB Browser

A MIB Browser will allow you to accept SNMP messages on any PC or Laptop. A suitable MIB Browser can be downloaded (FREE Version) from <http://www.ireasoning.com>

IMPORTANT: Once the MIB Browser is loaded you will need to load the GTRM MIB file. If you did not receive this file with your GTRM please contact Ventev innovations or your TESCO Account Manager to download the file.

To Install MIB Browser

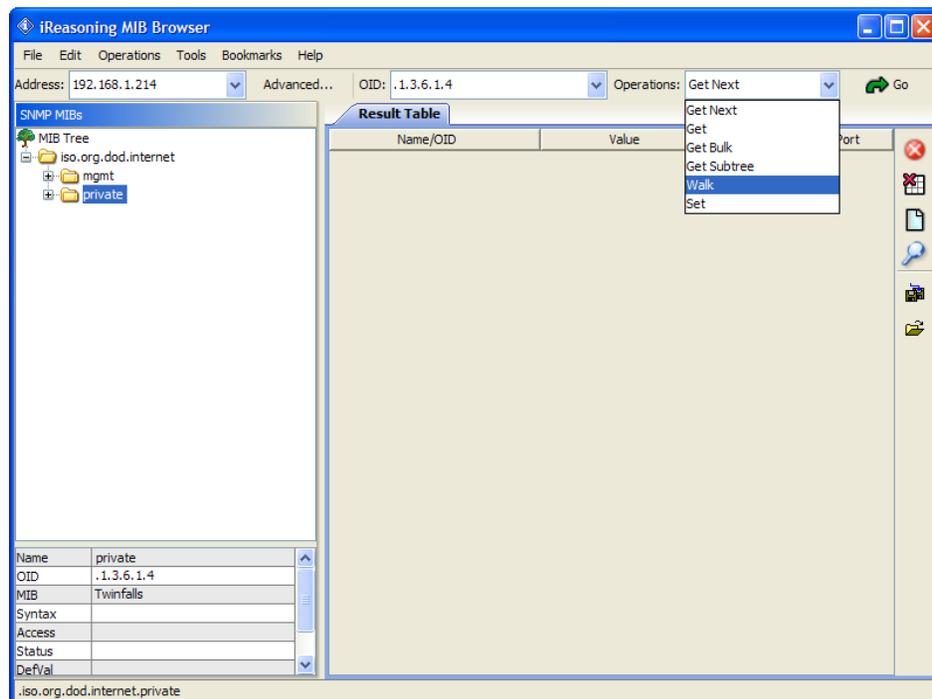
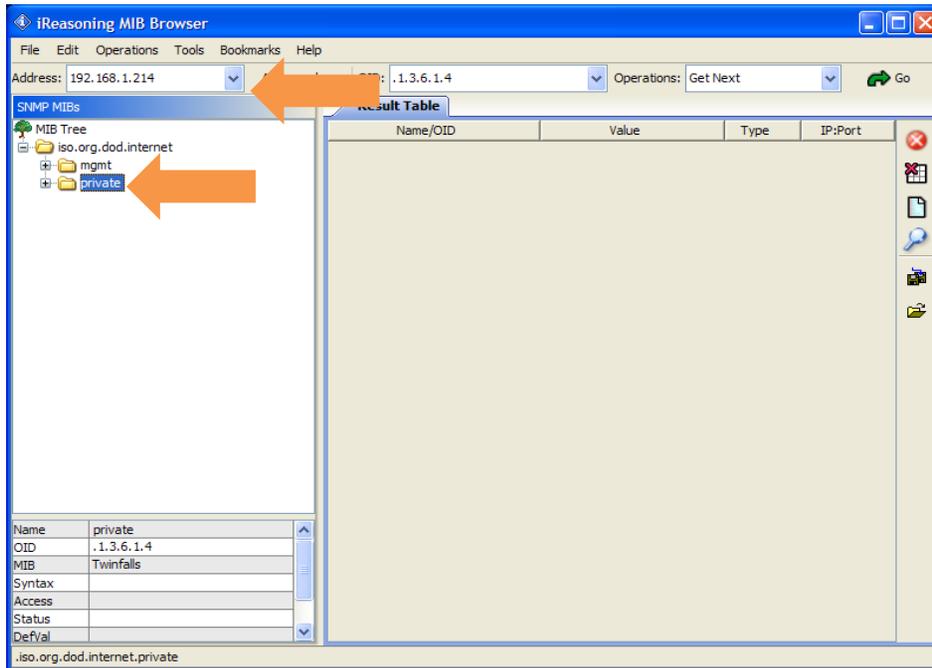
1. Download MIB Browser from <http://www.ireasoning.com>
2. Open MIB Browser Folder
3. Click on the Setup.exe file
4. Click Run and Follow the installation instructions
5. Click Close when the installation has completed
6. Launch the MIB Browser

