



*Innovative Electronics for a changing world*

## MANUAL



Our Site – Monitor products permit the monitoring and control of equipment at any site with IP connectivity in the comfort of your office. The Ethernet Relay + e-MAIL is the perfect addition to any remote repeater site to control and monitor equipment remotely via Ethernet, email and SNMP.

The Ethernet AC Monitor + eMail reports the status of 1 x 220 VAC mains input on/off, the battery input voltage and the onboard Relay status at remote sites via email , SNMP and embedded web-pages

The unit accepts **12V to 24V DC** power.

The on board Relay can be controlled via web browser or SNMP set command and can be selected by a pcb dip switch to either do a reset function for 10sec to reset remote equipment or to switch and keep its position until change by the user to switch remote equipment on or off.

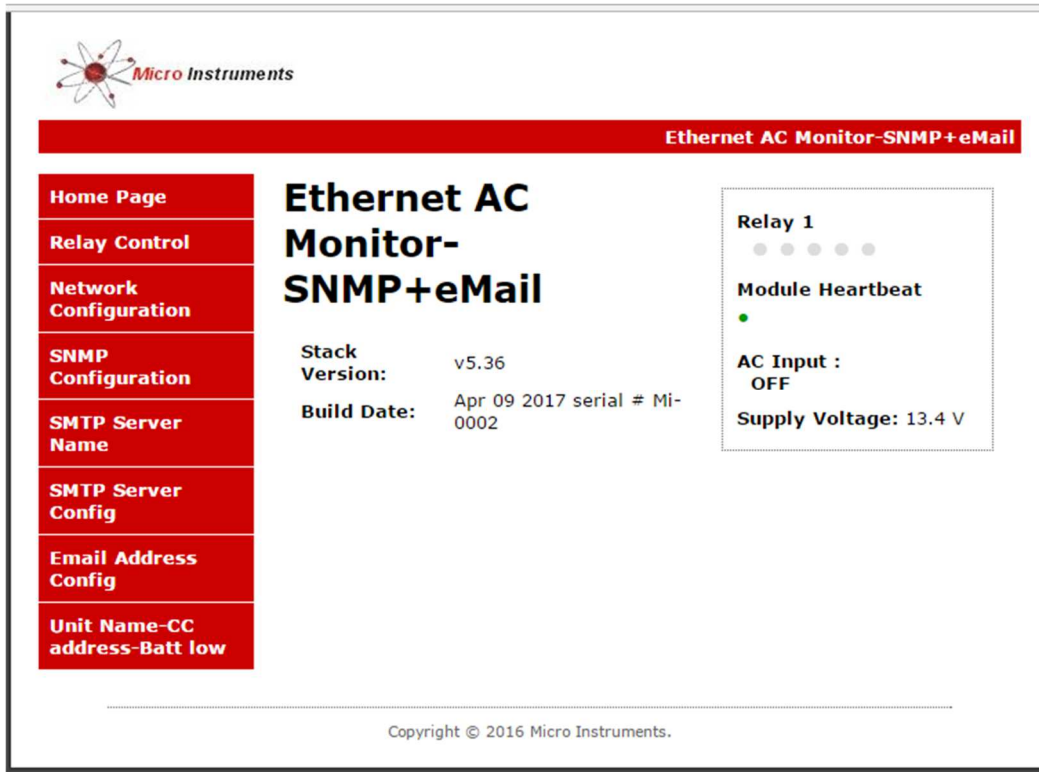
The Ethernet AC Monitor + eMAIL will send an email and cc another email address if configured as soon as the mains input goes down or return and if the battery voltage falls below or above the user settings

**Default IP: 192.168.1.4**

Master Reset the unit:

Remove power to the unit – press the button next to the LAN port, power the unit and wait 15sec, release the switch , unit will be reachable at the default 192.168.1.4 address

