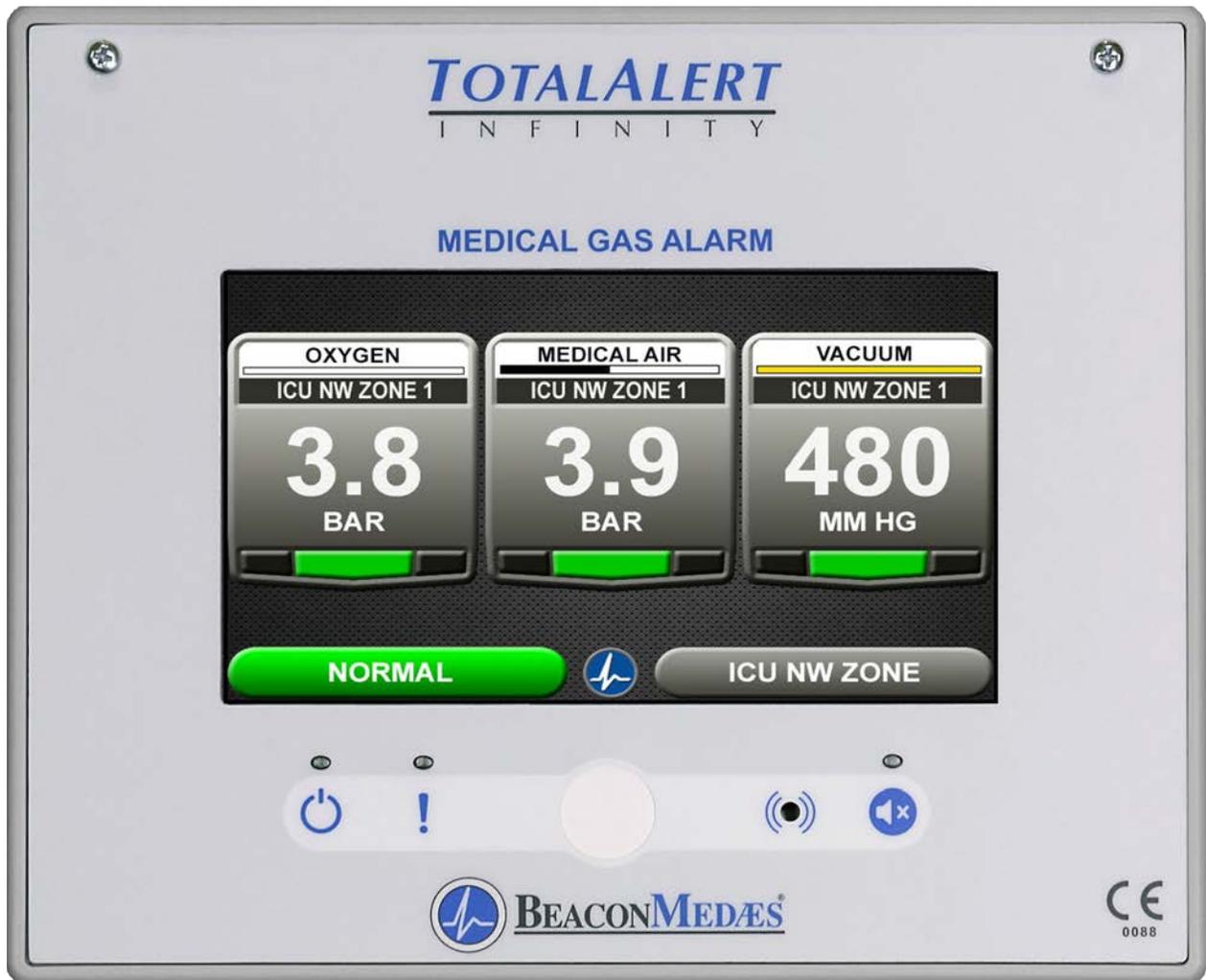


Installation, Operation and Maintenance Instructions



TotalAlert Infinity™ HTM Medical Gas Notification System

Part number 4107 9016 60

Revision 01

December 18, 2017



Part of the Atlas Copco Group

Installation, Operation and Maintenance Manual

TotalAlert Infinity™ HTM Medical Gas Notification System

This unit is purchased from: _____

Date purchased: _____

Model number: _____

Part number: _____

Option(s) included: _____

Any information, service or spare parts requests should be directed to:

BeaconMedæs
Telford Crescent, Staveley,
Derbyshire, S43 3PF, England

Telephone: +44 (0) 1246 474 242

BeaconMedæs reserves the right to make changes and improvements to update products sold previously without notice or obligation.

Part number 4107 9016 60

Revision 01
December 18, 2017

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0.0 Safety Symbols / Environmental Protection

0.1 Important symbols for safety, storage and handling

	Read Instructions
	Warning - dangerous voltage
	Ambient temperature
	Ambient humidity range
	Ambient pressure range
	Date of manufacture
	Location of manufacture
	Caution - Means there is a possibility of damage to unit or other property
	Power on
	Alarm system fault
	Mute switch
	Protective earth
	Shock hazard - Means there is a possibility of electric shock
	Do not dispose of in general waste

0.2 Environmental Protection



Do Not Dispose of in General Waste.

This unit and/or components may be discarded in any standard refuse facility. The unit does not contain any hazardous substances.

TotalAlert Infinity™ HTM Medical Gas Notification System

1.0 Introduction

1.1 Product Identification

Each alarm is identified by a Reference number, Item number, and Lot Code.

Installation procedures vary depending on the alarm configuration.

The product ID label is located on the inside of the alarm back box (Figure 1.1).

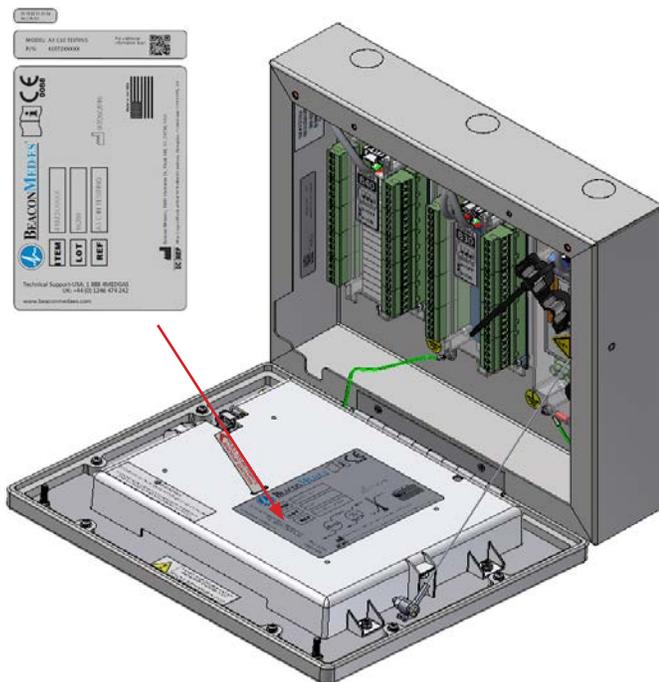


Figure 1.1: Product Identification Labels

1.2 User Interface Layout



Figure 1.2: User Interface Layout

1.2.1 TotalAlert Infinity™ Features:

- 8" Touch Screen LCD Display.
- User-defined Instructions for Hospital Response Plan
- 10/100base-T Wired Ethernet Connection
- WIFI 802.11 b/g/n interface
- Embedded Web server for viewing alarm information through a computer or tablet
- Electronic Notification of Alarms through e-mail/text messaging
- History Event Log for Documentation
- Electronic User-defined Gas Labels for any mixes
- Electronic User-defined Location Labels
- Ability to "mirror" alarms from other panels using the wired Ethernet interface

TotalAlert Infinity™ HTM Medical Gas Notification System

1.2.2 Central Alarm

Features:

Displays a maximum of 24 signals. Combinations can include:

- Locally wired BeaconMedaes Line Contact Monitored Signals (Up to 20)
- Medipoint/Shire Network signals
- Ethernet Wired signals (From up to 8 panels)

1.2.3 Area Alarm

Features:

Monitors up to 8 Digital gas sensors.

- Digital pressure/vacuum read out with Low/Normal/High indicators
- Customizable gas ID labels with user-defined location labels for each monitored gas
- 1/4" BSPP connection on gas sensors
- Gas Specific Digital ID for each gas sensor

1.2.4 Combination Alarm

Monitors a mix of BeaconMedaes plant signals, digital gas sensor modules, and 4-20mA transducers.

Features:

- User-defined values for monitoring any two or three-wire 4-20mA transducer

1.2.5 Boards

NOTE:

I	=	4-20mA Inputs
X	=	Source Signal Inputs
Y	=	Dry-Contact Relay Outputs
D	=	Digital Gas Sensor Inputs

B03 Advance Board

Features:

Contains hardware for advanced features of the TotalAlert Infinity™ Alarm.

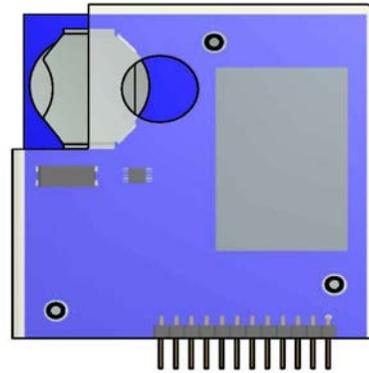


Figure 1.3: B03 Advanced Board

B05 Power Supply Board

Features:

- Supplies 24VDC to all circuit boards in the alarm.

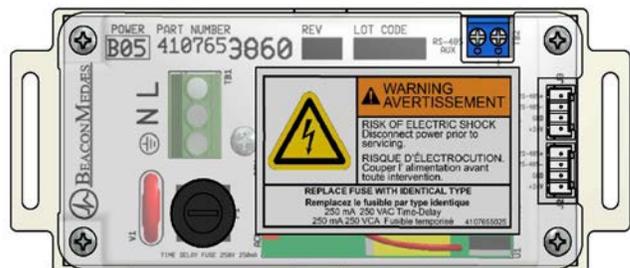


Figure 1.4: B05 Power Board

TotalAlert Infinity™ HTM Medical Gas Notification System

B06 Digital Gas Sensor Board

Features:

- Monitors the Pressure/Vacuum from the pipeline, and provides a gas-specific digital signal for the alarm.
- Heartbeat indicator to indicate proper operation.
- Embedded in the gas sensor



Figure 1.5: B06 Digital Gas Sensor Board

B30 Digital Gas Sensor Board

Features:

- Monitors up to 20 BeaconMedaes Line Contact Monitoring signals on each board from source equipment.
- Heartbeat indicator to signal proper operation.

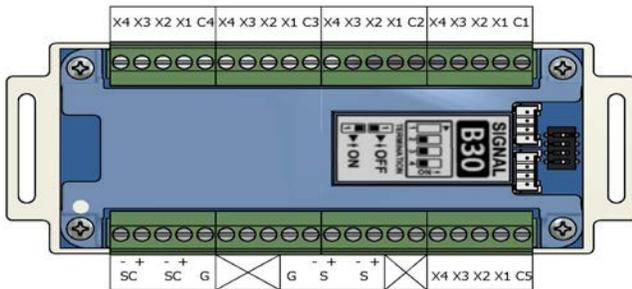


Figure 1.6: B30 Digital Gas Sensor Board

B40, B41 Relay Output Boards

Features:

- Provides 16 normally closed dry-contact relay outputs for external monitoring.
- Heartbeat indicator to signal proper operation.

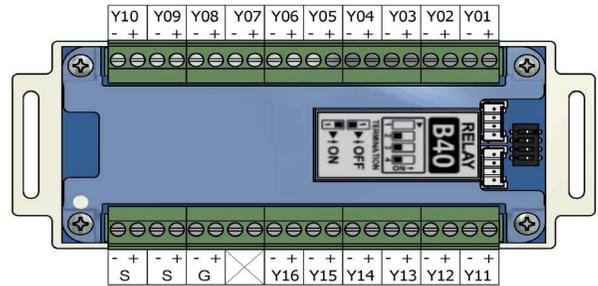


Figure 1.7: B40, B41 Output Boards

B50 4-20mA Combination Board

Features:

- Monitors up to four 4-20mA inputs and provides 6 normally closed dry-contact relay outputs for external monitoring.
- Heartbeat indicator signals proper operation.

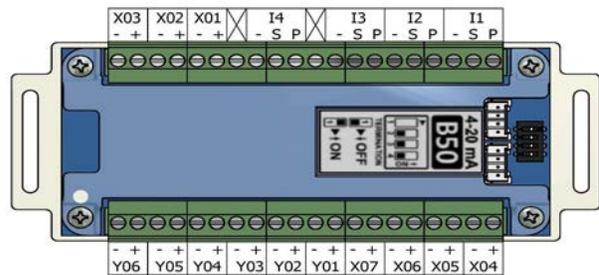


Figure 1.8: B50 4-20 mA Combination Board

TotalAlert Infinity™ HTM Medical Gas Notification System

B60 Gas Input Board

Features:

- Monitors up to 8 Digital Gas Sensor Boards. One normally closed dry-contact relay output is available and opens when any fault occurs.
- Heartbeat indicator signals proper operation.

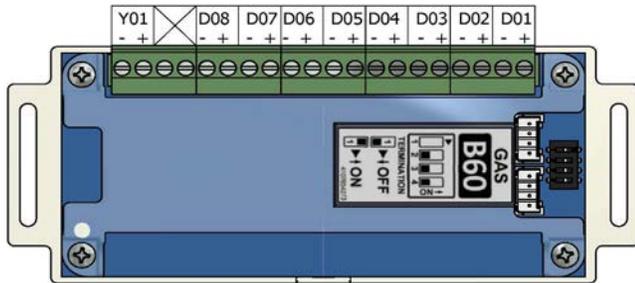


Figure 1.9: B60 Gas Input Board

1.3 Definition of Statements

Statements in this manual preceded by the following words are of special significance.

- WARNING:** Means there is a possibility of injury or death to yourself or others.
- CAUTION:** Means there is a possibility of damage to unit or other property.
- SHOCK HAZARD:** Means there is a possibility of electric shock.
- ATTENTION:** Means precautions for handling electrostatic sensitive devices are to be observed.

NOTE: Indicates points of particular interest for more efficient and convenient operation.

1.4 Definitions

4-20 mA

Input which monitors a two or three-wire 4-20mA transducer.

Address Resolution Protocol (ARP)

Protocol used by a device to learn the MAC address of another device so it can send an Ethernet packet.

Area Alarm Panel

Alarm panel that monitors medical gas and vacuum systems serving a specific Area.

Central Alarm Panel

Alarm panel that monitors medical gas and vacuum source equipment and main pipelines.

Combination Alarm Panel

Alarm panel that combines features of a Central alarm panel and an Area alarm panel.

Crossover Cable

Network cable that swaps transmit and receive pairs so cable can be used to connect two computers or devices without the use of a hub or switch.

Domain Name Server (DNS)

A device that has a list of device names matched to IP addresses. Browsers use this resource to locate the IP address of a named device. NetBIOS name service provides this function on a local network.

Dry-Contact

Electrical contact isolated or unconnected from any electrical source.

Dynamic Host Configuration Protocol (DHCP)

A protocol used by a server to assign IP addresses to devices and computers.

Electromagnetic Compatibility (EMC)

Verification that a product meets required standards for emissions of and immunity from electromagnetic energy in its intended environment.

Ethernet

A standard high-speed network medium specified by IEEE standard 802.3.

Ethernet Switch

A device that connects many Ethernet devices together with optimization. Message destinations are examined and passed only to the correct device.

Firewall

A computer or computer software that prevents unauthorized access to private data from outside computer users.

Gateway

A computer or device that connects two computer networks together (such as a private network and the Internet).

TotalAlert Infinity™ HTM Medical Gas Notification System

General Fault Relay

Single-pole single-throw dry-contact relay output. Used to activate remote alarm or building management system. Relay will open whenever ANY audible alarm on panel is in progress. General Fault Relay will close only after alarm condition is corrected and alarm panel resumes normal status.

Hyper Text Transfer Protocol (HTTP)

Protocol used to manage the request and transfer of web pages to a computer.

Internet Protocol (IP) Address

Unique number that identifies a device on a network.

LED

Light Emitting Diode

Media Access Control (MAC) Address

A unique hardware address of a device on an Ethernet.

NetBIOS Name Service

Local method of addressing a device by name. This allows a web browser to reference a device by name instead of an IP address, such as 192.168.2.3.

Remote Sensors

Pressure / vacuum sensors mounted outside of alarm panel back box. Sensor assemblies may be mounted separately or ganged together near pressure / vacuum pipelines. Sensors must then be wired to alarm panel.

Simple Mail Transfer Protocol (SMTP)

Protocol for sending e-mail on a network.

Subnet Mask

A binary number used to separate the network portion from the host portion of a network address.

SMTP Client

Computer or device that uses SMTP to send e-mail by communicating with an SMTP server. The TotalAlert Infinity™ Medical Gas Notification System acts as an SMTP client.

SMTP Server

Computer or device that uses SMTP to receive e-mail from an SMTP client and then transfer it across the internet.

Transmission Control Protocol (TCP)

Protocol used to send data streams between two devices. TCP guarantees reliable and in order data from sender to receiver.

User Datagram Protocol (UDP)

Protocol used to send short messages between computers. UDP does not guarantee reliable transmission (packets may be lost, duplicated or out of order), but is faster and more efficient than TCP.

1.5 Alarm Configurations

All TotalAlert Infinity™ alarm panels are factory pre-configured. Configuration of alarm panel varies dependent upon customer's requirements.

Three types of alarm panels are available.

- Central alarms
- Area alarms
- Combination alarms



Figure 1.10: Central Alarm Front Panel

1.5.1 Central Alarms

Central alarm panels include the following modular components:

- Signal input board (B30) that can accept 20 signals per board; maximum of 1 board.
- Relay boards (B40, B41) that can be used to control 16 dry-contact signals per board; maximum of 2 boards.

Central alarm panels can monitor 20 switched inputs.

Inputs can be assigned to any gas service indicators.

Model Number Scheme:

_____ - _____ - _____

Series - Configuration - Retrofit

See Model Number Chart in Section 1.7.