Install SNMP Traps File

1. In the MIB Browser – Click on the File Tab
2. Select Load MIBs
3. In the Open Window, locate the file called tft_2.mib (This traps file should be located in the software files included with your GTRM)
4. Click on the tft_2.mib file
5. Click Open

Once the MIB browser is loaded, click on the desktop icon to launch it. You will see the main screen that should look similar to the one below. In the Address field type in the IP address of the GTRM. 192.168.1.214 also, expand the folders on the left menu and highlight private.

From the Operations pull down menu select "Walk" and click Go



You should see data results begin to fill up in the main window Results Tab

The screenshot shows the iReasoning MIB Browser interface. The main window displays a table of SNMP MIB data. The table has four columns: Name/OID, Value, Type, and IP:Port. The data is as follows:

Name/OID	Value	Type	IP:Port
name.0	0	Integer	192.168.1.2...
version.0	0	Integer	192.168.1.2...
date.0	0	Integer	192.168.1.2...
trapReceiverNumber.0	0	Integer	192.168.1.2...
trapReceiverNumber.1	1	Integer	192.168.1.2...
trapEnabled.0	Yes (1)	Integer	192.168.1.2...
trapEnabled.1	Yes (1)	Integer	192.168.1.2...
trapReceiverIPAddress.0	192.168.1.100	IpAddress	192.168.1.2...
trapReceiverIPAddress.1	192.168.1.2	IpAddress	192.168.1.2...
trapCommunity.0		OctetString	192.168.1.2...
trapCommunity.1		OctetString	192.168.1.2...
alarm1.0	CLOSED (0)	Integer	192.168.1.2...
alarm2.0	CLOSED (0)	Integer	192.168.1.2...
chancount.0	0	Integer	192.168.1.2...

The interface also shows a MIB Tree on the left with folders for 'iso.org.dod.internet', 'mgmt', and 'private'. The 'private' folder is selected. Below the tree, a table shows details for the selected MIB:

Name	Value
Name	private
OID	.1.3.6.1.4
MIB	Twinfalls
Syntax	
Access	
Status	
DefVal	

The status bar at the bottom of the window displays the full OID path: .iso.org.dod.internet.private.enterprises.twinfalls.control.chancount.0

Configure the Trap Receiver

In order to receive SNMP Traps (alert messages) you will need to setup your MIB browser to receive them. This means you need to setup your TrapReceiver so that the GTRM knows where to send the traps. So in the next you will setup the TrapReceiver IP address. (You will set this to the IP address of your laptop that you recorded earlier)

In the Results Table locate the line that says trapReceiverAddress.0 , right click on the line and select “set”

The screenshot shows the iReasoning MIB Browser interface. The address is set to 192.168.1.214 and the OID is .1.3.6.1.4.1.34506.2.1.1.3.0. The MIB tree on the left shows the path iso.org.dod.internet > mgmt > private. The Results Table on the right displays the following data:

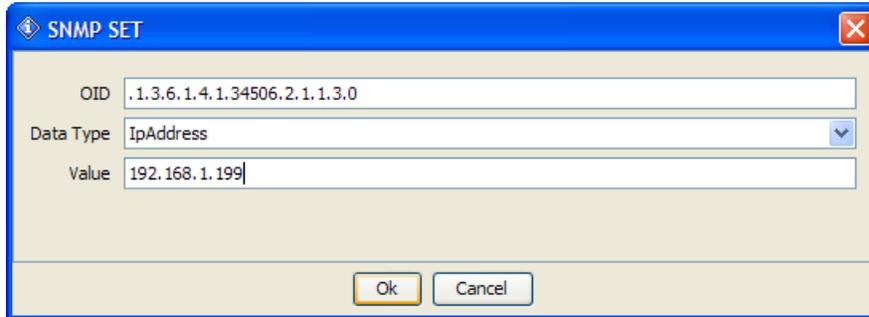
Name/OID	Value	Type	IP:Port
name.0	0	Integer	192.168.1.2...
version.0	0	Integer	192.168.1.2...
date.0	0	Integer	192.168.1.2...
trapReceiverNumber.0	0	Integer	192.168.1.2...
trapReceiverNumber.1	1	Integer	192.168.1.2...
trapEnabled.0	Yes (1)	Integer	192.168.1.2...
trapEnabled.1	Yes (1)	Integer	192.168.1.2...
trapReceiverIPAddress.0	192.168.1.100	IPAddress	192.168.1.2...
trapReceiverIPAddress.1	1		2.168.1.2...
trapCommunity.0			2.168.1.2...
trapCommunity.1			2.168.1.2...
alarm1.0			2.168.1.2...
alarm2.0			2.168.1.2...
chancount.0	0		2.168.1.2...