Home Page // Default IP address = 192.168.1.4

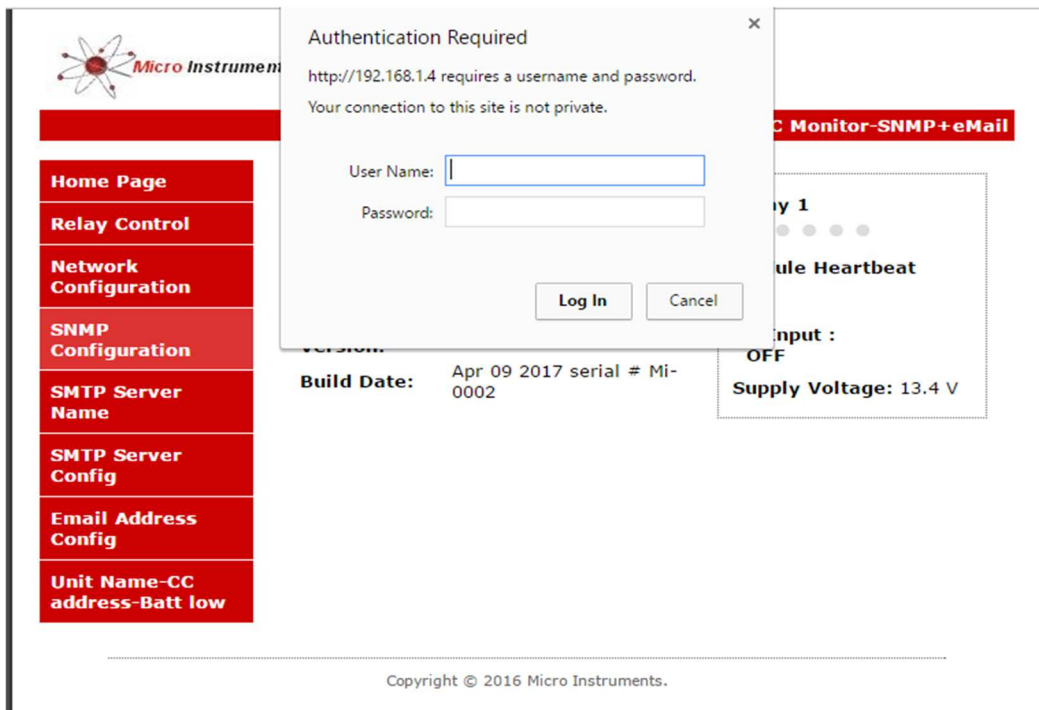


The screenshot shows the home page of the Ethernet AC Monitor-SNMP+eMail web interface. On the left is a red sidebar menu with the following items: Home Page, Relay Control, Network Configuration, SNMP Configuration, SMTP Server Name, SMTP Server Config, Email Address Config, and Unit Name-CC address-Batt low. The main content area has a red header bar with the title "Ethernet AC Monitor-SNMP+eMail". Below this, the title "Ethernet AC Monitor-SNMP+eMail" is displayed in large black font. To the right of the title, there is a status box containing: "Relay 1" with five dots (the first is filled), "Module Heartbeat" with a green dot, "AC Input : OFF", and "Supply Voltage: 13.4 V". Below the title, the "Stack Version: v5.36" and "Build Date: Apr 09 2017 serial # Mi-0002" are shown. At the bottom, a copyright notice reads "Copyright © 2016 Micro Instruments."

Selector Menu on the left

Stack version and Serial number in middle

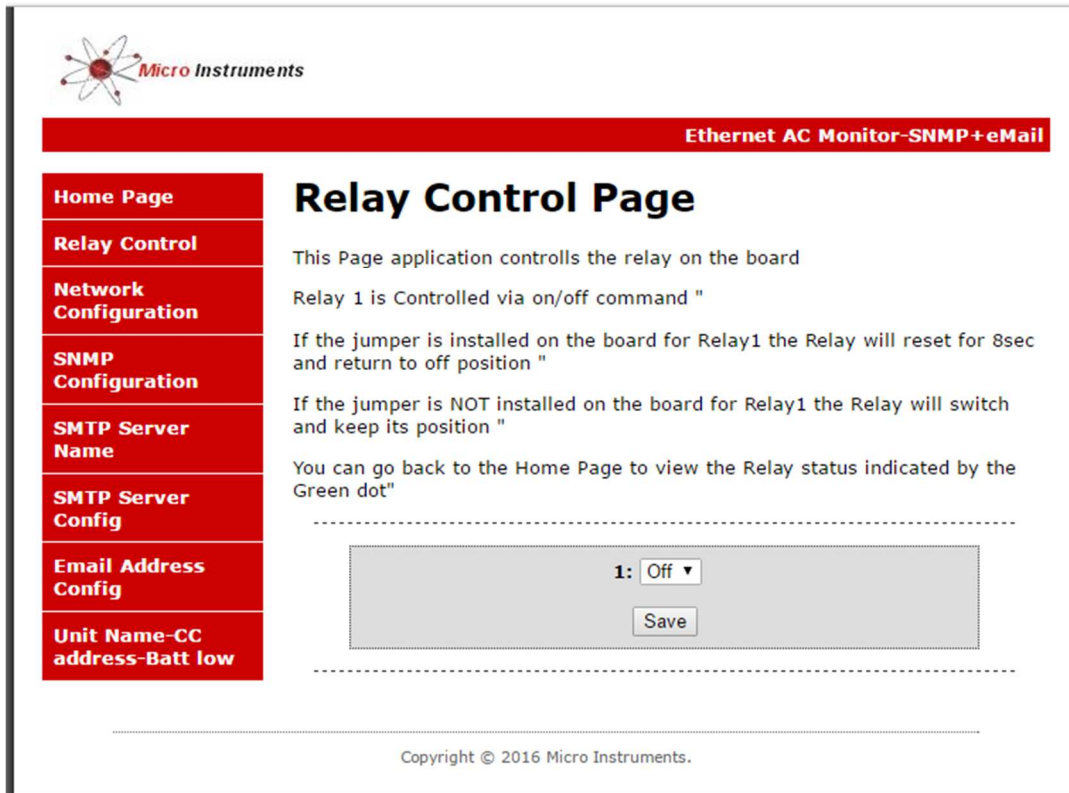
Relay Status – module heartbeat- The status of the AC input and the supply voltage on the home page