Example:

TotalAlert Infinity™ Central 20X 16Y

Example Model Number: A3-M11

TotalAlert Infinity™ HTM Medical Gas Notification System

1.5.2 Area Alarms

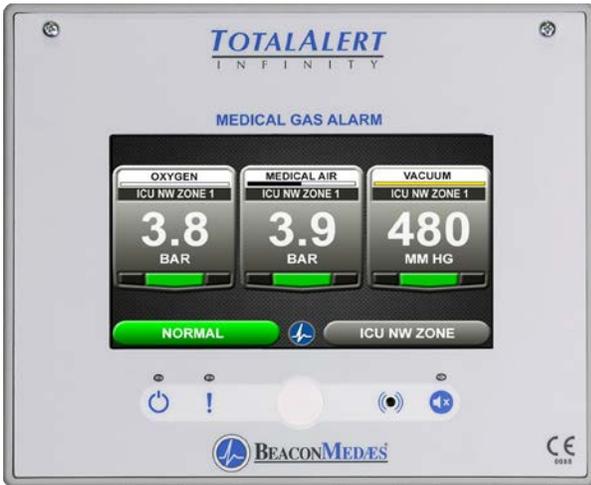


Figure 1.11: Area Alarm Front Panel

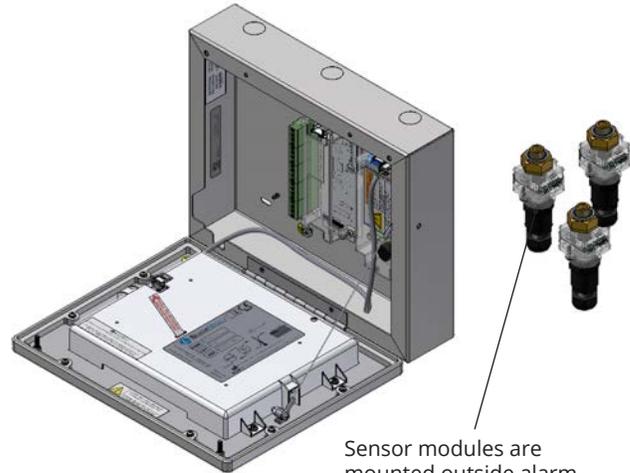


Figure 1.12: Remote Sensors

Area alarm panels include the following modular components:

- Gas Sensor input board (B60) that are used for up to 8 digital sensors modules
- Digital gas sensor module (B06), can be mounted remotely on the gas pipeline. A maximum of 8 digital gas sensor modules are allowed per Area alarm panel.

Area alarm panels may be configured for 1 to 8 gas inputs. If alarm is configured with gas inputs, the sensors will be included for connection to pressure/vacuum pipeline.

Sensors have a 1/4" BSSPP male fitting for attaching to the hospital pipeline.

Model Number Scheme:

_____ - _____ - _____

Series - Configuration - Retrofit

See Model Number Chart in Section 1.6.

Example:

TotalAlert Infinity™ Area Alarm

Example Model Number: A3-A10

TotalAlert Infinity™ HTM Medical Gas Notification System

1.5.3 Gas Combination Alarms



Figure 1.13: Combination Alarm Front Panel

Gas Combination alarms include a mix of the following modular components:

- B30 board
- B60 board
- B50 board

Combination alarms can monitor up to 20 BeaconMedaes Line Contact Monitoring signal.

Inputs can be assigned to any one of 8 gas service indicators.

Combination alarms can also monitor up to 6 digital gas sensors.

Model Number Scheme:

_____ - _____ - _____

Series - Configuration - Retrofit

See Model Number Chart in Section 1.7.

Example:

TotalAlert Infinity™ Combination Alarm
Example Model Number: A3-C10

1.6 Electromagnetic Compatibility

1.6.1 EN 60601-1-2

Medical Electrical Equipment needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in this manual.

Portable and mobile RF communications equipment can affect Medical Electrical Equipment. The use of accessories, transducers, and cables other than those specified by the manufacturer, may result in increased emissions or decreased immunity of the TotalAlert Infinity.

The TotalAlert Infinity should not be used adjacent to, or stacked with, other equipment. If adjacent or stacked use is necessary, the TotalAlert Infinity should be observed to verify normal operation in the configuration in which it will be used.

Guidance and manufacturer's declaration - electromagnetic emissions		
The TotalAlert Infinity is intended for use in the electromagnetic environment specified below. The customer or the user of the TotalAlert Infinity should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The TotalAlert Infinity uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class A	The TotalAlert Infinity is suitable for use in all establishments other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ Flicker emissions IEC 61000-3-3	Complies	

TotalAlert Infinity™ HTM Medical Gas Notification System

Guidance and manufacturer's declaration - electromagnetic immunity			
The TotalAlert Infinity is intended for use in the electromagnetic environment specified below. The customer or the user of the TotalAlert Infinity should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic Discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±6 kV contact ±8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/output lines	±2 kV for power supply lines ±1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV differential mode ±2 kV common mode	±1 kV differential mode ±2 kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short Interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % U_T (>95 % dip in U_T) for 0,5 cycle <40 % U_T (>60 % dip in U_T) for 5 cycles <70 % U_T (>30 % dip in U_T) for 25 cycles <5 % U_T (>95 % dip in U_T) for 5 sec	<5 % U_T (>95 % dip in U_T) for 0,5 cycle <40 % U_T (>60 % dip in U_T) for 5 cycles <70 % U_T (>30 % dip in U_T) for 25 cycles <5 % U_T (>95 % dip in U_T) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. If the user of the TotalAlert Infinity requires continued operation during power mains interruptions, it is recommended that the TotalAlert Infinity be powered from an uninterruptible power supply or battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
Note: U_T is the a.c. mains voltage prior to application of the test level.			
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 Vrms	Portable and mobile RF communications equipment should be used no closer to any part of the TotalAlert Infinity, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = 1,2\sqrt{P}$ $d = 1,2\sqrt{P}$ 80 MHz to 800 MHz $d = 2,3\sqrt{P}$ 800 MHz to 2,5 GHz where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, ^a should be less than the compliance level in each frequency range. ^b Interference may occur in the vicinity of equipment marked with the following symbol: 
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,5 GHz	3 V/m	
Note 1: At 80 MHz and 800 MHz, the higher frequency range applies. Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			
a. Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, and electromagnetic site survey should be considered. If the measured field strength in the location in which the TotalAlert Infinity is used exceeds the applicable RF compliance level above, the TotalAlert Infinity should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the TotalAlert Infinity. b. Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.			

TotalAlert Infinity™ HTM Medical Gas Notification System

Recommended separation distances between portable and mobile RF communications equipment and the TotalAlert Infinity			
The TotalAlert Infinity is intended for use in the electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the TotalAlert Infinity can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the TotalAlert Infinity as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz d = 1,2√P	80 MHz to 800 MHz d = 1,2√P	800 MHz to 2,5 GHz d = 2,3√P
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer. Note 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies. Note 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

1.7 TotalAlert Infinity™ Medical Gas Notification System Parent Model Number Chart

A3 - $\frac{\quad}{B}$

Variable B Alarm Type and Size	
Allowable Value	Description
A10	Area Alarm, Up to 8 Area Gases
M01	Central, 0 Inputs, 16 Relay Outputs
M02	Central, 0 Inputs, 32 Relay Outputs
M10	Central, 20 Inputs
M11	Central, 20 Inputs, 16 Relay Outputs
C10	Combination, 20 Inputs, Display up to 6 Area Gases
C40	Combination, 4 Inputs for 4-20 mA devices, 6 Relay Outputs

Available Gas Sensors
Description
Oxygen
Nitrous Oxide
Medical Air
Medical Vacuum
Nitrogen
Carbon Dioxide (CO2)
HE-O2 (HE over 80%)
Laboratory Air
Laboratory Vacuum
Surgical Air
O2-N2O

Example: TotalAlert Infinity™ Central Alarm with 20 Inputs and 16 Relay Outputs **Example Model Number:** A3-M11

Example: TotalAlert Infinity™ Area Alarm with 4 gases - Oxygen, Nitrous Oxide, Medical Air, and Vacuum

Example Model Number: A3-A10

* Gas sensors to be ordered separately

Example: TotalAlert Infinity™ Combination Alarm with 20 Inputs, and 3 gases - Oxygen, Medical Air, and Vacuum

Example Model Number: A3-C10

* Gas sensors to be ordered separately

Example: TotalAlert Infinity™ Combination Alarm with four 4-20mA devices and 6 Relay Outputs.

Example Model Number: A3-C40

2.0 Installation Procedures

2.1 Surface Mount Box

The alarm panel backbox is suitable for both surface and concealed installation. Installer shall consult with healthcare facility regarding the location of the alarm panel. Knock out plugs are provided in the top and bottom of the box for routing of supply power, Ethernet CAT5 cable, gas sensor wiring. With a concealed installation a chase depth of 62mm is required and a bezel is fitted to cover the plaster joint. The procedure to install a first fix alarm panel backbox is as follows.

DO NOT drill the First Fix kit.

1. Remove cardboard dust cover and save for later use. Installation instructions are provided on the back for convenience.
2. Ensure the backbox is in the correct orientation. Locate the backbox at the correct position and mark out the slots in each corner for the securing screws. See mounting height requirement (Figure 2.1).

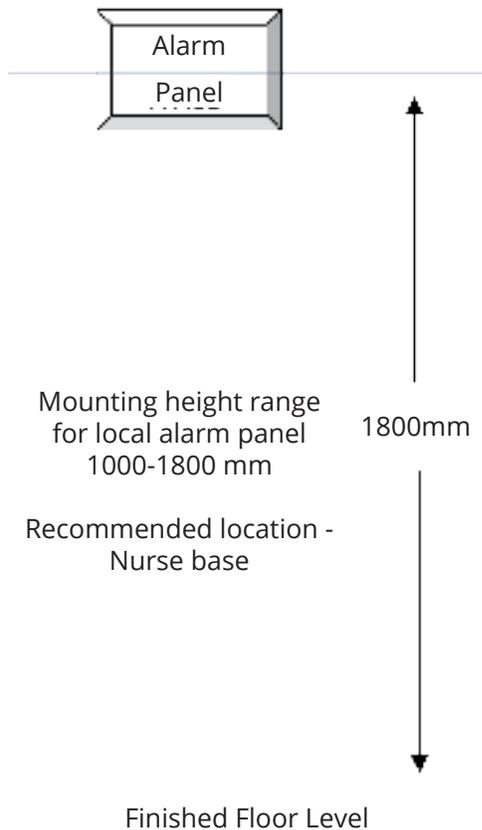


Figure 2.1: Local alarm panel mounting height

3. Drill wall and fit anchors in position.
4. Select cable entry/exit points and remove the desired knock-out segments from the inside. Fit suitable grommets/cable glands as required by the contract specification. Feed cables into the box leaving 400mm to enable connection to the printed circuit boards. Secure backbox to the wall with suitable screws.
5. Reinstall cardboard dust cover to prevent dust and debris from entering the backbox.

2.2 Gas Sensor Installation

WARNING:

With a concealed installation, the plaster depth must be flush with the face of the box surface.

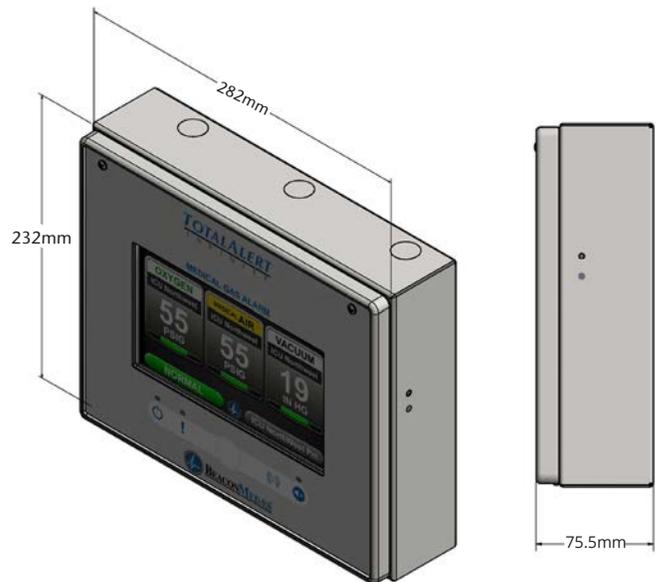


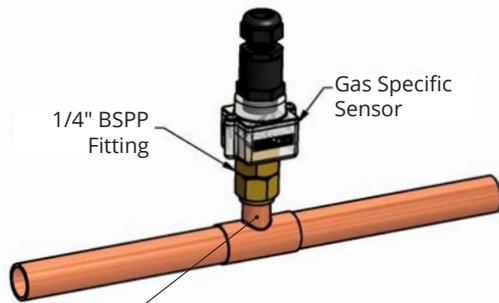
Figure 2.2: Alarm Panel Backbox Dimensions

TotalAlert Infinity™ HTM Medical Gas Notification System

2.2.1 Remotely Installed Sensors in Pipeline

1. Sensors can be installed onto the hospital pipeline or in a compatible BeaconMedaes Zone Valve Box. Pressure sensors should be connected to the pipeline by means of minimum leak devices. It should not be possible to isolate the sensor by a manually operated shut-off valve while it is connected to the pipeline. If a valve is incorporated for maintenance purposes, it shall be opened by the insertion of the sensing device.
2. Remove the protective cap and screw sensor into the 1/4" BSPP threaded port in the gas pipeline. Ensure the Gas ID of the sensor installed matches with the Gas ID of the pipeline.
3. Remove the black housing from the top of the sensor to access the wiring terminal block.
4. Route the signal cable through the cord grip and land the wires to the terminals. Ensure to match correct polarity of the wires, Red(+), Black(-).
5. Install the black housing to the top of the sensor and tighten the cord grip onto the cable (see section 2.3.5).

2.3 Wiring



Connection should be made on top of pipe

NOTE:

If the remote sensor is not installed using a BeaconMedaes T-Fitting, an orifice should be installed between the pipe and sensor to allow future serviceability.

2.3.1 General Requirements

1. All alarms are to be powered from the Essential Circuit as required by applicable standards. Mains operated using 115/230V, 50/60Hz AC.
2. Protect all wiring from physical damage by raceways or conduit as required by applicable standards. All electrical wiring should be in accordance with IEE regulations.
3. Wire alarm panels directly to switches or sensors as required by applicable standards.
4. Wiring runs should be made with color coded wire. Record color, signal, and source of signal for each wiring lead to aid in connection of alarm finish components.
5. Avoid installing alarm panels near radio transmitters, electrical motors, or switch-gear.

2.3.2 Wire Type and Size

All low voltage wiring must meet the following criteria:

- Copper wire no smaller than 22AWG conductor insulation at least 0.4mm (0.016in), jacket insulation at least 0.76mm (0.030in), rated for 300V and 60°C (140°F) minimum.
- Circuit length not to exceed 100 meters.
- Cable must be twisted-pair shielded type. Multi-pair cables within one common shield are acceptable.

All low voltage interconnect wiring between hospital signaling units must meet the following criteria:

- Copper wire no smaller than 24AWG conductor insulation at least 0.25mm (0.010in), jacket insulation at least 0.76mm (0.030in), rated for 300V and 60°C (140°F) minimum.
- Circuit length not to exceed 1200 meters.
- Cable must be twisted-pair shielded type. Multi-pair cables within one common shield are acceptable.

2.3.3 Determining Number of Conductors

TotalAlert Infinity™ HTM Medical Gas Notification System

The following rules along with references to this manual's schematics clarify wiring requirements.

- **Digital Gas Sensor Modules**

Two conductor cables (must be twisted pair type with shield) are required for each Gas Sensor module to the Gas Input board (B60).

Refer to HTM Area Wiring Diagram (Section 3.2).

- **BeaconMedaes Line Contact Monitoring**

The Total Alert Infinity uses BeaconMedaes Line Contact Monitoring on all input signals. This type of connection is relatively immune to interference, but shielded cables are still recommended. Five conductor cables (must be twisted pair) are required for each channel.

BeaconMedaes recommends the following cable type, and a maximum length of 100 meters.

Refer to HTM Central / Combination Wiring Diagrams (Section 3.1 / 3.3) for B30, B50 signal boards.

- **Relay outputs**

Two conductors are required for each signal between relay output terminals and remote device (such as a building automation system). Refer to the wiring requirements of the connecting device when selecting the appropriate type of conductors to use (i.e. wire gauge, twisted or not, shielded or not.)

Refer to HTM Central / Combination Wiring Diagrams (Section 3.1 / 3.3) for B4X signal board.

- **Digital display module "mirroring"**

Two panels may be connected together so digital display module pressure reading(s) of first panel will be duplicated at second panel.

An eight conductor category 5 CROSS OVER cable is required for connecting alarm panels directly to each other. Otherwise, standard cabling can be used with a facility's Ethernet hub or switch to set up a connection between panels.

- **Source signal "mirroring"**

Two panels may be connected together so source signals of the first panel will be duplicated at second panel.

An eight conductor category 5 CROSS OVER cable is required for connecting alarm panels directly to each other. Otherwise, standard cabling can be used with a facility's Ethernet hub or switch to set up a connection between panels.

- **Ethernet**

For each alarm panel to be networked, an eight

conductor category 5 network cable is required between each alarm panel and a facility's Ethernet hub or switch.

2.3.4 Power Supply

NOTE:

All wiring shall be protected from physical damage by raceways or conduit in accordance with local electrical code.

A power supply assembly is provided with the alarm panel. The installer must use 18AWG copper supply wiring minimum with an insulation of not less than 0.8mm (1/32in) thick. Power supply shall be connected to a building installed circuit breaker. Circuit breaker shall be a maximum of 15 amps and marked as disconnecting means for the alarm panel. It is recommended that the circuit breaker be in close proximity to the alarm panel and properly selected according to local regulations.

A knock-out is provided in the lower right hand corner of the backbox for main power (Figure 2.4). Wiring is to be installed in accordance with local standards.

No other holes should be punched or used.

Several additional holes or knockouts are provided on the top panel and bottom for entrance of low voltage field wiring (Figure 2.4).