A context menu is open over the trapReceiverIPAddress.0 row, showing the following options: Get (Ctrl+G), Get Next (Ctrl+N), Get Bulk (Ctrl+B), Set (Ctrl+S), Walk (Ctrl+W), Find in Tree (double click), Copy, and Delete. The 'Set' option is highlighted.

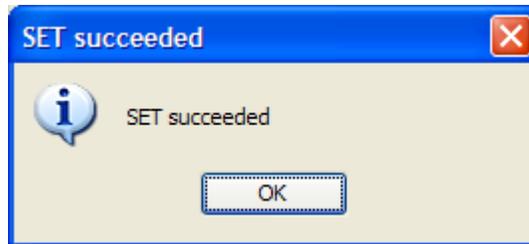
At the bottom of the window, the path is displayed as: .iso.org.dod.internet.private.enterprises.twinfalls.setup.traps.trapEntry.trapReceiverIPAddress.0

Enter the IP Address of your PC or Laptop in the Value field and click OK

Note: In order to receive SNMP messages the GTRM and the associated PC or Laptop must be on the same network or be able to communicate across networks. Verify connectivity by pinging the GTRM with your PC or laptop. If you receive a reply you should be able to receive SNMP messages.

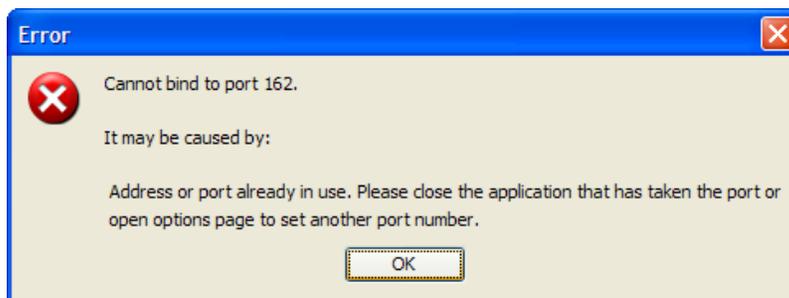


If your entry was successful you will see a SET succeeded window.



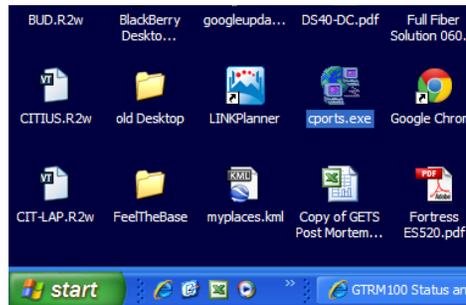
Cannot bind to port 162 Error Message

Depending on your computer configuration you may get an error message pop up that says that you cannot bind to port 162. SNMP uses port 162 and sometimes Windows has an active SNMP server running that is using port 162. If you get this message you will need to follow the steps below to kill the process using the port.



Steps to shut down Application binding to Port 162

1. Load CurrPorts software – find the cports.exe file on the thumb drive and load it onto your computer.
2. Click on the cports.exe icon to launch the software



3. When the software opens click Run



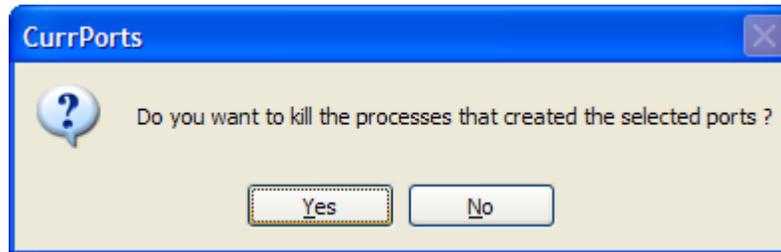
- Locate the application that is using port 162 by finding it under the Local Port column. Click on the line to highlight it.