This screenshot shows the same web interface as before, but with an "Authentication Required" dialog box overlaid in the center. The dialog box contains the text: "http://192.168.1.4 requires a username and password. Your connection to this site is not private." It has input fields for "User Name:" and "Password:", and "Log In" and "Cancel" buttons. The background content is partially obscured by the dialog box.

Default user name and password : admin / admin

## Relay Control Page



 **Micro Instruments**

**Ethernet AC Monitor-SNMP+eMail**

**Home Page**

**Relay Control**

**Network Configuration**

**SNMP Configuration**

**SMTP Server Name**

**SMTP Server Config**

**Email Address Config**

**Unit Name-CC address-Batt low**

### Relay Control Page

This Page application controls the relay on the board

Relay 1 is Controlled via on/off command "

If the jumper is installed on the board for Relay1 the Relay will reset for 8sec and return to off position "

If the jumper is NOT installed on the board for Relay1 the Relay will switch and keep its position "

You can go back to the Home Page to view the Relay status indicated by the Green dot"

1: Off ▼

Save

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The user can control the on board relay via this page to either switch or reset equipment

The status of the relay is indicated by a green dot on the home page – green if energized

Switch next to relay output terminal – set to **pulse** , Relay 1 will energize for 10sec and then return to off position ( reset a device)

Switch next to relay output terminal set to **Latch**, Relay1 will energize and keep the position until switched again via web page or SNMP set command.

## Ethernet Interface Settings Page



## Ethernet AC Monitor-SNMP+eMail

[Home Page](#)[Relay Control](#)[Network Configuration](#)[SNMP Configuration](#)[SMTP Server Name](#)[SMTP Server Config](#)[Email Address Config](#)[Unit Name-CC address-Batt low](#)

## Board Configuration

This page allows the configuration of the board's network settings.

**CAUTION:** Incorrect settings may cause the board to lose network connectivity.

Enter the new settings for the board below:

	<b>Email sending Port:</b>
	<input type="text" value="587"/>
<b>MAC Address:</b>	<input type="text" value="00:19:F6:00:1F:EA"/>
<b>Host Name:</b>	<input type="text" value="AC MONITOR"/>
<b>Password:</b> [max 10]	<input type="text" value="admin"/>
<b>IP Address:</b>	<input type="text" value="192.168.1.4"/>
<b>Gateway:</b>	<input type="text" value="192.168.1.1"/>
<b>Subnet Mask:</b>	<input type="text" value="255.255.255.0"/>
<b>Primary DNS:</b>	<input type="text" value="192.168.1.1"/>
	<input type="button" value="Save Config/Reboot"/>

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Here the IP address, Gateway and subnet mask can be specified to match your network settings

The eMail sending port should be specified by the user

Also a user configurable Password can be specified / don't forget there is no back door for forgotten password / unit will have to be hard reset.