Several additional knock-outs are provided on the top and bottom of the backbox for entrance of low voltage

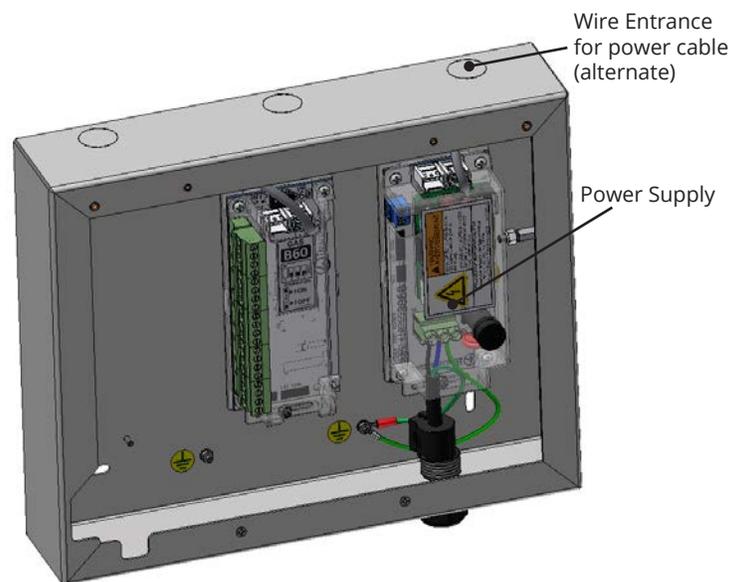


Figure 2.4: Wire Routing

TotalAlert Infinity™ HTM Medical Gas Notification System

field wiring. Alarm panels require 115 to 230VAC 50/60Hz 250mA mains power. Refer to HTM Central, Area, Combination Wiring Diagrams (Section 3).

For HTM 02-01 compliance, alarm panel must be connected to the essential power supply of the electrical system.

1. Remove the four screws from the plastic power supply shield
2. Remove the plastic shield from the power supply
3. Connect incoming Live and Neutral wires to the terminal block. Mains Earth wire connects to the ring terminal provided on the backbox grounding stud.
4. DO NOT remove or alter the green factory installed earth wire from the terminal block to the backbox.
5. Reinstall the plastic power supply shield while making sure all high voltage wires are contained within the plastic shield.
6. Secure the plastic shield with four screws.

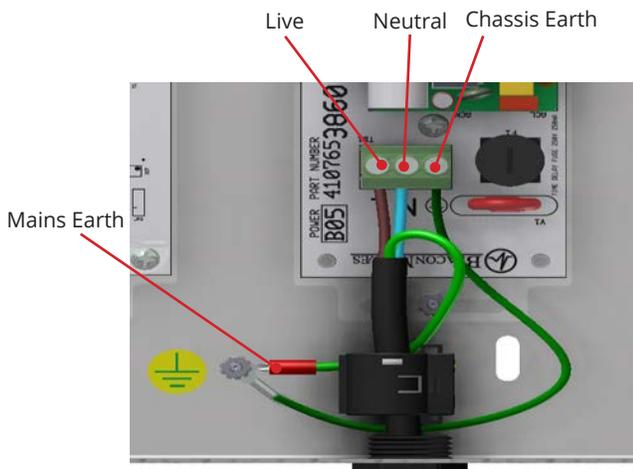


Figure 2.5: Supply Power Wiring

2.3.5 B60 Gas Input Board

An Area alarm has 8 Gas Inputs. Signals are numbered D01 thru D08. There is a single relay output for general gas fault notification.

1. Identify each pair of twisted gas sensor wires inside the alarm backbox (Figure 2.6).
2. Connect each pair of sensor wires to terminal blocks noting the correct polarity Red(+), Black (-). HTM Area Wiring Diagram (Section 3.2).

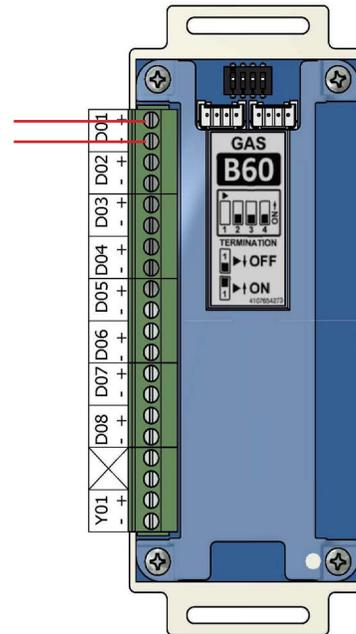


Figure 2.6: B60 Board Wire Routing



WARNING:



RISK OF ELECTRICK SHOCK

Disconnect power at the circuit breaker before removing power supply shield.

TotalAlert Infinity™ HTM Medical Gas Notification System

2.3.6 B30 Gas Input Board

A Central or Combination alarm panel can contain a signal input board, maximum of 1 board or 20 BeaconMeades Line Contact Monitoring signals.

1. Input signals on the B30 board are grouped as Channels 1-5 with each containing a COM and X1-X4.
2. Identify each group of twisted wires that are field installed inside the alarm backbox.
3. Route each group of wires as shown in Figure 2.6 to the appropriate terminals on input board. Refer to HTM Central / Combination Wiring Diagrams (Section 3.1 / 3.3)

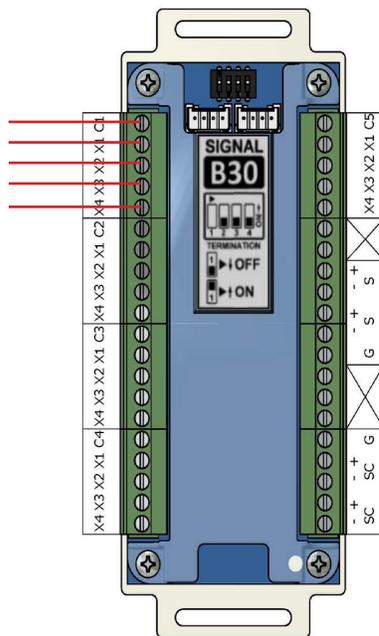


Figure 2.7: B30 Board Wire Routing

2.3.7 B4X Relay Output Board

A Central or Combination alarm can contain multiple relay output boards; up to a maximum of 4 boards with 16 relay outputs each. The B4X boards (B40, B41) utilize normally closed dry contact relay outputs. The outputs on the B4X boards are labeled Y01 through Y16.

Identify each pair of field installed relay output signal wires inside the alarm backbox. Route each pair of relay output wires as shown in Figure 2.8 to the appropriate terminals on the relay board. Connect each pair of signal wires to the terminal blocks, noting the correct polarity (+,-). Refer to HTM Central/ Combination Wiring Diagram (Section 3.1/3.3).

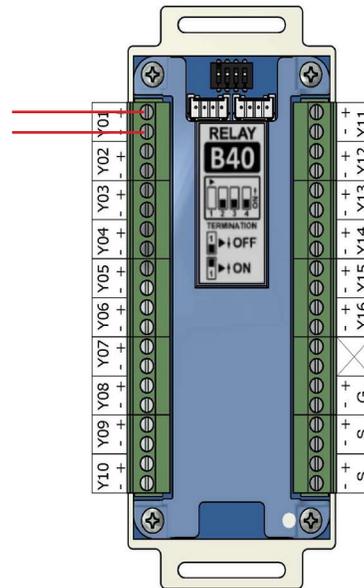


Figure 2.8: B4X Board Wire Routing

TotalAlert Infinity™ HTM Medical Gas Notification System

2.3.8 B50 4-20mA Combination Board

A Combination alarm can contain a B50 board that contains four 4-20mA inputs that can be used with a two or three-wire transmitter. The board also six normally closed dry contact relay outputs. Each alarm panel can have a maximum of one B50 board.

Identify each set of field installed 4-20mA input signal wires (2 or 3 wires per set) inside the alarm backbox. Route each set of input wires to the appropriate terminals on the B50 board. Connect each set of signal wires to the terminal blocks, noting the correct polarity (Figure 2.9).

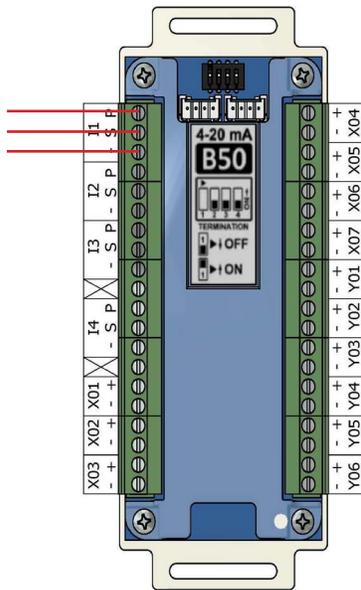


Figure 2.9: B50 Board Wire Routing



CAUTION:

Source equipment signal wires must be connected to normally-closed, dry contacts. No electrical voltage can be present and contacts must be closed during normal equipment operation. When contacts open, an alarm condition will be activated.

2.3.9 Alarm Panel “Mirroring”

Each alarm panel has an Ethernet port on the back of the front panel assembly. By connecting the alarm to the hospital network, via Ethernet, or directly cabling it to another alarm panel, signals and gas pressures can be pulled from one panel and displayed on another panel.

A category 5 CROSS OVER cable is required for connecting alarm panels directly to each other. Otherwise, standard cabling can be used with a facility’s Ethernet hub or switch to connect panels.

2.3.10 General Fault Relay

The B60 Gas Input board is supplied with an alarm panel general fault output relay.

This relay has a set of dry contacts that is wired normally closed.

The relay will activate when ANY alarm on the ENTIRE alarm panel is activated. Relay will remain activated as long as alarm condition is active, even if audible alarm is silenced by MUTE button.

When alarm condition is corrected, relay will deactivate. Relay contact ratings are 5A @ 30VDC / 3A @ 250VAC. Refer to HTM Area Wiring Diagram (Section 3.2).

2.3.11 Ethernet

Alarms can be connected to a facility’s network via Ethernet by plugging the network cable to the port provided on the back of the alarm front panel.

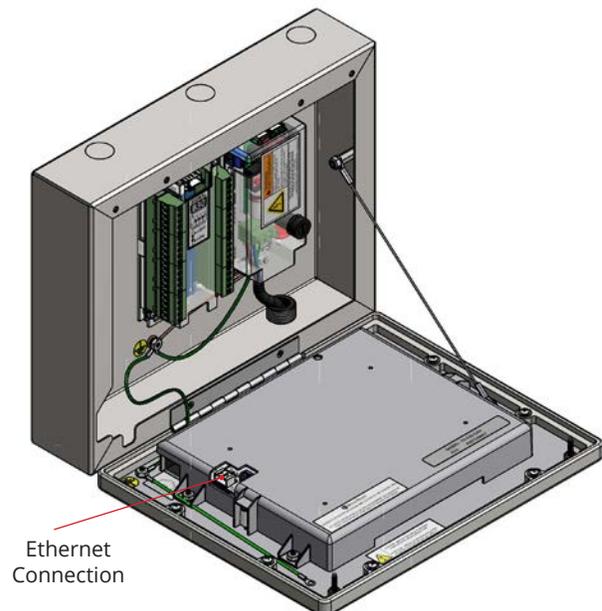


Figure 2.10: Ethernet Connection

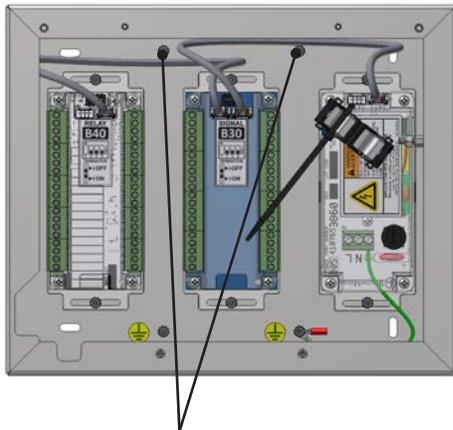
TotalAlert Infinity™ HTM Medical Gas Notification System

2.3.12 Field Wiring Cable Shield Grounding

All field wiring cable shields must be grounded inside alarm panel back box.

Studs are provided in the top and bottom of the alarm back box for ring terminals (Figure 2.11).

Shields from several cables may be wrapped together and crimped into one ring terminal (by others).



Grounding Studs

Figure 2.11: Cable Shield Grounding-Zone



CAUTION:

Keep shield wires to ground screw as short as possible so they can not touch front panel circuit boards when front panel is closed.

2.3.13 BACnet

The BeaconMedæx TotalAlert Infinity™ HTM control systems utilize the TCP/ IP family of protocols for communication and each alarm has a unique IP address.

Each BACnet enabled TotalAlert Infinity™ alarm conforms to the BACnet protocol.

- **Protocol Implementation Conformance Statement**

Each BACnet enabled TotalAlert Infinity™ alarm has available a Protocol Implementation Conformance Statement (PICS). The PICS is a written document created by BeaconMedæx that identifies the particular options specified by BACnet that are implemented in the TotalAlert Infinity™ alarm.

- **BACnet Conformance**

BACnet Vendor ID: 543

Alarm Profile: BACnet Smart Sensor (B-SS)
BIBB (BACnet Interoperability Building Blocks)

Supported:

- Read Property - B (DS-RP-B)
- Dynamic Device Binding - B (DM-DDB-B)
- Dynamic Object Binding - B (DM-DOB-B)

Object Type Support: Analog value, Binary value, Device.

Data Line Layer Options: ISO 8802-3 ("Ethernet") LAN

Character Set Support: ISO 10646 (UTF-8) Encoding

2.4 Finish Assembly

2.4.1 Front Panel Mounting



ATTENTION:
Observe Precautions for Handling
ELECTROSTATIC SENSITIVE DEVICES

1. Remove front panel assembly from packaging.
2. Remove front panel mounting screws from alarm panel backbox assembly.
3. Remove lanyard mounting nut from alarm panel back box assembly.
4. Attach front panel to alarm panel backbox using screws removed in step 2 (Figure 2.12).
5. Attach lanyard to alarm panel backbox using screws removed in step 3 (Figure 2.12).
6. Remove nut from front panel grounding lug.
7. Install front panel grounding wire using nut removed in step 6.
8. Connect the grey cable on the front panel to the open power/communication port on the power supply.

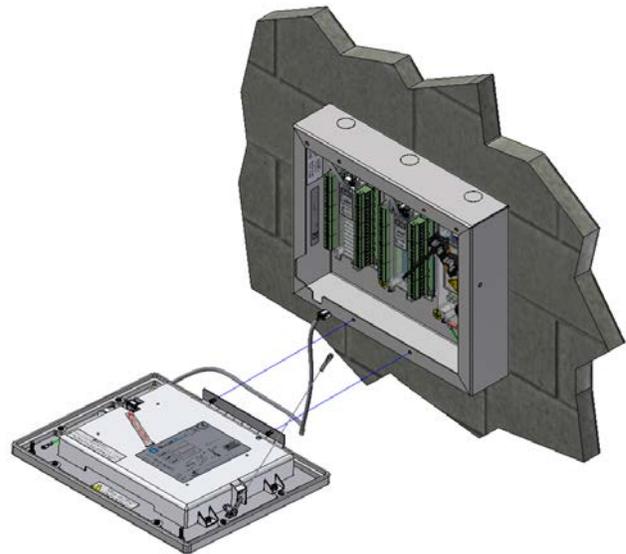
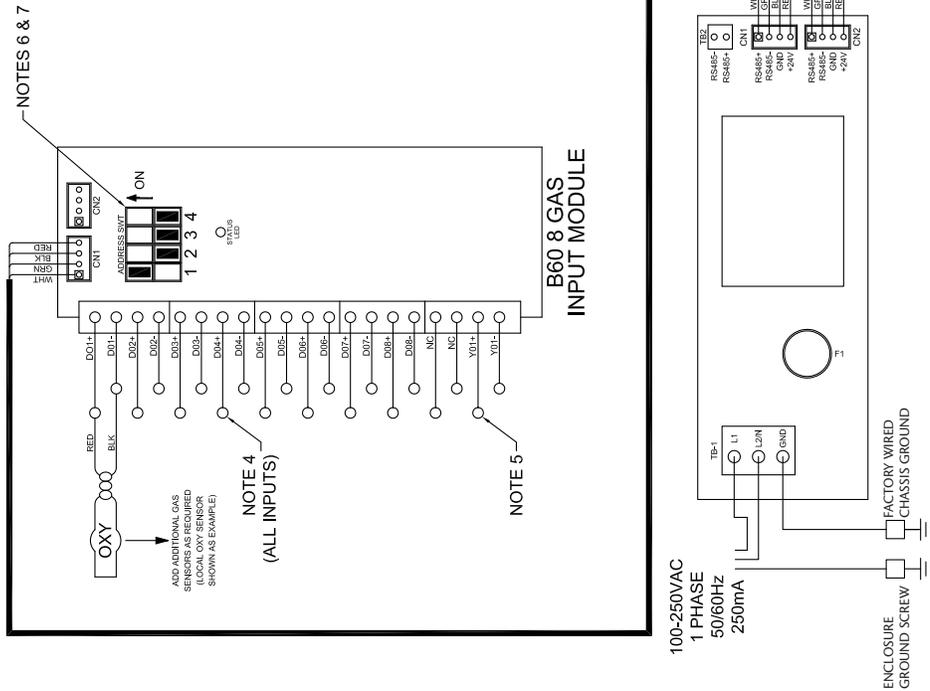


Figure 2.12: Attach Front Panel and Lanyard

TotalAlert Infinity™ HTM Medical Gas Notification System

3.2 HTM Area Wiring Diagram

- NOTES:
1. MAIN DISCONNECT PROVIDED BY OTHERS
 2. FIELD POWER WIRING TO BE COPPER RATED FOR 75°C MINIMUM
 3. FIELD SIGNAL WIRING TO BE MINIMUM 22AWG MULTI-CONDUCTOR CABLE MUST BE TWISTED PAIR TYPE WITH SHIELD. TOTAL CIRCUIT LENGTH NOT TO EXCEED 100 METERS.
 4. SIGNAL INPUTS (UP TO 8) FROM GAS SENSOR MODULES.
 5. RELAY OUTPUT CONTACT RATED 3A / 30VDC MAX.
 6. SEE MODULE LABEL TO SET MODULE ADDRESS (POSITIONS 2, 3 & 4)
 7. SET ADDRESS SWT POSITION 1 TO "ON" FOR LAST MODULE IN CHAIN ONLY.