Process Name	Process...	Protocol	Local Port	Local Por...	Local Address	Remote ...	Remote ...	Remote Address	Remote Host Name	State	Process Path
alg.exe		TCP	1033		127.0.0.1			0.0.0.0		Listening	C:\WINDOWS\Sys...
cvpnd.exe		TCP	62514		127.0.0.1			0.0.0.0		Listening	C:\Program Files\C...
cvpnd.exe		UDP	62514		127.0.0.1			0.0.0.0		Listening	C:\Program Files\C...
DWRCS.EXE		TCP	6129		127.0.0.1	1038		127.0.0.1	localhost	Established	C:\WINDOWS\sysst...
DWRCS.EXE		TCP	6129		0.0.0.0			0.0.0.0		Listening	C:\WINDOWS\sysst...
DWRCSST.exe		TCP	1038		127.0.0.1	6129		127.0.0.1	localhost	Established	C:\WINDOWS\sysst...
DWRCSST.exe		TCP	1038		0.0.0.0			0.0.0.0		Listening	C:\WINDOWS\sysst...
endpoint.exe		TCP	10115		0.0.0.0			0.0.0.0		Listening	C:\PROGRA~1\Xxi...
endpoint.exe		UDP	10115		0.0.0.0			0.0.0.0		Listening	C:\PROGRA~1\Xxi...
GravibService...		TCP	1031		127.0.0.1	1068		127.0.0.1	localhost	Established	C:\Program Files\P...
GravibService...		TCP	4000		0.0.0.0			0.0.0.0		Listening	C:\Program Files\P...
GravibService...		TCP	1031		0.0.0.0			0.0.0.0		Listening	C:\Program Files\P...
GravibService...		UDP	1031		0.0.0.0			0.0.0.0		Listening	C:\Program Files\P...
explore.exe		TCP	1948		127.0.0.1	6999		127.0.0.1	localhost	Established	C:\Program Files\I...
explore.exe		UDP	1070		127.0.0.1			0.0.0.0		Listening	C:\Program Files\I...
ipq.exe		TCP	5152		127.0.0.1	3862		127.0.0.1	localhost	Close Wait	C:\Program Files\U...
ipq.exe		TCP	5152		127.0.0.1			0.0.0.0		Listening	C:\Program Files\U...
judcheck.exe		TCP	3710		127.0.0.1	6999		127.0.0.1	localhost	Established	C:\Program Files\U...
judcheck.exe		TCP	3699		127.0.0.1	6999		127.0.0.1	localhost	Close Wait	C:\Program Files\U...
LMS.exe		TCP	16992		0.0.0.0			0.0.0.0		Listening	C:\Program Files\U...
LMS.exe		TCP	16993		0.0.0.0			0.0.0.0		Listening	C:\Program Files\U...
lsass.exe		UDP	500	isakmp	0.0.0.0			0.0.0.0		Listening	C:\WINDOWS\sysst...
lsass.exe		UDP	4500		0.0.0.0			0.0.0.0		Listening	C:\WINDOWS\sysst...
omtreco.exe		TCP	2030		0.0.0.0			0.0.0.0		Listening	C:\oracle\ora92\bi...
pdadm.exe		TCP	1068		127.0.0.1	1031		127.0.0.1	localhost	Established	C:\Program Files\P...
snmptrap.exe		UDP	162	snmptrap	0.0.0.0			0.0.0.0		Listening	C:\WINDOWS\sysst...
svchost.exe		TCP	135	epmap	0.0.0.0			0.0.0.0		Listening	C:\WINDOWS\sysst...
svchost.exe		TCP	2869		0.0.0.0			0.0.0.0		Listening	C:\WINDOWS\sysst...
svchost.exe		TCP	3389		0.0.0.0			0.0.0.0		Listening	C:\WINDOWS\sysst...
svchost.exe		UDP	123	ntp	192.168.1.199			0.0.0.0		Listening	C:\WINDOWS\sysst...
svchost.exe		UDP	123	ntp	127.0.0.1			0.0.0.0		Listening	C:\WINDOWS\sysst...
svchost.exe		UDP	1900	ntp	192.168.1.199			0.0.0.0		Listening	C:\WINDOWS\sysst...
svchost.exe		UDP	1900		127.0.0.1			0.0.0.0		Listening	C:\WINDOWS\sysst...
svchost.exe		UDP	1047		127.0.0.1			0.0.0.0		Listening	C:\WINDOWS\sysst...
svchost.exe		UDP	1900		127.0.0.1			0.0.0.0		Listening	C:\WINDOWS\sysst...
System		TCP	445	microsoft...	0.0.0.0			0.0.0.0		Listening	
System		TCP	139	netbios-ssn	192.168.1.199			0.0.0.0		Listening	
System		UDP	138	netbios-d...	192.168.1.199			0.0.0.0		Listening	