Click Save Configuration, the board will reboot with the new settings

## SNMP Configuration Page



## Ethernet AC Monitor-SNMP+eMail

**Home Page**

**Relay Control**

**Network Configuration**

**SNMP Configuration**

**SMTP Server Name**

**SMTP Server Config**

**Email Address Config**

**Unit Name-CC address-Batt low**

### SNMP Community Configuration

Read/Write Community String configuration for SNMPv2c Agent.

Configure multiple community names if you want the SNMP agent to respond to the NMS/SNMP manager with different read and write community names. If less than three communities are needed, leave extra fields blank to disable them.

**Read Comm1 :**

**Read Comm2 :**

**Read Comm3 :**

**Write Comm1:**

**Write Comm2:**

**Write Comm3:**

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Read and Write communities can be specified here

Dude screenshot on SNMP walk

Snm Walk 192.168.1.4

From: server To: 192.168.1.4 Profile: v1-public Timeout: 3000 Tries: 8


#	Oid	Simple Oid	Type	Value
1	iso.org.dod.internet.mgmt.mib-2.system.sysDescr.0	1.3.6.1.2.1.1.1.0	octet string	Ethernet AC Monitor
2	iso.org.dod.internet.mgmt.mib-2.system.sysObjectID.0	1.3.6.1.2.1.1.2.0	object id	iso.org.dod.internet.private.enterprises.45501
3	iso.org.dod.internet.mgmt.mib-2.system.sysUpTime.sysUpTimeInstance	1.3.6.1.2.1.1.3.0	timeticks	00:14:13.11
4	iso.org.dod.internet.mgmt.mib-2.system.sysContact.0	1.3.6.1.2.1.1.4.0	octet string	admin
5	iso.org.dod.internet.mgmt.mib-2.system.sysName.0	1.3.6.1.2.1.1.5.0	octet string	Micro Instruments
6	iso.org.dod.internet.mgmt.mib-2.system.sysLocation.0	1.3.6.1.2.1.1.6.0	octet string	Remote
7	iso.org.dod.internet.mgmt.mib-2.system.sysServices.0	1.3.6.1.2.1.1.7.0	integer	10
8	iso.org.dod.internet.mgmt.mib-2.system.sysDescr.0	1.3.6.1.2.1.1.1.0	octet string	Ethernet AC Monitor
9	iso.org.dod.internet.mgmt.mib-2.system.sysObjectID.0	1.3.6.1.2.1.1.2.0	object id	iso.org.dod.internet.private.enterprises.45501
10	iso.org.dod.internet.mgmt.mib-2.system.sysUpTime.sysUpTimeInstance	1.3.6.1.2.1.1.3.0	timeticks	00:14:13.77
11	iso.org.dod.internet.mgmt.mib-2.system.sysContact.0	1.3.6.1.2.1.1.4.0	octet string	admin
12	iso.org.dod.internet.mgmt.mib-2.system.sysName.0	1.3.6.1.2.1.1.5.0	octet string	Micro Instruments
13	iso.org.dod.internet.mgmt.mib-2.system.sysLocation.0	1.3.6.1.2.1.1.6.0	octet string	Remote
14	iso.org.dod.internet.mgmt.mib-2.system.sysServices.0	1.3.6.1.2.1.1.7.0	integer	10
15	iso.org.dod.internet.private.enterprises.45501.1.1.1.0	1.3.6.1.4.1.45501.1.1.1.0	octet string	SNMPv1/2Agent
16	iso.org.dod.internet.private.enterprises.45501.1.1.2.0	1.3.6.1.4.1.45501.1.1.2.0	octet string	V1
17	iso.org.dod.internet.private.enterprises.45501.1.1.3.0	1.3.6.1.4.1.45501.1.1.3.0	octet string	June 16
18	iso.org.dod.internet.private.enterprises.45501.1.2.1.1.1.0	1.3.6.1.4.1.45501.1.2.1.1.1.0	integer	0
19	iso.org.dod.internet.private.enterprises.45501.1.2.1.1.1.1	1.3.6.1.4.1.45501.1.2.1.1.1.1	integer	1
20	iso.org.dod.internet.private.enterprises.45501.1.2.1.1.2.0	1.3.6.1.4.1.45501.1.2.1.1.2.0	integer	0
21	iso.org.dod.internet.private.enterprises.45501.1.2.1.1.2.1	1.3.6.1.4.1.45501.1.2.1.1.2.1	integer	0
22	iso.org.dod.internet.private.enterprises.45501.1.2.1.1.3.0	1.3.6.1.4.1.45501.1.2.1.1.3.0	ip address	0.0.0.0
23	iso.org.dod.internet.private.enterprises.45501.1.2.1.1.3.1	1.3.6.1.4.1.45501.1.2.1.1.3.1	ip address	0.0.0.0
24	iso.org.dod.internet.private.enterprises.45501.1.2.1.1.4.0	1.3.6.1.4.1.45501.1.2.1.1.4.0	octet string	
25	iso.org.dod.internet.private.enterprises.45501.1.2.1.1.4.1	1.3.6.1.4.1.45501.1.2.1.1.4.1	octet string	
26	iso.org.dod.internet.private.enterprises.45501.1.3.1.0	1.3.6.1.4.1.45501.1.3.1.0	integer	0
27	iso.org.dod.internet.private.enterprises.45501.1.3.2.0	1.3.6.1.4.1.45501.1.3.2.0	integer	0
28	iso.org.dod.internet.private.enterprises.45501.1.3.3.0	1.3.6.1.4.1.45501.1.3.3.0	integer	0
29	iso.org.dod.internet.private.enterprises.45501.1.3.4.0	1.3.6.1.4.1.45501.1.3.4.0	octet string	13.6
30	iso.org.dod.internet.private.enterprises.45501.1.3.4.0.0	1.3.6.1.4.1.45501.1.3.4.0.0	null	
31	iso.org.dod.internet.private.enterprises.45501.1.3.4.0.0.0	1.3.6.1.4.1.45501.1.3.4.0.0.0	null	
32	iso.org.dod.internet.private.enterprises.45501.1.3.4.0.0.0.0	1.3.6.1.4.1.45501.1.3.4.0.0.0.0	null	
33	iso.org.dod.internet.private.enterprises.45501.1.3.4.0.0.0.0.0	1.3.6.1.4.1.45501.1.3.4.0.0.0.0.0	null	
34	iso.org.dod.internet.private.enterprises.45501.1.3.4.0.0.0.0.0.0	1.3.6.1.4.1.45501.1.3.4.0.0.0.0.0.0	null	
35	iso.org.dod.internet.private.enterprises.45501.1.3.4.0.0.0.0.0.0.0	1.3.6.1.4.1.45501.1.3.4.0.0.0.0.0.0.0	null	