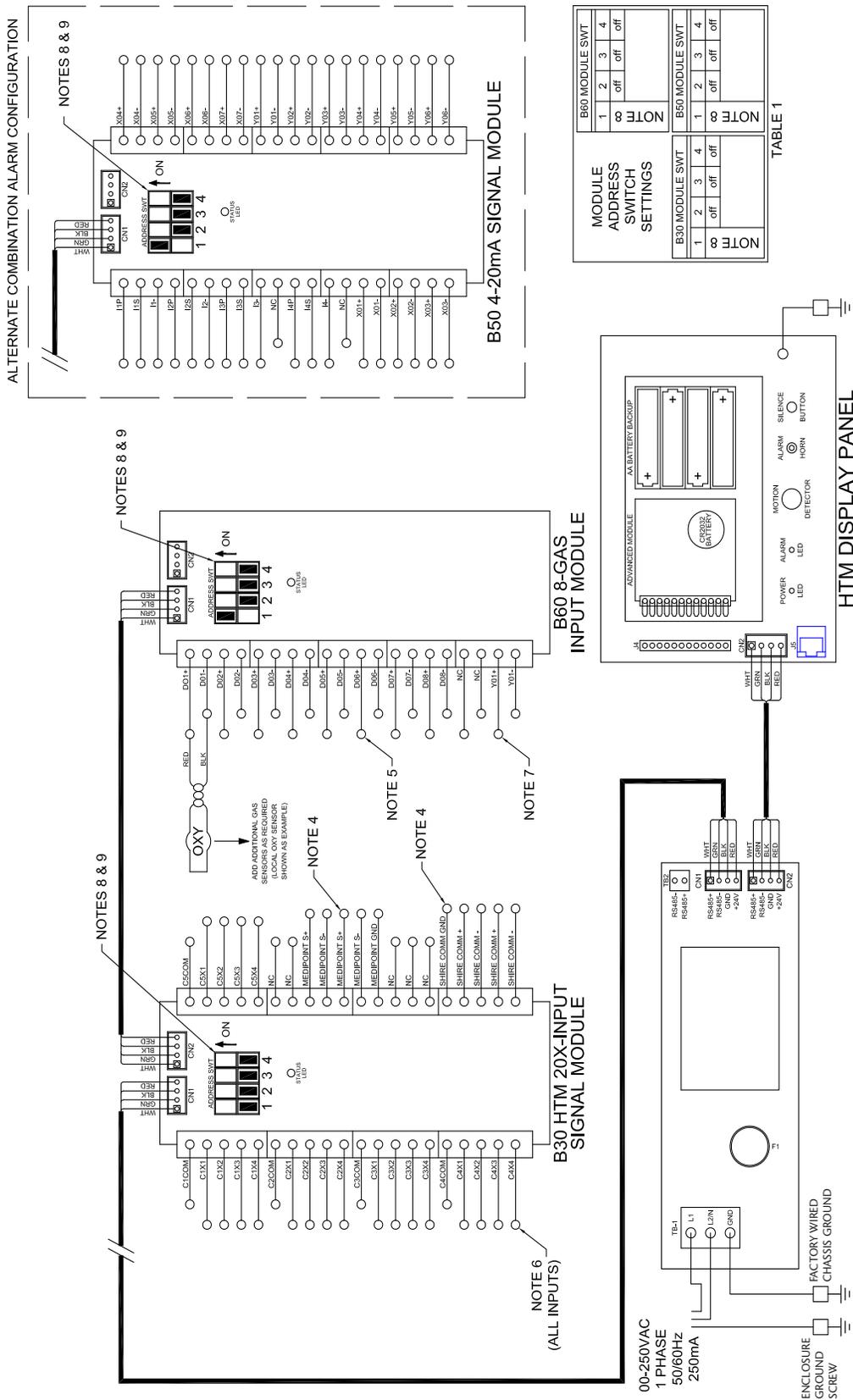
MODULE ADDRESS SWITCH SETTINGS

TABLE 1				
B60 MODULE SWT	1	2	3	4
NOTE	off	off	off	off

Figure 3.2: Wiring Diagram for TotalAlert Infinity™ Area Alarm

TotalAlert Infinity™ HTM Medical Gas Notification System

3.3 HTM Combination Wiring Diagram



- NOTES:**
1. MAIN DISCONNECT PROVIDED BY OTHERS
 2. FIELD POWER WIRING TO BE COPPER RATED FOR 75°C MINIMUM
 3. FIELD SIGNAL WIRING TO BE MINIMUM 22AWG
 4. MULTI-CONDUCTOR CABLE MUST BE TWISTED PAIR TYPE WITH SHIELD
 5. TOTAL CIRCUIT LENGTH NOT TO EXCEED 100 METERS
 6. MEDPOINT & SHIRE WIRING TO BE MINIMUM 24 AWG.
 7. MULTI-CONDUCTOR CABLE MUST BE TWISTED PAIR TYPE WITH SHIELD.
 8. SIGNAL INPUTS FROM BEACONMEDA/ES LINE CONTACT MONITORING CONTACTS. RELAY OUTPUT CONTACT RATED 3A / 30VDC MAX. SEE MODULE LABEL TO SET MODULE ADDRESS (POSITIONS 2, 3 & 4). VERIFY WITH TABLE 1.
 9. SET ADDRESS SWT POSITION 1 TO "ON" FOR LAST MODULE IN CHAIN ONLY.

Figure 3.3: Wiring Diagram for TotalAlert Infinity™ Combination Alarm

4.0 Operation

4.1 Overview

The TotalAlert Infinity™ Medical Gas Notification System is a touchscreen gas pressure and system monitoring alarm created for ease of use.

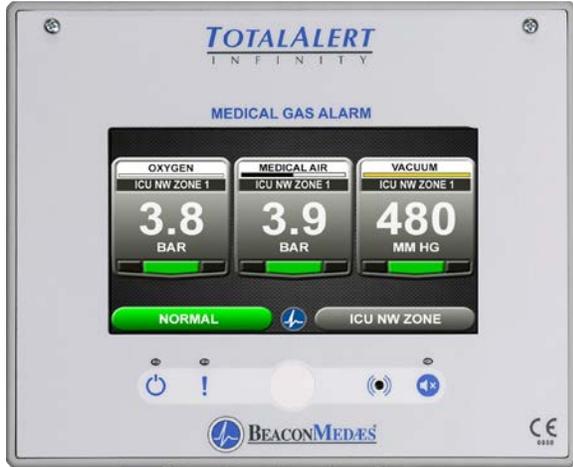


Figure 1: Area Alarm Main Screen

4.1.1 Main Screen

The first screen that users see on a configured unit is the MAIN screen. The MAIN screen is the main view for the alarm and shows the pressure status of all of the gases or source signals the alarm is monitoring.

NOTES:

The main screen will appear different depending on whether the alarm panel is configured as an Area, Central or Combination.

An Area alarm main screen will show gas pressure badges, a central alarm main screen will show source badges, and a combination alarm main screen will show both gas badges and source badges.

To provide an aesthetic display and maintain consistency in accordance with recognized and established medical gas service sequencing, it is recommended that displays are positioned in the following order on each alarm panel starting with the left hand column:

- Medical Oxygen
- Nitrous Oxide
- Oxygen/Nitrous Oxide Mix (50/50)
- Medical Air 400 kPa
- Medical Air 700 kPa
- Medical Vacuum

4.1.2 Gas Badge

Every gas monitored by the alarm will have a gas badge which will show the following information:

- Gas being monitored
- Location where gas is being used
- Gas pressure value
- Gas pressure status (Low, Normal, or High)



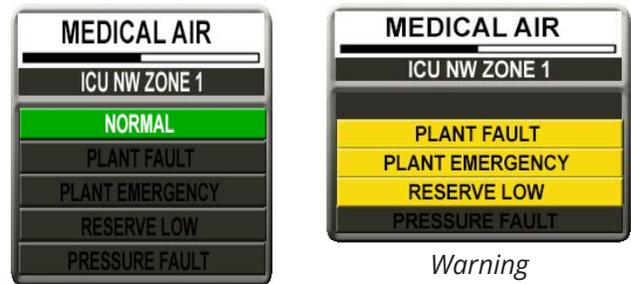
Figure 2: Gas Badge

4.1.3 Source Signals

Every source signal monitored by the alarm will display the following information once configured:

- Equipment being monitored
- Location of the source equipment
- Signal being monitored
- When all conditions are normal it will show "NORMAL" in green (Figure 4.3). If the conditions are out of normal range, it will show yellow (warning). During a pressure fault condition it will show "PRESSURE FAULT" in red and the normal message will disappear (Figure 4.4).

Each source badge can show the status of up to 4 signals.



Normal

Warning



Pressure Fault

Figure 3: Source signal status

TotalAlert Infinity™ HTM Medical Gas Notification System

NOTES:

To provide an aesthetic display and maintain consistency in accordance with recognized and established medical gas service sequencing, it is recommended that displays are positioned in the following order on each alarm panel starting with the left hand column:

- Medical Oxygen (cryogenic and manifolds)
- Nitrous Oxide (manifolds)
- Oxygen/Nitrous Oxide mix 50/50 (manifolds)
- Medical Air 400kPa (plant and manifolds)
- Medical Air/Surgical Air 700kPa (plant and manifolds)
- Medical Vacuum (plant)
- AGS (simplex or duplex)
- Helium/Oxygen mixture
- Point alarms (as required)



Figure 4: Combination Alarm Screen

4.1.4 Toolbar

Running from left to right across the bottom of the MAIN screen is the toolbar. The Normal toolbar is available when the alarm is operating in normal status and shows:



Figure 5: Normal Toolbar

To switch to the Icon toolbar, touch the HOME button.



Figure 6: Icon Toolbar

Icons on the toolbar:

1. Home button. This icon button toggles to the MAIN screen.
2. Alarm button. This icon button toggles to the ACTIVE ALARM screen.
3. Configuration button. This icon button toggles to the CONFIGURATION screen.
4. Information button. This icon button toggles to the INFORMATION screen.
5. History button. This icon button toggles to the HISTORY screen.

The button that corresponds to the screen currently in use will be blue.

4.1.5 Fault Status

If a gas sensor is measuring above or below the alarm level, the high or low pressure indicator on the gas badge will flash for the gas pressure out of range.

If a gas sensor becomes disconnected or shorted, both high and low indicators for that gas will flash and an error code and message will be displayed.

If a configured source signal becomes an open circuit, the source badge and the signal status will change from green to blinking red.

The Icon toolbar will appear, and the Alarm button will be flashing red. By default the screen will change to the Active Alarm Screen.

Users can touch any flashing red light to go to the ACTIVE ALARM screen.

Alarm Button (Red)



Figure 7: Fault Status

NOTE:

The Normal toolbar will automatically reappear when all faults are resolved.

TotalAlert Infinity™ HTM Medical Gas Notification System

4.1.6 Display Screens

Active Alarm Screen

The ACTIVE ALARM screen provides detailed information about pressures or signals that are in alarm condition. If an active alarm instruction has been set up, users will also see an instruction on how to respond to the alarm (see section 4.5 - Customized Instructions Set Up).



Figure 8: Active Alarm Screen

Configuration Screen

The CONFIGURATION screen is used to configure the alarm. The configuration screen is only accessible with a password. It is divided into three parts.

The top left section is the Display section. It contains a small representative view of the MAIN screen and buttons for configuring the MAIN screen.

The top right section is the Settings section. Tabs not accessible are grayed out.

The bottom section is the Icon toolbar.



Figure 9: Configuration Screen

Information Screen

The INFORMATION screen provides pertinent information about the alarm—including high and low alarm values and firmware details—in one central place.



Figure 10: Information Screen

NOTE:

The Wireless (WIFI) tab is only present on the information screen if the default setting has been changed on the WIFI setting screen to allow WIFI control (See Section 4.9).

Version Tab

Touch the VERSION tab to view details about the:

- Series, code, and style of the alarm
- Firmware version for the main display board and additional boards

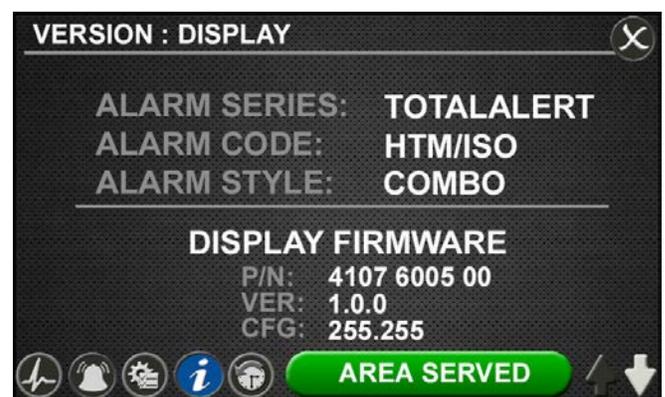


Figure 11: Version Tab

NOTE:

The version screens automatically scroll. Touch the blinking up or down arrow in the lower right to stop the automatic scroll and start the manual scroll.

TotalAlert Infinity™ HTM Medical Gas Notification System

Touch the X button in the upper right to close and return to the INFORMATION screen.

Alarm Points Tab

Touch the ALARM POINTS tab for a quick view of the alarm points—the low and high set points—for each gas badge (Area alarm) or source signal configuration (central alarm).

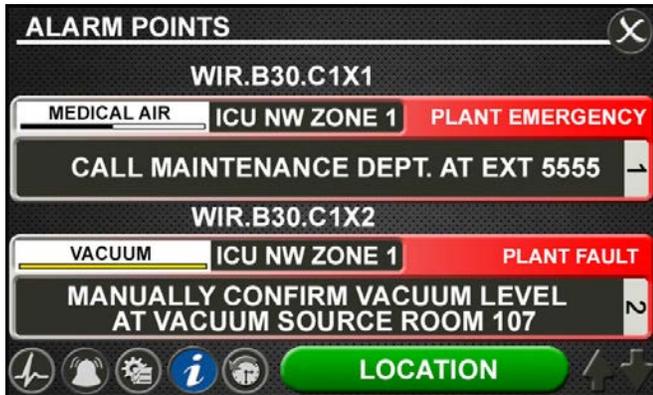


Figure 12: Alarm Points Tab

This screen provides a complete view of the configuration and is a fast way to check items such as:

- Location where the pressure sensors and source signals are physically wired.
- Gases Monitored
- Areas Monitored
- Low and high pressure set points for area signals
- Source Signals Monitored

Touch the X button in the upper right to close and return to the INFORMATION screen.

Test Alarm Tab

Touch the TEST ALARM tab to run a quick test of the hardware.

The audible alarm will sound for one-to-two seconds to test that the horn is working properly.

The LEDs on the front of the alarm will illuminate as well to show that they are still functioning.

Warnings Tab

Touch the WARNINGS tab to view any possible active warnings that would include lost network communication with manually enrolled devices, lost connection to a connected/initialized board, or when a central signal input is wired, but not assigned/programmed to an alarm signal.



Figure 13: Warnings Tab

WiFi Tab

Touch the Wireless Ethernet (WiFi) tab to view WiFi Status (On or Off), SSID identification, and IP Address. WiFi Status can be turned On or Off by touching the designated tabs.



Figure 14: WiFi Tab

TotalAlert Infinity™ HTM Medical Gas Notification System

History Screen

To view up to 100 alarm events on screen, touch the history button located on the icon toolbar. User can easily scroll to view the events by touching up/down arrows in the bottom right corner of the screen.

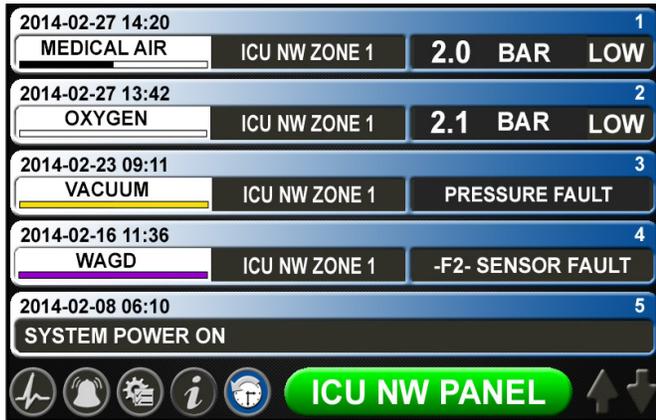


Figure 15: History Screen

4.2 Alarm Configuration

To set up or change the configuration of an alarm, start on the CONFIGURATION screen. Users are always prompted to enter the password when accessing this screen.



Figure 16: Password entry on Configuration screen

Type the default password (121212), and touch the Enter button. You will be prompted to change the password if you have not done so previously.

The CONFIGURATION screen displays.

Normal Status Message/Panel ID Description

The TotalAlert Infinity™ alarm allows for customization of certain labels and messages.

Normal Status Message

To change the message that is communicated when the alarm is operating in normal status:

1. Touch the [A] button that is located to the left of the numeric display (Figure 4.17).



Figure 17: Configuration Screen



Figure 18: Normal Status Message screen

2. Touch the Erase button on the keyboard to delete the existing message.
3. Enter the new word or message.
4. Touch the Save button.

TotalAlert Infinity™ HTM Medical Gas Notification System

Panel ID Description

To change the description of the location of the alarm panel:

1. Touch the [B] button that is located to the right of the numeric display (Figure 4.17).
2. Touch the Erase button on the keyboard to delete the existing description.
3. Enter the new description.
4. Touch the Save button.