- Right click on the highlighted line (ensure you are on the line of the process using port 162) select "Kill Processes Of Selected Ports"

Process Name	Process...	Protocol	Local Port	Local Por...	Local Address	Remote ...	Remote ...	Remote Address	Remote Host Name	State	Process Path
alg.exe		TCP	1033		127.0.0.1			0.0.0.0		Listening	C:\WINDOWS\Sys...
cvpnd.exe		TCP	62514		127.0.0.1			0.0.0.0		Listening	C:\Program Files\C...
cvpnd.exe		UDP	62514		127.0.0.1			0.0.0.0		Listening	C:\Program Files\C...
DWRCS.EXE		TCP	6129		127.0.0.1	1038		127.0.0.1	localhost	Established	C:\WINDOWS\sysst...
DWRCS.EXE		TCP	6129		0.0.0.0			0.0.0.0		Listening	C:\WINDOWS\sysst...
DWRCSST.exe		TCP	1038		127.0.0.1	6129		127.0.0.1	localhost	Established	C:\WINDOWS\sysst...
DWRCSST.exe		TCP	1038		0.0.0.0			0.0.0.0		Listening	C:\WINDOWS\sysst...
endpoint.exe		TCP	10115		0.0.0.0			0.0.0.0		Listening	C:\PROGRA~1\Xxi...
endpoint.exe		UDP	10115		0.0.0.0			0.0.0.0		Listening	C:\PROGRA~1\Xxi...
GravibService...		TCP	1031		127.0.0.1	1068		127.0.0.1	localhost	Established	C:\Program Files\P...
GravibService...		TCP	4000		0.0.0.0			0.0.0.0		Listening	C:\Program Files\P...
GravibService...		TCP	1031		0.0.0.0			0.0.0.0		Listening	C:\Program Files\P...
GravibService...		UDP	1031		0.0.0.0			0.0.0.0		Listening	C:\Program Files\P...
explore.exe		TCP	1948		127.0.0.1	6999		127.0.0.1	localhost	Established	C:\Program Files\I...
explore.exe		UDP	1070		127.0.0.1			0.0.0.0		Listening	C:\Program Files\I...
ipq.exe		TCP	5152		127.0.0.1	3862		127.0.0.1	localhost	Close Wait	C:\Program Files\U...
ipq.exe		TCP	5152		127.0.0.1			0.0.0.0		Listening	C:\Program Files\U...
judcheck.exe		TCP	3710		127.0.0.1	6999		127.0.0.1	localhost	Established	C:\Program Files\U...
judcheck.exe		TCP	3699		127.0.0.1	6999		127.0.0.1	localhost	Close Wait	C:\Program Files\U...
LMS.exe		TCP	16992		0.0.0.0			0.0.0.0		Listening	C:\Program Files\U...
LMS.exe		TCP	16993		0.0.0.0			0.0.0.0		Listening	C:\Program Files\U...
lsass.exe		UDP	500	isakmp	0.0.0.0			0.0.0.0		Listening	C:\WINDOWS\sysst...
lsass.exe		UDP	4500		0.0.0.0			0.0.0.0		Listening	C:\WINDOWS\sysst...
omtreco.exe		TCP	2030		0.0.0.0			0.0.0.0		Listening	C:\oracle\ora92\bi...
pdadm.exe		TCP	1068		127.0.0.1	1031		127.0.0.1	localhost	Established	C:\Program Files\P...
snmptrap.exe		UDP	162	snmptrap	0.0.0.0			0.0.0.0		Listening	C:\WINDOWS\sysst...
svchost.exe		TCP	135	epmap	0.0.0.0			0.0.0.0		Listening	C:\WINDOWS\sysst...
svchost.exe		TCP	2869		0.0.0.0			0.0.0.0		Listening	C:\WINDOWS\sysst...
svchost.exe		TCP	3389		0.0.0.0			0.0.0.0		Listening	C:\WINDOWS\sysst...
svchost.exe		UDP	123	ntp	192.168.1.199			0.0.0.0		Listening	C:\WINDOWS\sysst...
svchost.exe		UDP	123	ntp	127.0.0.1			0.0.0.0		Listening	C:\WINDOWS\sysst...
svchost.exe		UDP	1900	ntp	192.168.1.199			0.0.0.0		Listening	C:\WINDOWS\sysst...
svchost.exe		UDP	1900		127.0.0.1			0.0.0.0		Listening	C:\WINDOWS\sysst...
svchost.exe		UDP	1047		127.0.0.1			0.0.0.0		Listening	C:\WINDOWS\sysst...
svchost.exe		UDP	1900		127.0.0.1			0.0.0.0		Listening	C:\WINDOWS\sysst...
System		TCP	445	microsoft...	0.0.0.0			0.0.0.0		Listening	
System		TCP	139	netbios-ssn	192.168.1.199			0.0.0.0		Listening	
System		UDP	138	netbios-d...	192.168.1.199			0.0.0.0		Listening	