OID 1.3.6.1.4.1.45501.1.3.1.0 = Relay 1 ( 0 for off and 1 for On)

OID 1.3.6.1.4.1.45501.1.3.3.0 = AC Input ( 0 for off and 1 for On)

OID 1.3.6.1.4.1.45501.1.3.4.0 = Supply voltage from either DC jack or pcb terminal (as per 12v or 24v unit)

SMTP SERVER SETTINGS for e-mail



Ethernet AC Monitor-SNMP+eMail

Home Page

Relay Control

Network Configuration

SNMP Configuration

SMTP Server Name

SMTP Server Config

Email Address Config

Unit Name-CC address-Batt low

## SMTP Server Name

-----

For Safety reasons NO HTTP callback is done for this page

SMTP Server(max32):


Save

-----

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Enter your SMTP server name here

## SMTP SERVER CONFIGURATION PAGE



Ethernet AC Monitor-SNMP+eMail

Home Page

Relay Control

Network Configuration

SNMP Configuration

SMTP Server Name

SMTP Server Config

Email Address Config

Unit Name-CC address-Batt low

## SMTP Server Configuration

-----

For Safety reasons NO HTTP callback is done for this page

Username(max32):

Password:(max24)

Save


-----

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Enter your SMTP server username and password here



## Unit Name configuration page



Ethernet AC Monitor-SNMP+eMail

Home Page  
 Relay Control  
 Network Configuration  
 SNMP Configuration  
 SMTP Server Name  
 SMTP Server Config  
 Email Address Config  
 Unit Name-CC address-Batt low

## Unit Name Configuration

Low BATT Volts(max4):   
 High BATT Volts(max4):   
 Unit Name(max14):   
 CC To(cc:email address-max32):   