Figure 19: Panel ID Description screen

4.3 Setting Up an Area Alarm

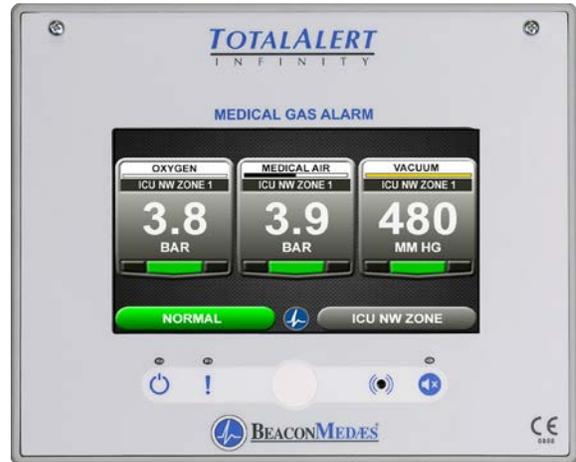


Figure 20: Area Alarm Main Screen

4.3.1 Initial Setup of an Unconfigured Area Alarm

To begin setup of the alarm, first pull the battery tab located on the back of the front panel to activate battery backup of the alarm.



Figure 21: Battery Pull Tab

TotalAlert Infinity™ HTM Medical Gas Notification System

The SETUP INFORMATION screen is the first screen that users will see on an unconfigured alarm. (The MAIN screen is the first screen that users will see on a configured alarm.)

Password Setup - Unconfigured Alarm

- Touch the Configuration button.



Configuration Button

Figure 22: Setup Information Screen

Entering the Password

The ENTER SECURITY PASSWORD screen appears.

- Enter the security password. (The default password is 121212.)
- Touch the Enter button.
- Touch Continue to advance to the CONFIGURATION screen.



Figure 23: Entering the Security Password

Note:

If you would like to change the password, touch Change Password. Enter a 4-10 digit password, and touch the Enter button. Confirm the new password. Touch the X button in the upper right to close the SECURITY PASSWORD screen.



Figure 24: Changing the Security Password

- The CONFIGURATION screen will display as unconfigured and ready for setup.



Figure 25: Unconfigured Configuration Screen

TotalAlert Infinity™ HTM Medical Gas Notification System

Primary Settings Tab

The PRIMARY SETTINGS tab allows you to select the alarm type, initialize boards, and select gas inputs.

- Touch the PRIMARY SETTINGS tab



Alarm Type Tab

The ALARM TYPE screen defines which type of alarm will be displayed and drives later setup functions.

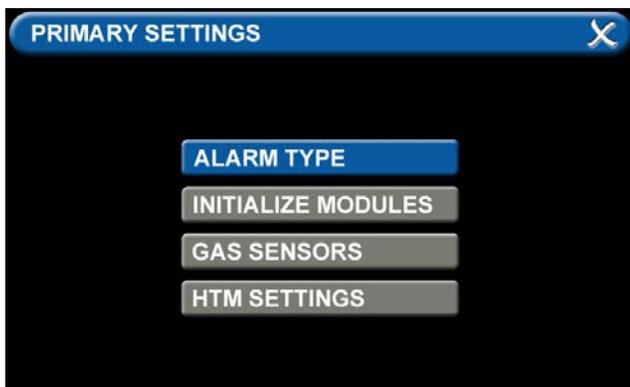


Figure 26: Alarm Type Tab

- Touch the ALARM TYPE tab.
- Choose a code style based on code requirements.



Figure 27: Choosing Code and Alarm Styles

- Touch the AREA tab
- Touch the Save button when you see checks beside your selections to save the settings and return to the PRIMARY SETTINGS screen.

Note: To clear your selections, touch the Erase button.

Initialize Modules Tab

The PRIMARY SETTINGS screen will now display with ALARM TYPE checked, INITIALIZE MODULES active, and the other tabs grayed out.

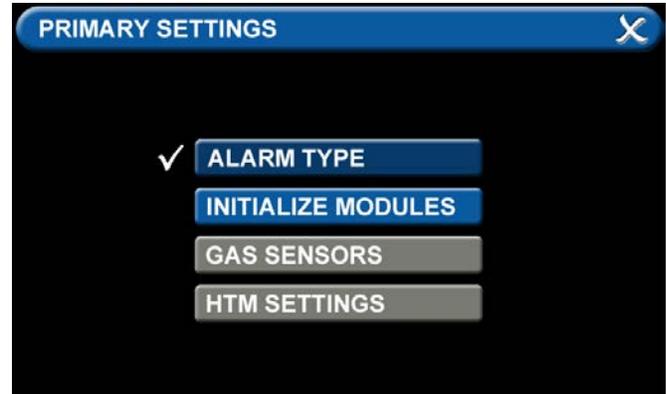


Figure 28: Initialize Modules Tab

- Touch the INITIALIZE MODULES tab.

The INITIALIZE MODULES screen is used to set up the boards that are installed. The boards function as the input/output hardware of the alarm.

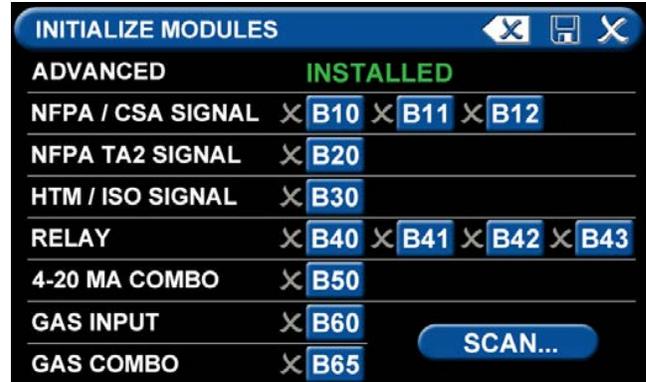


Figure 29: Initialize Modules Screen

At this point, you have two options:

1. Either touch the Scan button to prompt the alarm to auto fill the screen for you.
- OR
2. Complete the screen by selecting the boards installed in the alarm.

TotalAlert Infinity™ HTM Medical Gas Notification System

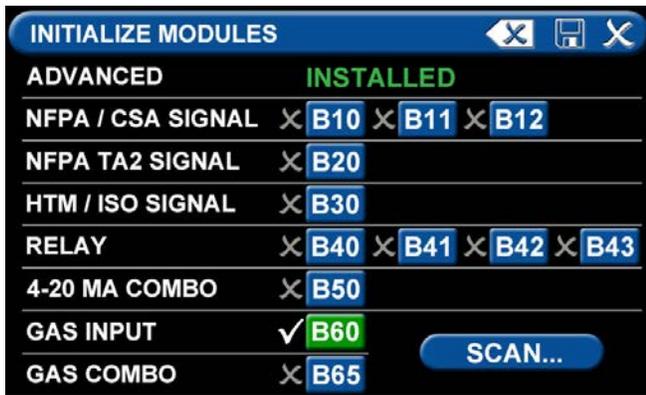


Figure 30: B60 board selected

Note:

THE GAS INPUT / B60 board must be selected during the configuration of an area alarm.

- Touch the Save button when you see checks beside your selections.

Gas Sensors Tab

The PRIMARY SETTINGS screen will now display with ALARM TYPE and INITIALIZE MODULES checked, GAS SENSORS active, and the last tab grayed out.

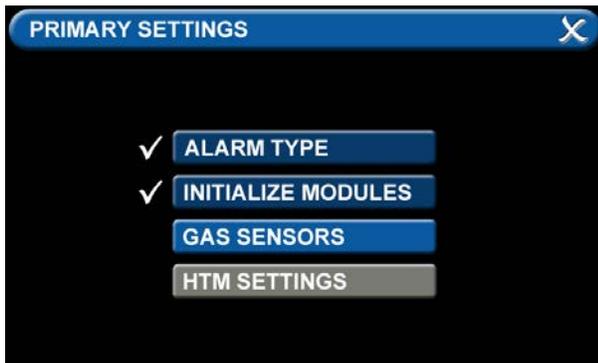


Figure 31: Gas Sensors Tab

- Touch the GAS SENSORS tab.

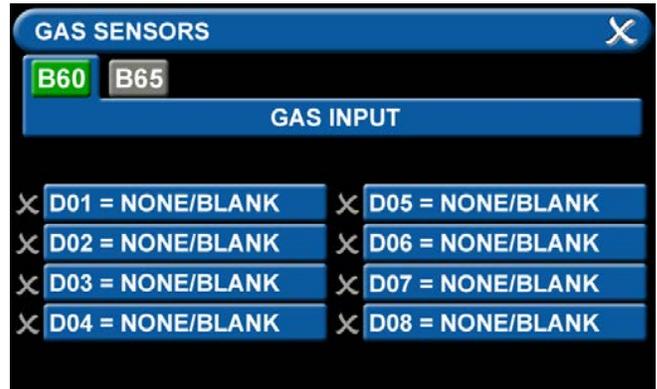


Figure 32: Gas Input Screen

Users may select up to eight different gases on the GAS INPUT screen. These gases correspond to the digital gas sensors wired into the GAS INPUT / B60 board (see section 2.4.2).

- To select the first gas, touch the D01 = NONE/BLANK tab.



Figure 33: Gas Sensors Screen

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- Touch the right and left arrows at the bottom of the screen to scroll through additional gas choices, including options to create custom mixes. Select the gas that is wired into the D01 input on the GAS INPUT / B60 board.



Figure 34: Gas Choices

- Touch the Save button when you see a check beside your selection.
- (If an alarm sounds, press the Mute button on the panel under the screen and continue with setup.)
- Repeat to add additional gases.
- Touch the X button in the upper right to close the GAS SENSORS screen and return to the PRIMARY SETTINGS screen. The alarm will retain your information.
- Touch the X button in the upper right to close the PRIMARY SETTINGS screen. The alarm will retain your information.

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4.3.2 Configuring Gas ID Badges

The TotalAlert Infinity™ Area alarm is designed to allow configuration of eight gas badges using the B60 board.

To configure the first badge to custom settings, touch the [1] button in the numeric display of the configuration screen (Figure 4.17).

Eight tabs are used for configuration (Figure 4.34). Tabs are listed in alphabetical order

A = [GAS INPUT]	To change which wired input should be shown on the badge
B = GAS DESC	To change color codes based on standard and country
C = [GAS NAME]	To label the gas
D = AREA MONITORED	To edit the location label for the specific gas
E = [UNITS OF MEASURE]	To change the displayed unit of measure for the pressure/vacuum
F = LOW ALARM SETTINGS	To adjust the value that should indicate that the pressure is low
G = HIGH ALARM SETTINGS	To adjust the value that should indicate that the pressure is high
H = ZERO OFFSET	To make small adjustments to the displayed pressure based on user preference

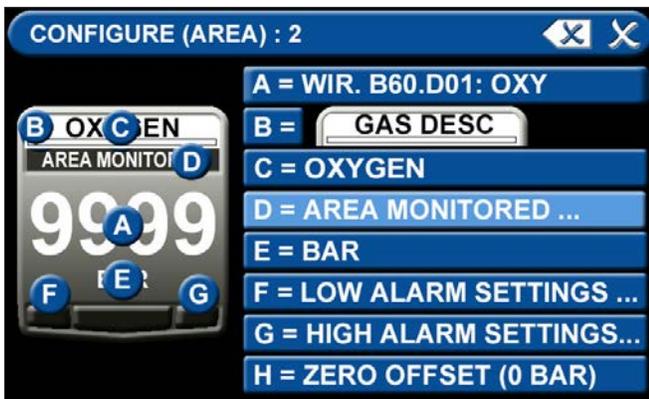


Figure 35: Configuring Gas Badges

A = [Gas Input] Tab



Figure 36: Gas Input Tab

To change which wired sensor should be displayed on that badge:

1. Touch the tab for the appropriate wired gas sensor.
2. Touch the Save button to close the screen.

B = Gas Desc Tab



Figure 37: Gas Desc Tab

To change color codes based on your standard and country:

1. Scroll through the codes using the right and left arrows at the bottom of the screen.
2. Touch the tab for the appropriate code.
3. Touch the Save button when you see a check beside your selection.

NOTE:

If the alarm default is correct, touch the X button in the upper right to close the screen.

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C = [Gas Name] Tab



Figure 38: Gas Text Screen

- Touch the Erase button on the keyboard to delete the gas name.
- Enter the new gas name. Touch the [<AÑ] to toggle to symbols and extended Latin Characters. Touch the [1AZ] key to toggle back to letters and numbers.
- Touch the Save button

D = Area Monitored Tab



Figure 39: Area Monitored Tab

To add locations to be monitored:

1. Touch an unused location tab.
2. Using the keyboard, enter the name of the location that you would like to monitor (e.g., ROOM 1). Enter multiple locations as needed (e.g., Room 1, Room 5).
3. A check appears when the location is selected, the save button has to be pressed if the selection is new.

To edit the location information, touch the Pencil button.

E = [Units of Measure] Tab



Figure 40: Units of Measure Tab

To change the unit of measure:

1. Touch the tab for the appropriate unit of measure.
2. Touch the Save button to close the screen.

F = Low Alarm Settings Tab

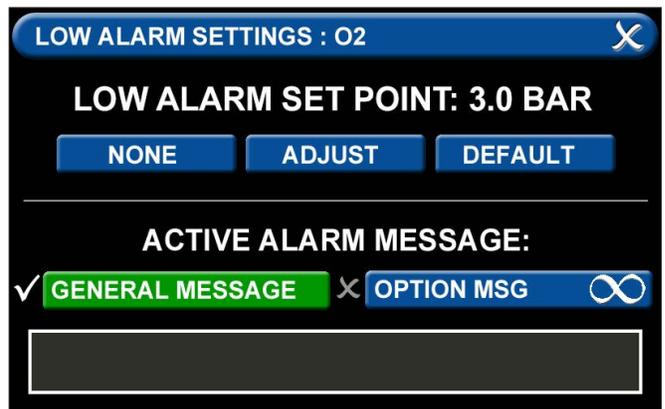


Figure 41: Low Alarm Settings Tab

You can remove the low alarm set point or customize the low alarm set point.

To remove the low alarm set point:

1. Touch the NONE tab.
2. Touch the check on the CONFIRM SETTINGS CHANGE screen.

To customize the low alarm set point:

1. Touch the ADJUST tab.
2. Enter the new set point.
3. Touch the Save button.

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Active Alarm Instruction:

To set facility instructions for active alarms, touch either the GENERAL MESSAGE or OPTION MSG tab. The alarm defaults to GENERAL MESSAGE. See Section 4.6 for how to set up custom instructions.

G = High Alarm Settings Tab



Figure 42: High Alarm Settings Tab

You can remove the high alarm set point or customize the high alarm set point.

To remove the high alarm set point:

1. Touch the NONE tab.
2. Touch the check on the CONFIRM SETTINGS CHANGE screen.

To customize the high alarm set point:

1. Touch the ADJUST tab.
2. Enter the new set point.
3. Touch the Save button.

H = Zero Offset Tab



Figure 43: Zero Offset Tab

In some cases, facility dial gauges may show slightly different readings than the TotalAlert Infinity™ alarm (e.g., 3.2 BAR versus 3.0 BAR). To match the TotalAlert Infinity™ alarm exactly to a facility dial gauge:

1. Select the offset amount.
2. Touch the Save button to close the screen.

Configuring Additional Gas Badges

Configure additional gas badges by touching the number on the main configuration screen that corresponds with the gas badge and repeating the steps listed above.

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4.4 Setting Up a Central Alarm

The central alarm monitors whether source equipment is working properly.

The information for the signals connected in the field needs to be entered into the alarm using the touch screen interface.



Figure 44: Central Alarm Main Screen

To set up or change the configuration of an alarm, follow the steps outlined under Alarm Type Tab.

4.4.1 Initial Setup of an Unconfigured Central Alarm

To begin setup of the alarm, first pull the battery tab located on the back of the front panel to activate battery backup of the alarm.



Figure 45: Battery Pull Tab

The SETUP INFORMATION screen is the first screen that users will see on an unconfigured alarm.

(The MAIN screen is the first screen that users will see on a configured alarm).

- Touch the Configuration button.



Configuration Button

Figure 46: Setup Information Screen

Entering the Password

The ENTER SECURITY PASSWORD screen appears.



Figure 47: Entering the Security Password

- Enter the security password. (The default password is 121212.)
- Touch the Enter button.
- Touch Continue to advance to the CONFIGURATION screen.
- The CONFIGURATION screen will display as unconfigured and ready for setup

Note:

If you would like to change the password, touch Change Password. Enter a 4-10 digit password, and touch the Enter button. Confirm the new password. Touch the X button in the upper right to close the SECURITY PASSWORD screen.

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Figure 48: Changing the Security Password

Primary Settings Tab

The PRIMARY SETTINGS tab allows you to select the alarm type and initialize boards.



- Touch the PRIMARY SETTINGS tab.

Alarm Type Tab

The ALARM TYPE screen defines which type of alarm will be displayed and drives later setup functions.

- Touch the ALARM TYPE tab.

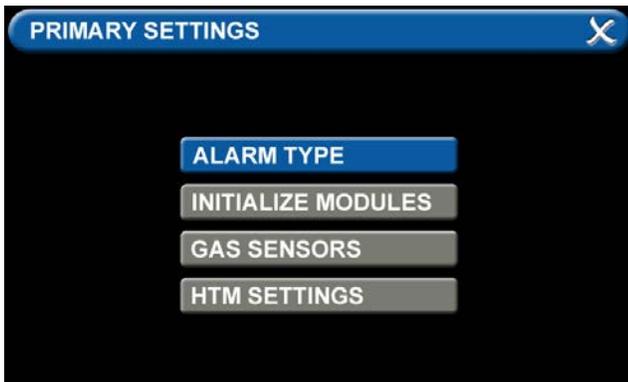


Figure 49: Alarm Type Tab

- Choose a code style based on code requirements.
- Touch the Central tab.



Figure 50: Choosing Code and Alarm Styles

- Touch the Save button when you see checks beside your selections to close the screen and return to the PRIMARY SETTINGS screen.

Note: To clear your selections, touch the Erase button.

Initialize Modules Tab

The PRIMARY SETTINGS screen will now display with ALARM TYPE checked and INITIALIZE MODULES active.