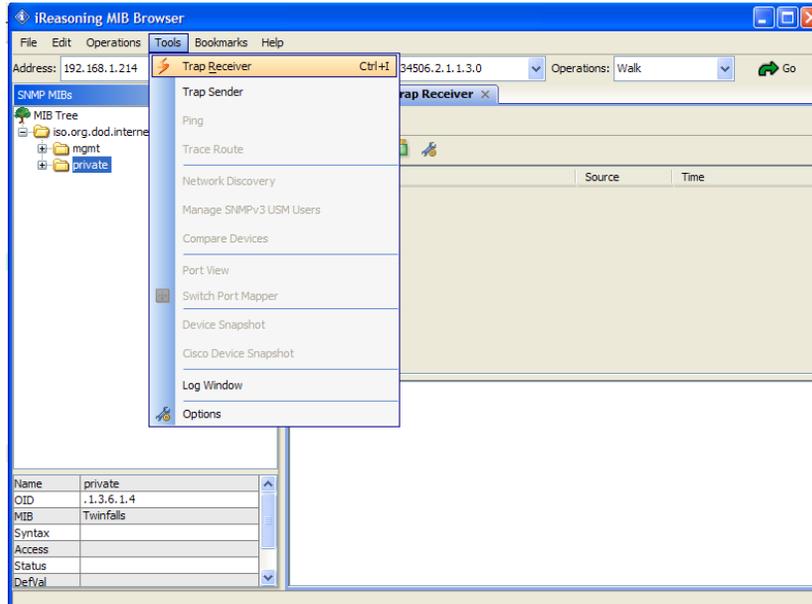
6. Select Yes on the window that asks if you want to kill the process.



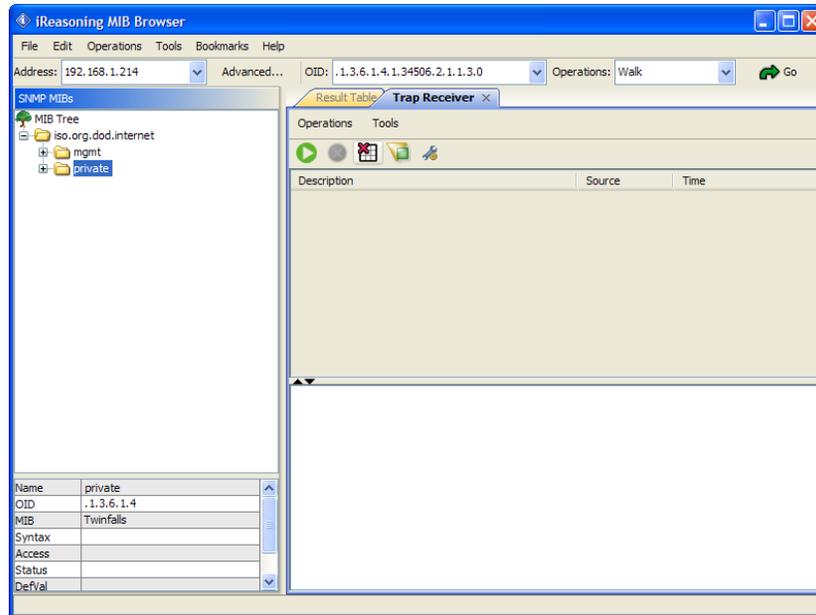
7. You should now be able to return to the MIB browser and continue to open the Trap Receiver.

Open Trap Receiver

In order to see the SNMP alert messages coming in you will need to open the trap receiver Tab. To do this, in the MIB Browser, go to Tools and select Trap Receiver.