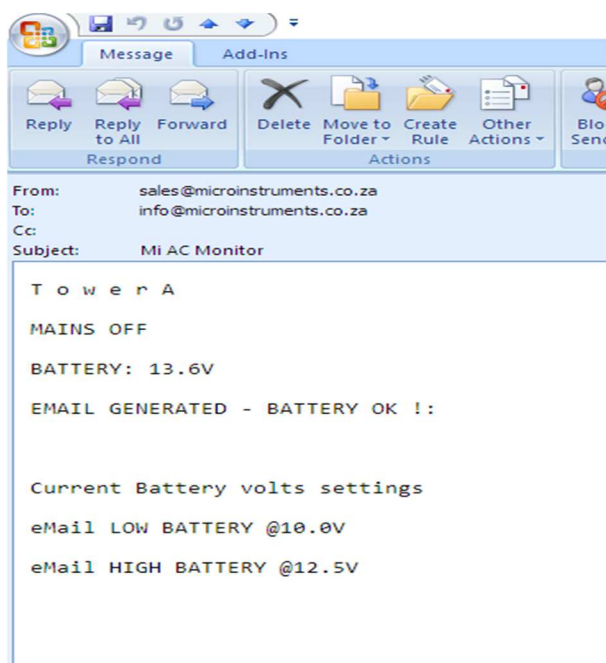
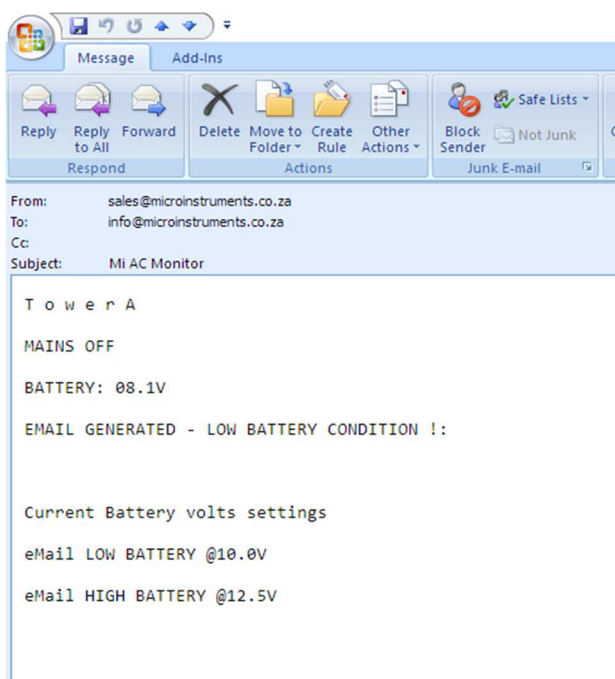
Save

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Enter LOW BATT Volts : eg 10.3 - unit will send a email to the specified email address and the cc address if specified as soon as the battery voltage is equal or smaller than 10.3 VDC

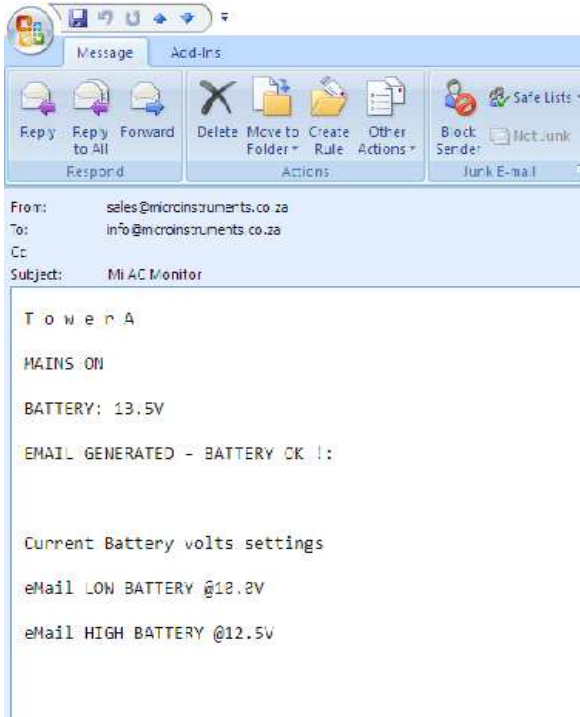
Enter HIGH BATT Volts : eg 12.6 - unit will send a email to the specified email address and the cc address if specified as soon as the battery voltage is equal or smaller than 12.6 VDC

Enter the Unit name : eg TowerA – this name will appear in the email body to easily determine from which tower the email came from / example email received from low and then recovered battery voltage





Example email received from low and then recovered battery voltage



Physical

**Default IP : 192.168.1.4 // factory default**

L=80mm – W = 70mm – H = 30mm

Power supply – 12v to 24 volt DC

Consumption with relay on = 100mA @12V / =50mA@24V

Consumption with relay off = 60mA @12V / = 30mA@24V