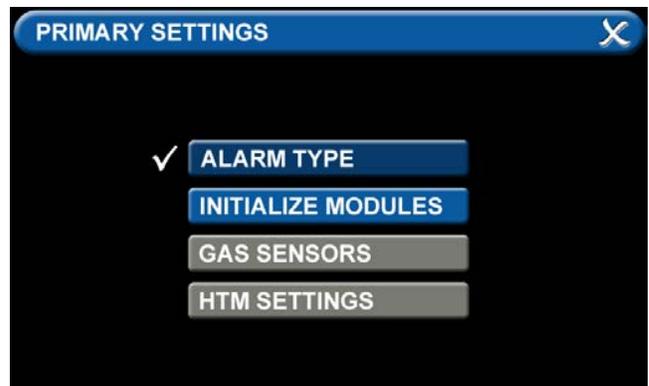


Figure 51: Initialize Modules Tab

- Touch the INITIALIZE MODULES tab. The INITIALIZE MODULES screen is used to set up the boards that are installed. The boards function as the input/output hardware of the alarm.

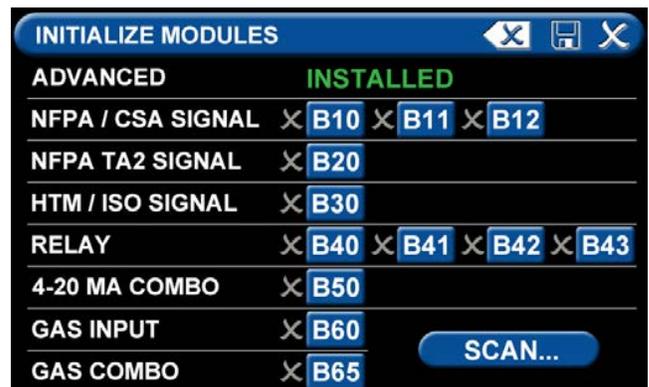


Figure 52: Initialize Modules Screen

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At this point, you have two options:

1. Either touch the Scan button to prompt the alarm to autofill the screen for you.

OR

2. Complete the screen by selecting the boards installed in the alarm.

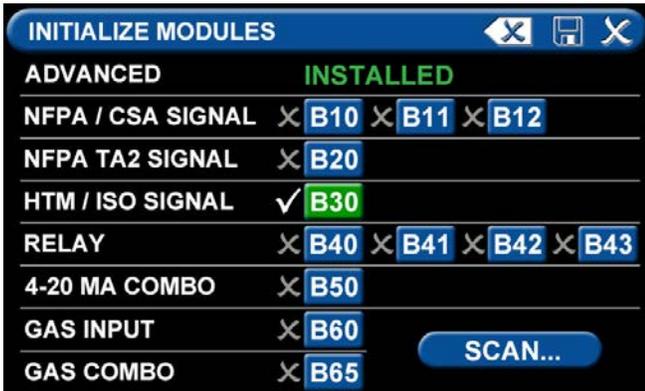


Figure 53: B30 board selected

- Touch the Save button when you see checks beside your selections.
- Touch the X button in the upper right to close and return to the CONFIGURATION screen.

The PRIMARY SETTINGS screen will now display with ALARM TYPE and INITIALIZE MODULES highlighted and checked and the other tabs grayed out.

- Touch the X button in the upper right to close and return to the CONFIGURATION screen.

Setting up the Location



Figure 54: Location Setup

Touch B to set the LOCATION text.



Figure 55: Entering the Location

Enter area served and touch save to return to the configuration screen. Touch the PRIMARY SETTINGS tab.

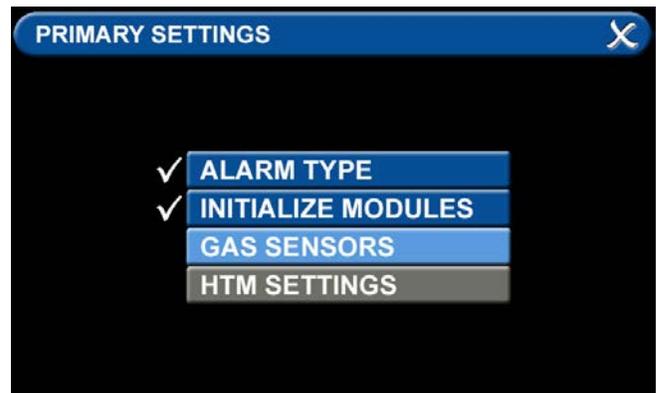


Figure 56: Primary Settings Screen

The PRIMARY SETTINGS screen will display with ALARM TYPE and INITIALIZE MODULES checked, GAS SENSORS active, and the last tab grayed out.

Touch the GAS SENSORS tab.

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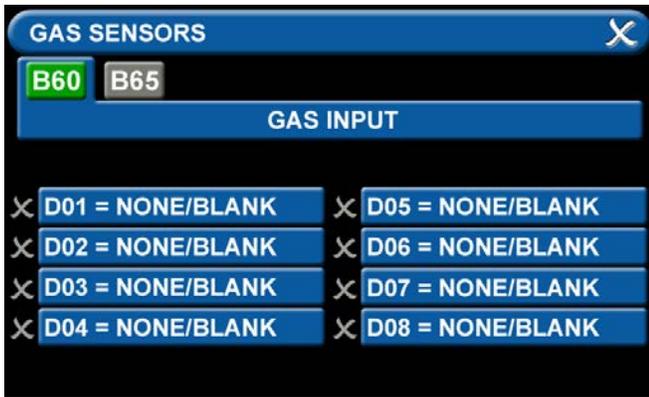
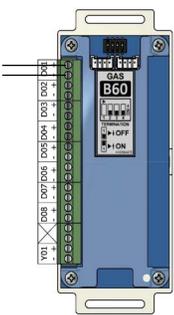


Figure 57: Gas Input Screen



Up to eight different gases may be selected on the GAS INPUT screen. These gases correspond to the digital gas sensors wired into the GAS INPUT / B60 board. To select the first gas, touch the D01 = NONE/BLANK tab.



Figure 59: Gas Sensors Selection

Touch the Save button when you see a check beside your selection (If an alarm sounds, press the Mute button on the panel under the screen and continue with setup).

Repeat starting at step 4.57 to add additional gases.

Touch the X button in the upper right to close the GAS SENSORS screen and return to the PRIMARY SETTINGS screen. Touch the X button in the upper right to close the PRIMARY SETTINGS screen. The alarm will retain your information.



Figure 58: Gas Sensors Screen

Select the gas that is wired into the D01 input on the GAS INPUT / B60 board. Touch the right and left arrows at the bottom of the screen to scroll through additional gas choices, including options to create custom mixes.

4.4.2 Configuring Source Badges

The TotalAlert Infinity™ central alarm is designed to allow the setup and monitoring of 6 source badges. Forty source locations with up to 8 source signal inputs for each location can be configured (maximum of 20 locations per gas type).

To configure alarm points in the first badge, touch the



Figure 60: Configuration Screen

Note:

Maximum wired input signals allowed is 20.

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(1) button in the numeric display (Figure 4.60).

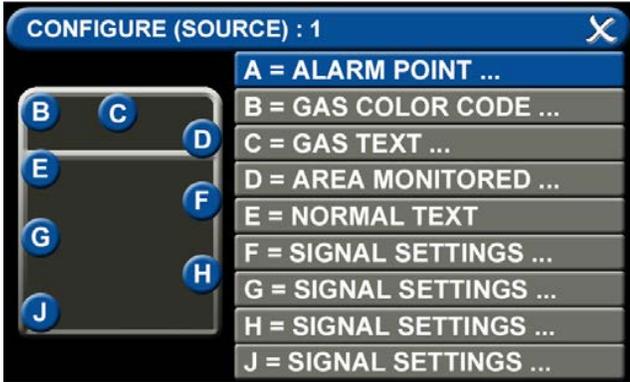


Figure 61: Configure Source Screen

A = Alarm Point

Touch the ALARM POINT tab to select the proper HTM Signal Channel.



Figure 62: HTM Signal Channel Configuration Screen

To identify the location where the wires are landed:

1. Touch the tab for the appropriate board and terminal block. (C1, C2, C3, C4, C5)
2. Touch the Save button when you see a check beside your selection.

B = Gas Color Code Tab



Figure 63: Gas Color Code Tab

To select the color code for the appropriate gas based on your standard and country:

1. Touch the B = GAS COLOR CODE tab (Figure 4.63)
2. Scroll through the gas types using the right and left arrows at the bottom of the screen.
3. Touch the tab for the appropriate code, or select a "custom" tab to create a unique source badge.
4. Touch the Save button when you see a check beside your selection. This will automatically fill in tabs C-J with default values for the gas selected. If changes are needed follow the next steps below.

C = Gas Text Tab



Figure 64: Gas Text Keyboard

Using the keyboard, enter the name of the area. To change the name of the gas:

1. Touch the C = [GAS TEXT] tab.
2. Touch the Erase button on the keyboard to delete the gas name.
3. Enter the new gas name. Touch the [<ÁÑ] to toggle to symbols. Touch the [1AZ] key to toggle back to letters and numbers.
4. Touch the Save button.

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D = Area Monitored



Figure 65: Configure Channels

Touch the D = (Area Monitored) Tab
On the SOURCE LOCATION screen:

1. Touch the 01 tab.
2. Using the keyboard, enter the name of the location for the source equipment being monitored (e.g., ROOM 1). Enter multiple locations as needed (e.g., Manifold Room, Roof Top, Source Room).
3. Touch the Save button. A check appears when the location is saved. Note: To edit the location, touch the Pencil button.
4. Touch the X button to close and return to the CONFIGURE (SOURCE) screen.

Each Plant (Source) badge has room for 5 signal inputs (E-J) (Figure 4.61). The first tab E is used to show the alarm in "Normal" condition. The (F-H) inputs are used for warning inputs such as "Change Cylinders" and flash yellow when active. The last input (J) is used for the fault condition and flashes red when in fault mode.

To select source signal input text:

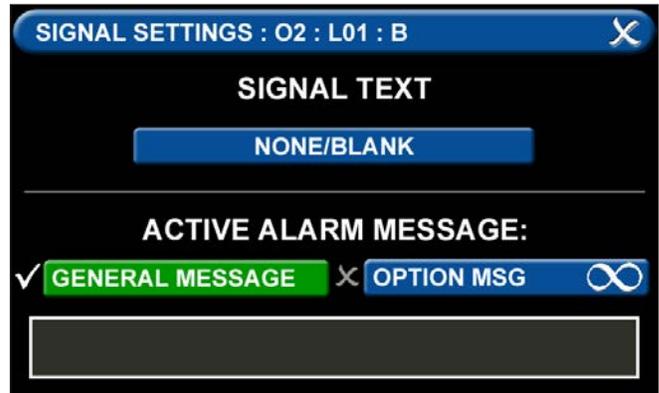


Figure 66: Signal Settings Screen

1. Scroll through the options using the right and left arrows at the bottom of the screen.
2. Touch the tab for the appropriate option, or select a blank to create a custom alarm.
3. Touch the Save button when you see a check beside your selection to close and return to the SIGNAL SETTINGS screen.
4. Touch the X button in the upper right to close and return to the CONFIGURE (SOURCE) screen.

Active Alarm Instruction:

To set facility instructions for active alarms, touch either the GENERAL MESSAGE or OPTION MSG tab. The alarm defaults to GENERAL MESSAGE. See Section 4.6 for how to set up custom instructions.

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4.4.3 Maintenance Mode Setup

To ensure the audible warning does not sound while setting up the alarm, the MAINTENANCE MUTE function can be activated.

Touch the MISCELLANEOUS tab in the configuration menu.



Figure 67: Miscellaneous Tab

Touch the AUDIBLE SETTINGS tab.



Figure 68: Audible Settings Tab

Press the tab to turn maintenance mode on. Exit the screens to return to the configuration screen.

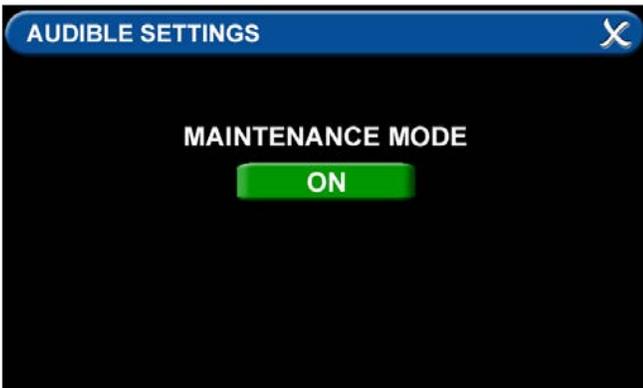


Figure 69: Maintenance Mode ON

NOTE:

See the end of this section for information on the Miscellaneous Tab. See Section 4.6 for information on the Active Alarm Opt Tab.



Figure 70: Combination Alarm Main Screen

4.5 Setting up a Combination Alarm

The TotalAlert Infinity™ combination alarm combines the functionality of a Area alarm and a central alarm. It monitors two things:

- Gases and their pressures.
- Source equipment.

4.5.1 Initial Setup of an Unconfigured Combination Alarm

To begin setup of the alarm, first pull the battery tab located on the back of the front panel to activate battery backup of the alarm.



Figure 71: Battery Pull Tab

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The SETUP INFORMATION screen is the first screen that users will see on an unconfigured alarm.

(The MAIN screen is the first screen that users will see on a configured alarm).

- Touch the Configuration button.



Configuration Button

Figure 72: Setup Information Screen

NOTE:

If you would like to change the password, touch Change Password. Enter a 4-10 digit password, and touch the Enter button. Confirm the new password. Touch the X button in the upper right to close the SECURITY PASSWORD screen.



Figure 73: Changing the Security Password

Entering the Password

The ENTER SECURITY PASSWORD screen appears.



Figure 74: Entering the Security Password

Enter the security password. (The default password is 121212.)

- Touch the Enter button.
- Touch Continue to advance to the CONFIGURATION screen.
- The CONFIGURATION screen will display as unconfigured and ready for setup.

Primary Settings Tab

The PRIMARY SETTINGS tab allows you to select the alarm type and initialize boards.



- Touch the PRIMARY SETTINGS tab.
- **Alarm Type Tab**

The ALARM TYPE screen defines which type of alarm will be displayed and drives later setup functions.

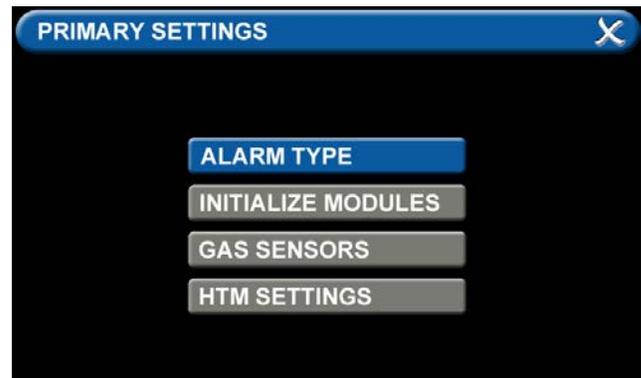


Figure 75: Alarm Type Tab

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- Touch the ALARM TYPE tab.
- Choose a code style based on code requirements.
- Touch the COMBO tab.



Figure 76: Choosing Code and Alarm Styles

- Once the desired tabs are selected, touch the Save button to save the selection and go back to the PRIMARY SETTINGS screen.

Note: To clear your selections, touch the Erase button.

• Initialize Modules Tab

The PRIMARY SETTINGS screen will now display with ALARM TYPE checked and INITIALIZE MODULES active.

- Touch the INITIALIZE MODULES tab.

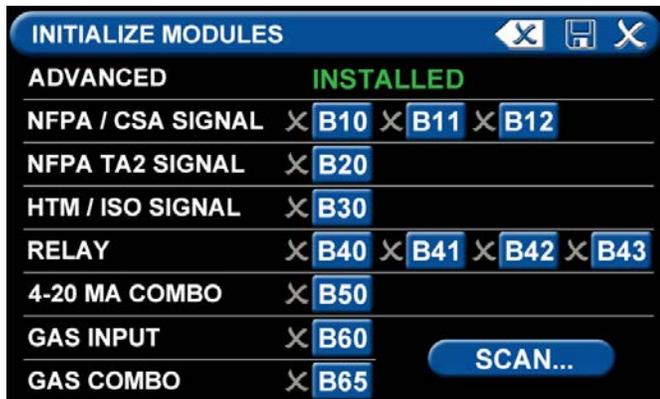


Figure 77: Initialize Modules Screen

The INITIALIZE MODULES screen is used to set up the boards that are installed. The boards function as the input/output hardware of the alarm.

At this point, you have two options:

1. Either touch the Scan button to prompt the alarm to autofill the screen for you.

OR

2. Complete the screen by selecting the boards installed in the alarm.

Touch the Save button when you see checks beside your selections.

Gas Sensors Tab

The PRIMARY SETTINGS screen will now display with ALARM TYPE and INITIALIZE MODULES checked, GAS SENSORS active, and the last tab grayed out.

- Touch the GAS SENSORS tab

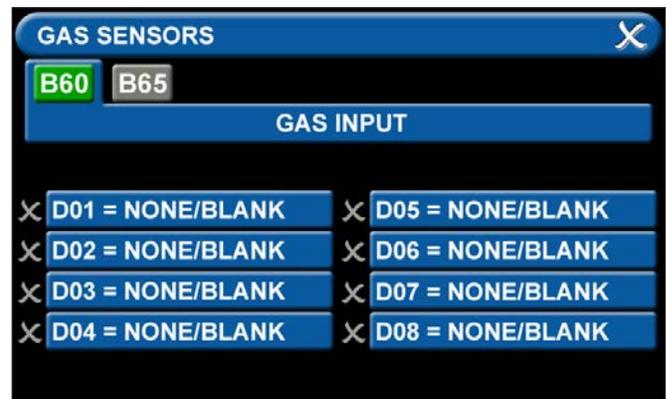


Figure 78: B60 Gas Input Screen

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B60 Board

Users may select up to six different gases on the GAS INPUT screen. These gases correspond to the pressure sensors wired into the GAS INPUT / B60 board or the Gas Combination / B65 board.

Note: This setup accommodates:

- Eight badges, with up to 5 central badges or 7 area badges.



Figure 79: Gas Choices

To select the first gas, touch the D01=NONE/BLANK tab.