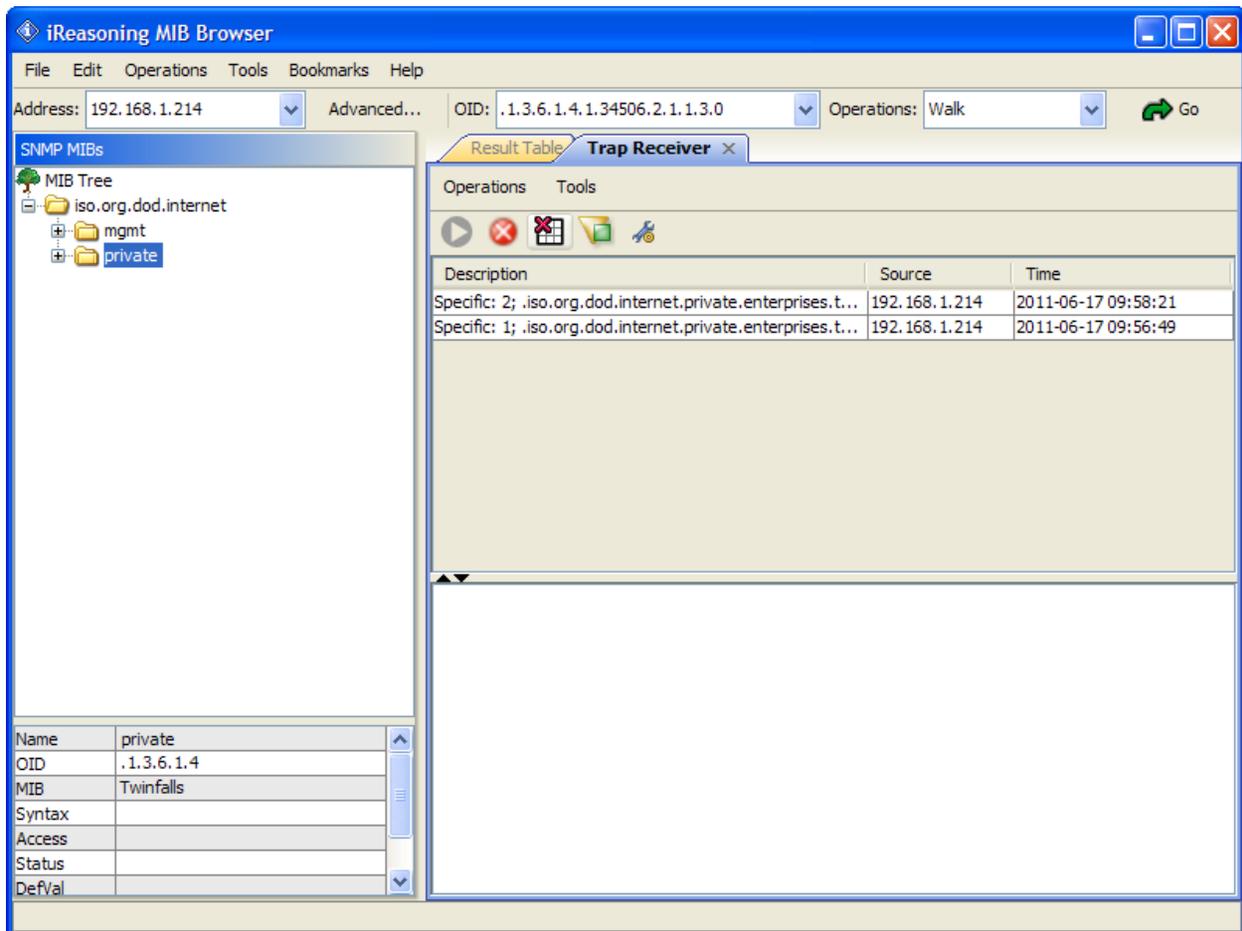


You should now see a Trap Receiver Tab in the main window of the MIB Browser.



Now, in order to see the SNMP traps coming in you need to throw the GTRM into an alarm by removing one ground lead at a time.