- Touch the right and left arrows at the bottom of the screen to scroll through additional gas choices. Select the gas that is wired into the D01 input on the GAS INPUT / B60 board.
- Touch the Save button when you see a check beside your selection. (If an alarm sounds, press the Mute button on the panel under the screen and continue with setup.)
- Repeat to add additional gases.
- Touch the X button in the upper right to close the GAS SENSORS screen and return to the PRIMARY SETTINGS screen. The alarm will retain your information.

Setting up the Location

Touch B to set the LOCATION text.



Figure 80: Location Setup

Enter the central alarm location and touch save to return to the configuration screen.



Figure 81: Entering the Location

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4.5.2 Configuring Source Badges

The TotalAlert Infinity™ combination alarm is designed to allow the configuration of ten source badges. Twenty locations with up to eight source signals each can be tied to each source badge.

To configure alarm points in a central badge, touch the [1] button on the configuration screen (Figure 4.83).



Figure 82: Combination Alarm Screen

- **Configure (Source) Badge**



Figure 83: Configure Source Screen

A = Alarm Point

Touch the ALARM POINT tab to select the proper HTM Signal.



Figure 84: HTM Signal Configuration Screen

To identify the location where the wires are landed:

1. Touch the tab for the appropriate board and terminal block. (C1, C2, C3, C4, C5)
2. Touch the Save button when you see a check beside your selection.

B = Gas Color Code Tab

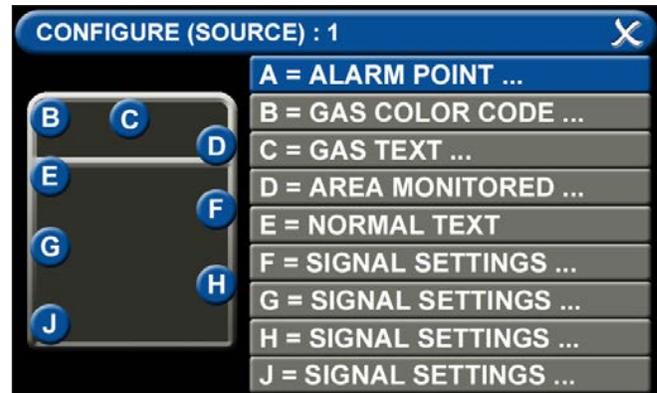


Figure 85: Configuration Screen

To select the color code for the appropriate gas based on your standard and country:

1. Touch the B = GAS COLOR CODE tab (Figure 4.85)
2. Scroll through the gas types using the right and left arrows at the bottom of the screen.
3. Touch the tab for the appropriate code, or select a "custom" tab to create a unique source badge.
4. Touch the Save button when you see a check beside your selection.

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C = Gas Text Tab



Figure 86: Gas Text Keyboard

To change the name of the gas:

1. Touch the C = [GAS TEXT] tab (Figure 4.85).
2. Touch the Erase button on the keyboard to delete the gas name.
3. Enter the new gas name. Touch the [<AÑ] to toggle to symbols. Touch the [1AZ] key to toggle back to letters and numbers.
4. Touch the Save button.

D = Area Monitored

Touch the D = (Area Monitored) Tab



Figure 87: Configure Channels

On the SOURCE LOCATION screen:

1. Touch the 01 tab. 1.
2. Using the keyboard, enter the name of the location for the source equipment being monitored (e.g., ROOM 1). Enter multiple locations as needed (e.g., Manifold Room, Roof Top, Source Room).
3. Touch the Save button. A check appears when the location is saved. Note: To edit the location, touch the Pencil button.
4. Touch the X button to close and return to the CONFIGURE (SOURCE) screen.

Each Plant (Source) badge has room for 5 signal inputs (E-J) (Figure 4.85). The first tab E is used to show the alarm in “Normal” condition. The (F-H) inputs are used for warning inputs such as “Change Cylinders” and flash yellow when active. The last input (J) is used for the fault condition and flashes red when in fault mode.

To select source signal input text:

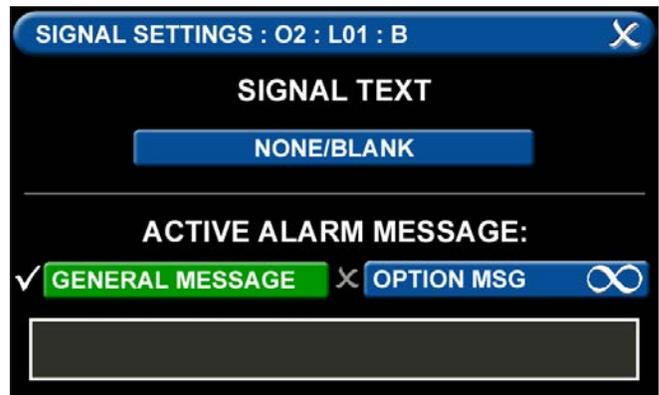


Figure 88: Signal Settings Screen

1. Scroll through the options using the right and left arrows at the bottom of the screen.
2. Touch the tab for the appropriate option, or select a blank to create a custom alarm.
3. Touch the Save button when you see a check beside your selection to close and return to the SIGNAL SETTINGS screen.
4. Touch the X button in the upper right to close and return to the CONFIGURE (SOURCE) screen.

Active Alarm Instruction:

To set facility instructions for active alarms, touch either the GENERAL MESSAGE or OPTION MSG tab. The alarm defaults to GENERAL MESSAGE. See Section 4.6 for how to set up custom instructions.

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4.5.2 Configuring Gas ID Badges

The TotalAlert Infinity™ Area alarm is designed to allow configuration of eight gas badges using the B60 board.

To configure the first badge to custom settings, touch the [1] button in the numeric display of the configuration screen (Figure 4.83).

Eight tabs are used for configuration (Figure 4.89). Tabs are listed in alphabetical order.

A = [GAS INPUT]	To change which wired input should be shown on the badge
B = GAS DESC	To change color codes based on standard and country
C = [GAS NAME]	To label the gas
D = AREA MONITORED	To edit the location label for a specific gas
E = [UNITS OF MEASURE]	To change the displayed unit of measure for the pressure/vacuum
F = LOW ALARM SETTINGS	To adjust the value that indicates that the pressure is low
G = HIGH ALARM SETTINGS	To adjust the value that indicates that the pressure is high
H = ZERO OFFSET	To make small adjustments to the displayed pressure based on user preference

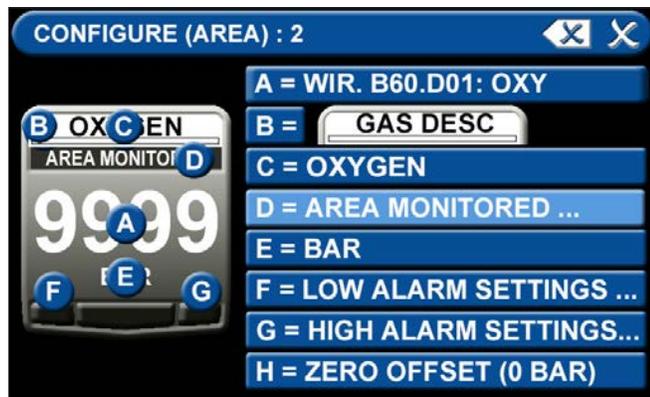


Figure 89: Configuring Gas Badges

B = Gas Desc Tab

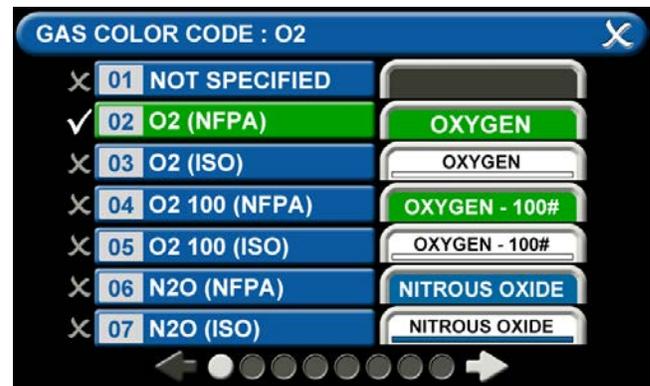


Figure 91: Gas Color Code Screen

A = [Gas Input] Tab



Figure 90: [Gas Input] Tab

To change which wired sensor should be displayed on that badge:

1. Touch the tab for the appropriate wired gas sensor.
2. Touch the Save button to close the screen.

To change color codes based on your standard and country:

1. Scroll through the codes using the right and left arrows at the bottom of the screen.
2. Touch the tab for the appropriate code.
3. Touch the Save button when you see a check beside your selection.

NOTE:

If the alarm default is correct, touch the X button in the upper right to close the screen.

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C = [Gas Name] Tab



Figure 92: Gas Text Screen

1. Touch the Erase button on the keyboard to delete the gas name.
2. Enter the new gas name. Touch the [<ÁÑ] to toggle to symbols. Touch the [1AZ] key to toggle back to letters and numbers.
3. Touch the Save button.

D = Area Monitored Tab



Figure 93: Area Monitored

To add locations to be monitored:

1. Touch an unused location tab.
2. Using the keyboard, enter the name of the location that you would like to monitor (e.g., ROOM 1). Enter multiple locations as needed (e.g., Room 1, Room 2, Room 5).
3. Touch the Save button. A check appears when the location is saved.

Note: To edit the location information, touch the Pencil button.

E = [Units Of Measure] Tab



Figure 94: [Units of Measure] Tab

To change the unit of measure:

1. Touch the tab for the appropriate unit of measure.
2. Touch the Save button to close the screen

F = Low Alarm Settings Tab



Figure 95: Low Alarm Settings Tab

• Low Alarm Set Point

You can remove the low alarm set point or customize the low alarm set point.

To remove the low alarm set point:

1. Touch the NONE tab.
2. Touch the check on the CONFIRM SETTINGS CHANGE screen.

To customize the low alarm set point:

1. Touch the ADJUST tab.
2. Enter the new set point.
3. Touch the Save button.

TotalAlert Infinity™ HTM Medical Gas Notification System

Active Alarm Instruction:

To set facility instructions for active alarms, touch either the GENERAL MESSAGE or OPTION MSG tab. The alarm defaults to GENERAL MESSAGE. See Section 4.6 for how to set up custom instructions.

G = High Alarm Settings Tab



Figure 96: High Alarm Settings Tab

You can remove the high alarm set point or customize the high alarm set point.

To remove the high alarm set point:

1. Touch the NONE tab.
2. Touch the check on the CONFIRM SETTINGS CHANGE screen.

To customize the high alarm set point:

1. Touch the ADJUST tab.
2. Enter the new set point.
3. Touch the Save button.

H = Zero Offset Tab



Figure 97: Zero Offset Tab

In some cases, facility dial gauges may show slightly different readings than the TotalAlert alarm (e.g., 3.1 BAR versus 3.0 BAR). To match the TotalAlert alarm exactly to a facility dial gauge:

1. Select the offset amount.
2. Touch the Save button to close the screen.

Configuring Additional Area Badges

Configure additional area badges by touching the number on the numeric display that corresponds with the area badge and repeating the steps listed above.

TotalAlert Infinity™ HTM Medical Gas Notification System

4.5.4 Miscellaneous Tab

Users can customize certain aspects of the TotalAlert Infinity™ Alarm's appearance and functionality. One aspect of changing the Alarms appearance is that the users can select between English, Spanish, and French by touching the "LANGUAGE" tab and choosing the corresponding language. See section 9.0 for all other non-latin languages to be setup. Also, to preserve the life of the LED display, the TotalAlert Infinity™ Alarm allows for the user to adjust the time that the display backlight will remain on with no motion detected

- Touch the BACKLIGHT tab.
- Then select 5 to 60 minutes, or Never tab.
- Save setting by pressing the Save icon.



Figure 98: Miscellaneous Screen

Two other functions that can be adjusted are the WIFI settings and the date and time settings.

- Touch the MISCELLANEOUS tab.
- **Wireless Ethernet Settings Tab**

The WIRELESS ETHERNET SETTINGS screen allows for customization of the WIFI settings. All of the tabs on this screen are set to default status.

- Touch the WIRELESS ETHERNET tab.
- To turn the WIFI on, touch the WIFI STATUS / ON tab.
- To change the WIFI password—STRONGLY RECOMMENDED—touch the WIFI PWD tab. Using the keyboard, enter a new password. Touch the Save button to close and return to the WIFI SETTINGS screen.
- To add the WIFI settings to the INFORMATION screen, touch the ALLOW WIFI CONTROL / ON tab. Touch the Save button.
- The INFORMATION screen will now display a WIFI tab.

The WIFI screen shows:

- WIFI status
- SSID
- IP address

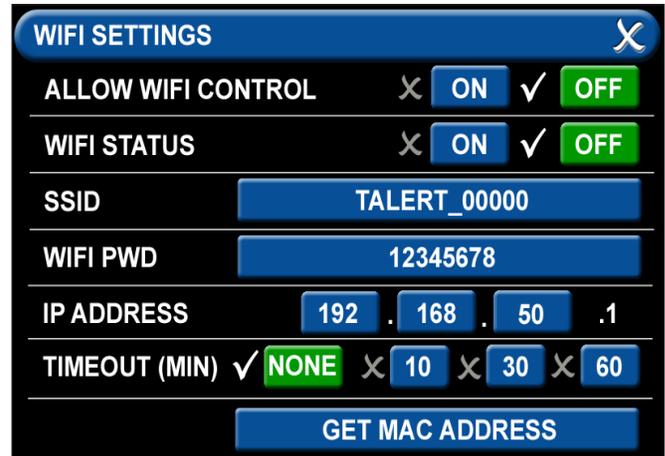


Figure 99: WIFI Settings Screen



Figure 100: Date/Time Settings Screen

- **Date/Time Settings Tab**

For DATE SETTINGS, use the plus and minus signs to adjust the:

- Year
- Month
- Day

For TIME SETTINGS, use the plus and minus signs to adjust the 24-hour clock:

- Hour
- Minute

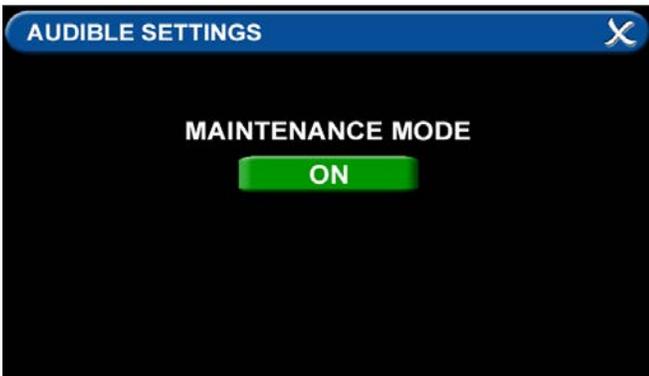


Figure 101: Maintenance Mode ON

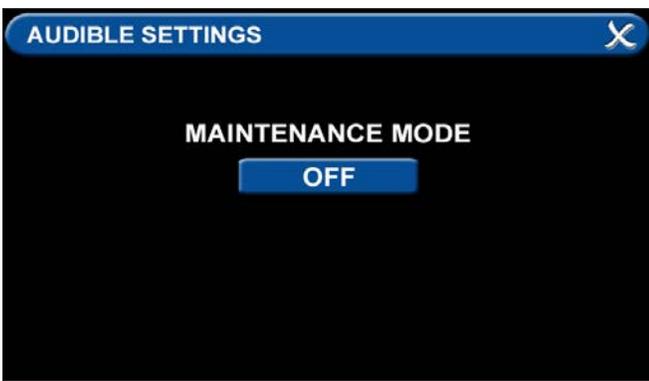


Figure 102: Maintenance Mode OFF

- **Audible Settings Tab**

The AUDIBLE SETTINGS tab allows for the alarm to be put in Maintenance Mode. When the Maintenance mode tab is toggled "ON", the audible warning will not reinitialize.

Maintenance mode will automatically change to OFF if a new alarm condition is introduced or all alarm conditions are cleared.

4.6 Customized Instructions Set Up

Active Alarm Opt Tab

The ACTIVE ALARM OPT tab allows users to customize their Active Alarm options in two ways: by adding alarm instructions and by changing the alarm default screen.



Figure 103: Active Alarm Opt Tab

- **Adding Custom Alarm Instructions**

Users can add instructions—both general instructions and specific instructions—to facility personnel for when the alarm goes into fault status.

To add general instructions:

- Touch the GENERAL ALARM MESSAGE tab
- Enter the instruction.



Figure 104: General Alarm Message Tab

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Keyboard tips:

- Touch the [◀] to toggle to symbols. Touch the [1AZ] key to toggle back to letters and numbers.
- As text is entered, the letters will decrease in size. This feature helps to accommodate a longer message.
- To add a second line of text, use the Enter button.
- Touch the Save button to close and return to the ACTIVE ALARM OPT screen



Figure 105: General Alarm Message Screen

To add specific instructions:

- Touch the OPTIONAL ALARM MESSAGE tab.

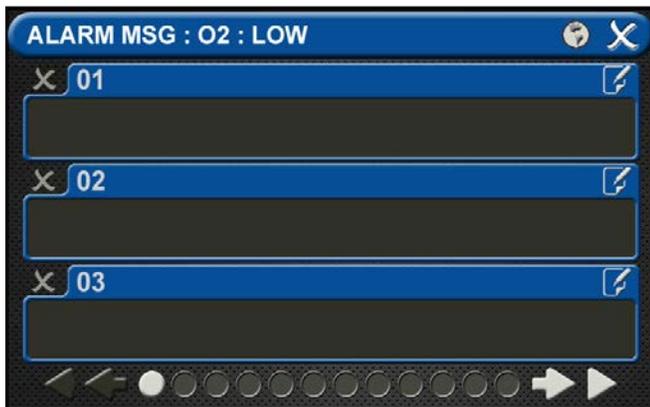


Figure 106: Alarm Messages Screen

- Touch the 01 tab. Enter the instruction. Touch the [◀] to toggle to symbols. Touch the [1AZ] key to toggle back to letters and numbers.