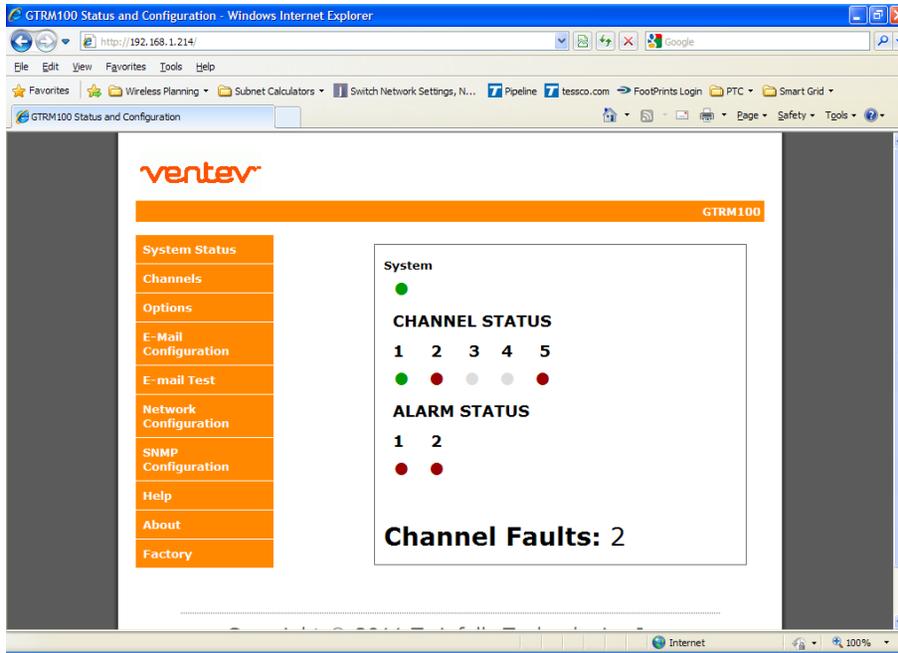
As you remove the first ground lead you should see the GTRM alarm LEDs go red and the amber LED light illuminate on the Demo kit. In a few seconds you should see an SNMP message alert come into the trap receiver in the MIB Browser.



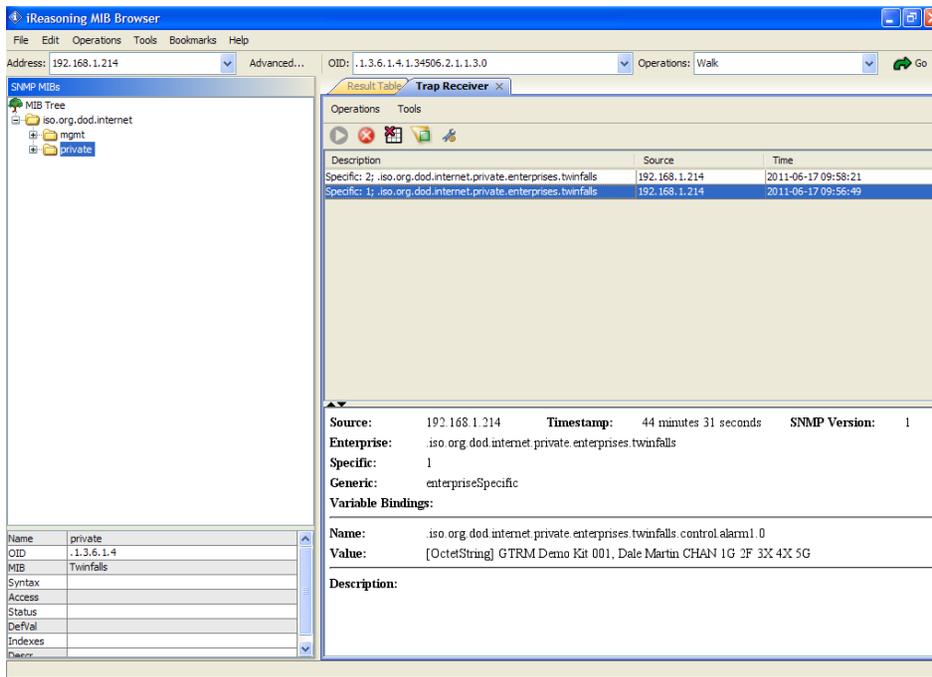
When you remove a second ground lead you should see the second alarm on the GTRM, the RED LED illuminate and you should receive the second SNMP message come into the MIB Browser.

ALSO NOTE: along with the LED alarms, the software alarms in the GTRM user interface and the SNMP alert messages, the GTRM is also sending out email message alerts to the email address that you configured in the email setup section.

Screenshot of the User Interface Status Screen showing alarm on Channel 2



Screenshot of SNMP Messages – If you click on the SNMP messages you can read the detailed description including timestamp and location the message was sent from.



If you have any further questions or require assistance installing and configuring your GTRM 100 please contact your Account Manager or call TESCO Technical Support.

1-800-472-7373

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