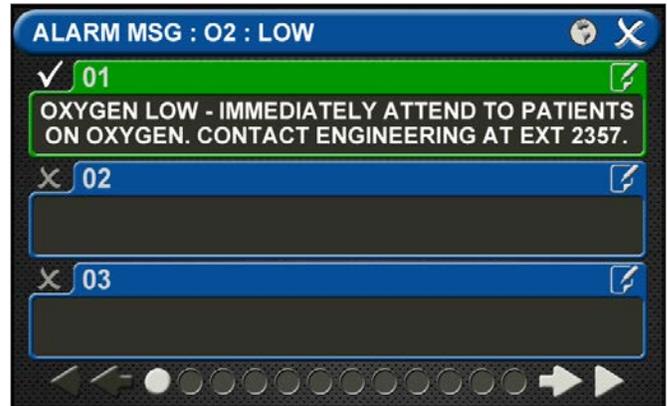


Figure 107: Optional Alarm Message

- Touch the Save button to close.
- Repeat to add additional instructions.
- Touch the X button to close and return to the ALARM MESSAGES screen.
- Touch the X button to close and return to the ACTIVE ALARM OPT screen.
- To tie an optional alarm message, or specific instruction, to a set point, go to the LOW ALARM SETTINGS screen or the HIGH ALARM SETTINGS screen for that gas.
- Touch the OPTION MSG tab.



Figure 108: Low Alarm Settings

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- Touch the X button to the left of the appropriate instruction tab. When your selection appears checked and highlighted, touch the Save button.
- This specific instruction (rather than the general instructions) will now display on the ACTIVE ALARM screen when the alarm is in fault status. It will also display on the ALARM POINTS screen.



Figure 109: Alarm Message: High

- **Changing the Alarm Default Screen**
- The TotalAlert Infinity™ Area Alarm switches to the ACTIVE ALARM screen if the alarm goes into fault status.
- To configure the alarm so that the MAIN screen appears in the event of a fault, touch the MAIN screen tab.
- If the alarm is already displaying the MAIN screen when it goes into fault status, the toolbar will switch from Normal to Icon and the high or low pressure indicator on the gas badge will flash for the gas pressure out of range.

4.7 Additional Components

4.7.1 4-20 mA Devices

To configure a 4-20mA device for monitoring, start on the CONFIGURATION screen. Users are always prompted to enter the password when accessing this screen. Type the password, and touch the Enter button.

The CONFIGURATION screen displays.



Figure 110: Configuration screen

The TotalAlert Infinity™ alarm is designed to allow configuration of four gas badges using the B50 board to monitor 4-20mA devices. The alarm must be set as an Area panel or Combination panel. See Alarm Type Tab in Section 4.3.2.

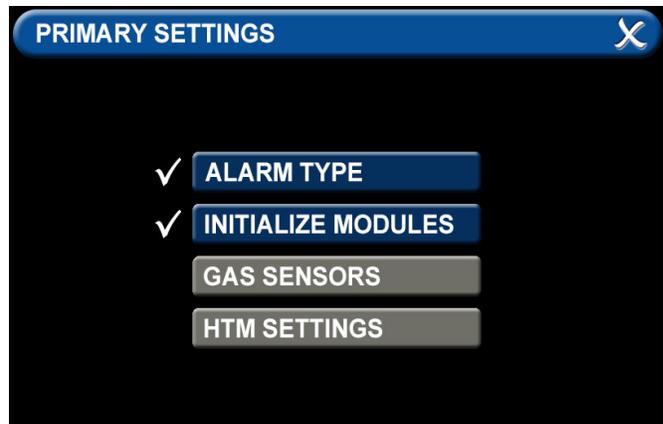


Figure 111: Primary Settings screen

TotalAlert Infinity™ HTM Medical Gas Notification System

After configuring the Alarm Type, the B50 board must be initialized. Select "Initialize Modules" on the Primary Settings Screen. Press the "Scan" button to make sure the B50 board is set up, as it should turn green. Once the B50 board is green, press the "Save" icon to exit the screen. Exit the "Primary Settings" screen.



Figure 112: initialize Modules screen

To configure the first badge to custom settings, touch the corresponding number button in the numeric display that represents the badge to be configured. If a badge needs to be added, press the "+" for additional badges.

Eight tabs are used for configuration of a custom badge. Tabs are listed in alphabetical order.

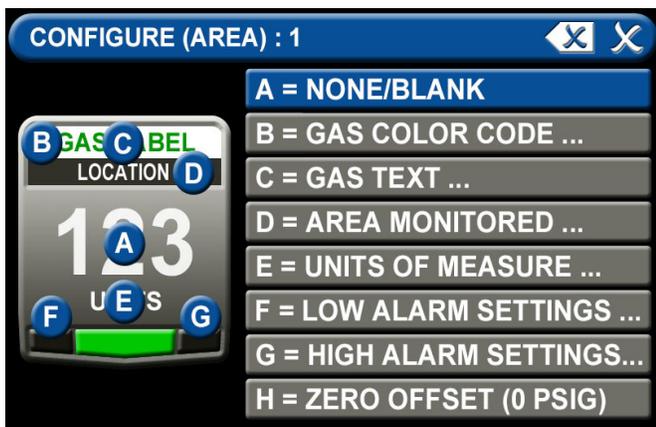


Figure 113: Configure Area screen

A = [Gas Input] Tab

The B50 should be green and there should be 4 choices (I01, I02, I03, I04). Select the wired input to be displayed on that badge.

Touch the tab for the appropriate wired gas sensor. Touch the Save button to close the screen.



Figure 114: B50 Tab, 4-20 mA

B = Gas Desc Tab

To assign a color code for the device:

1. Scroll through the codes using the right and left arrows at the bottom of the screen. Custom colors are located on pages 7-8.
2. Touch the tab for the appropriate code.
3. Touch the Save button when you see a check beside your selection.



Figure 115: Gas Color Code Tab

TotalAlert Infinity™ HTM Medical Gas Notification System

C = [Gas Name] Tab

Use the keyboard to assign a device name. Type in the name of the device to be monitored. Touch the [<ÁÑ] to toggle to symbols and extended Latin Characters. Touch the [1AZ] key to toggle back to letters and numbers.

Touch the Save button when complete.



Figure 116: Gas Text Keyboard

D = Area Monitored Tab

To add locations to be monitored:

1. Touch an unused location tab.
2. Using the keyboard, enter the name of the location that you would like to monitor (e.g., ROOM 1). Enter multiple locations as needed (e.g., Room 1, Room 2, Room 5).
3. A check appears when the location is selected, the save button has to be pressed if the selection is new.

To edit the location information, touch the Pencil button.



Figure 117: Source Location

E = [Units of Measure] Tab

To set up the 4-20mA device:

1. Touch the tab for "4MA=" to set the low measurement point of the device (zero for example) and press the save button to exit.
2. Touch the tab for "20MA=" to set the high measurement point of the device (100 for example) and press the save button to exit.
3. Touch the tab for "Units=" to set the method of measurement (percent for example), type in the measurement type and press the save button to exit.
4. Touch the X button in the upper right to close the screen.

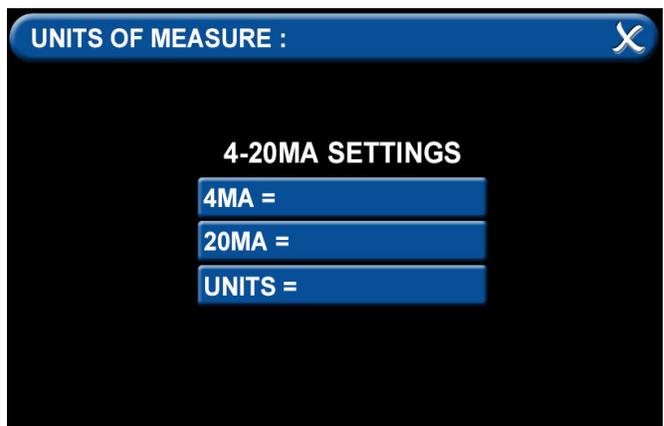


Figure 118: Units of Measure Tab

TotalAlert Infinity™ HTM Medical Gas Notification System

F = Low Alarm Settings Tab

You can remove the low alarm set point or customize the low alarm set point.

To remove the low alarm set point:

1. Touch the NONE tab.
2. Touch the check on the CONFIRM SETTINGS CHANGE screen.

To customize the low alarm set point:

1. Touch the ADJUST tab.
2. Enter the new set point.
3. Touch the Save button.



Figure 119: Low Alarm Settings

G = High Alarm Settings Tab

You can remove the high alarm set point or customize the high alarm set point.

To remove the high alarm set point:

1. Touch the NONE tab.
2. Touch the check on the CONFIRM SETTINGS CHANGE screen.

To customize the high alarm set point:

1. Touch the ADJUST tab.
2. Enter the new set point.
3. Touch the Save button.

Active Alarm

To setup active alarm General Message:

1. Touch the General Message tab to activate general message.
2. Touch the gray text box at bottom of screen to type in general message.
3. Using the keyboard, enter the message that you would like to be active when in alarm mode and save.

To setup active alarm Option Message:

1. Touch the Optional Message tab to activate optional message.
2. Touch the 01 tab.
3. Using the keyboard, enter the optional message that you would like to be active when in alarm mode and save.

Configuring Additional 4-20mA Devices

Configure additional 4-20mA devices by touching the number on the numeric display that corresponds with the gas badge and repeating the steps listed above.

4.7.2 Relay Output Board (B4X Board)

To configure a Relay Output, start on the CONFIGURATION screen. Users are always prompted to enter the password when accessing this screen.

Type the password, and touch the Enter button.

The CONFIGURATION screen displays.



Figure 120: Configuration Screen

TotalAlert Infinity™ HTM Medical Gas Notification System

The B40 (or B41) board must be initialized. Touch Primary Settings from the right side menu, then select "Initialize Modules". Press the "Scan" button to make sure the B40 board is set up, as it should turn green. Once the B40 board is green, press the "Save" icon to exit the screen. Exit the "Primary Settings" screen.

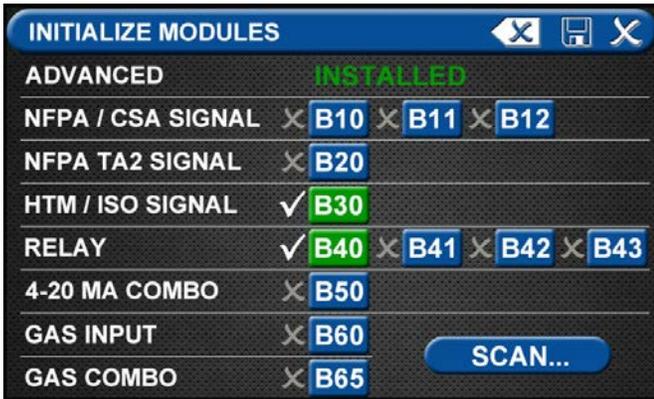


Figure 121: Initialize Modules Screen

The next step is to select the "Relay Outputs" from the menu on the Configuration Screen. The B40 board should be highlighted in Green (or other Relay Output board installed in the backbox).

Select the signal that corresponds to the output wires on the relay board (Y01 for example).



Figure 122: Relay Outputs Screen

After selecting the signal, you will need to assign it to an alarm signal to send. Select "Wired" on the Relay Output screen if the signal to be relayed is wired into the backbox.

Select the corresponding "Ethernet" if an Ethernet signal has been set up. (See Mirroring in Section 4.6.4.)

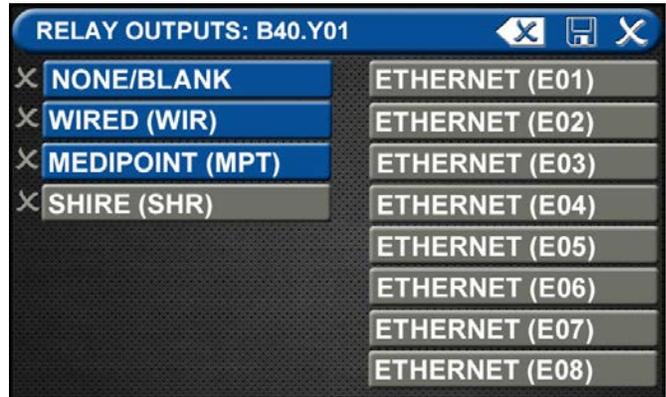


Figure 123: Relay Output Signal

There are three choices for the relay output signal.

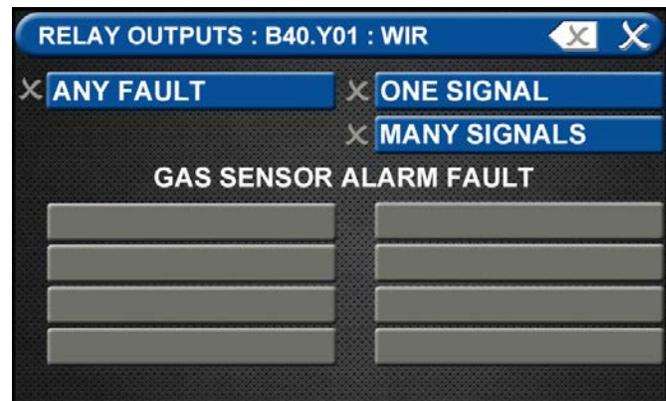


Figure 124: Relay Output Signals Screen

1. A single "Any Fault" which will report a general alarm fault if any of the alarm signals on the alarm go into alarm condition. To select "Any Fault", press the blue "Any Fault" to change it to green with the check mark. Then press Save to return to Relay Outputs and set up additional outputs.
2. "One Signal" reports a single signal through the relay output. When pressing "One Signal", the next step is to assign the signal to be transmitted. On the Relay Output screen, select the Input Signal to be transmitted (C1X1 from the B30 board for example). Press Save to return to the Relay Outputs screen.

TotalAlert Infinity™ HTM Medical Gas Notification System

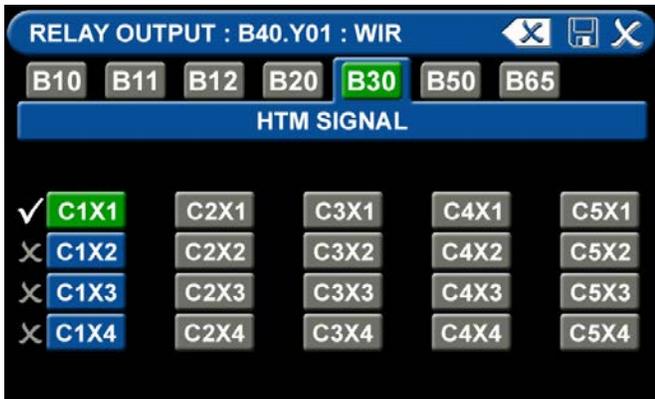


Figure 125: Relay Output One Signal

3. "Many Signals" allows the user to group multiple signals on a single relay output. If any of the signals goes into alarm condition, the relay output will report an alarm condition. Press "Many Signals" to move to the Relay Output screen and select from 1 to 10 signals to group together. Select the number 01 to start, then select the first signal to be grouped by pressing the corresponding number on the Relay Output (such as C1X1 from the B30 board). Press Save to return to the Many Signal Relay Output screen. Next select 02 to capture the second signal to be monitored. Repeat up to a grouping of 10 signals.



Figure 126: Relay Output Many Signals

4.7.3 Wired Ethernet Setup

The TotalAlert Infinity™ Notification System allows for networking via standard Ethernet. Any alarm panel can be remotely observed on the network using a standard web browser.

IP Address using DHCP method: Upon power-up of the system, the device will search for a DHCP server. If a DHCP server is found, IP Address, subnet mask and gateway are automatically obtained. If not found, the device will check for a DHCP server every 30 seconds. When found, the IP Address, subnet mask and gateway are automatically obtained.

IP Address using Static method: Upon power up of the system, the device will immediately begin using the fixed IP configuration.

CAUTION:

Only facility information systems personnel should set up the network interface. If the set up is done improperly, equipment may not perform properly.

CAUTION:

The information systems personnel should be notified before changing any of the network settings. Changing the settings could keep the equipment from working properly.

TotalAlert Infinity™ HTM Medical Gas Notification System

Wired Ethernet Settings

On the Miscellaneous screen, touch the WIRED ETHERNET tab (Figure 4.113).



Figure 127: Miscellaneous Screen

The WIRED ETHERNET screen allows for customization of the Ethernet settings. All of the tabs on this screen are set to default status.

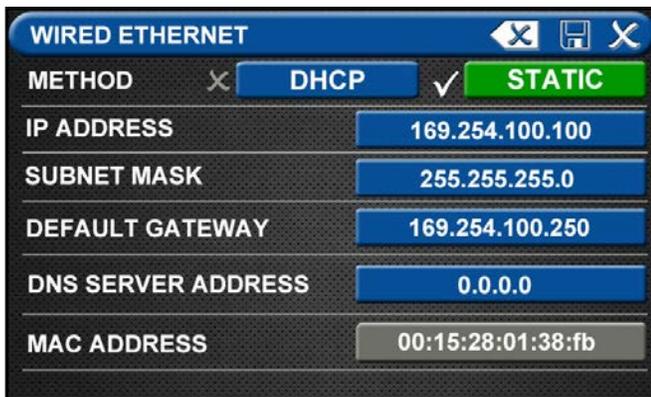


Figure 128: Wired Ethernet Screen

- The alarm IP Address defaults to Static method. To select the DHCP method, touch the DHCP tab.
- To change the IP Address, touch the IP Address tab. Using the keyboard, enter a new IP address.
- To change the Subnet Mask, touch the Subnet Mask tab. Using the keyboard, enter a new Subnet Mask address.
- To change the Default Gateway, touch the Default Gateway tab. Using the keyboard, enter a new Default Gateway.
- To change the DSN Server Address, touch the DSN Server Address tab. Using the keyboard, enter a new DSN Server Address.

4.7.4 BACnet Set-Up

The TotalAlert Infinity™ alarms employ the TCP/IP family of protocols for communication and each device has a unique IP address. The alarm utilizes a built-in Ethernet connection for BACnet transmission of signals to a Building Automation System. The TotalAlert Infinity™ alarm panel conforms to the BACnet protocol and includes a Protocol Implementation Conformance Statement (PICS).

- Touch the MISCELLANEOUS tab located on the configuration screen.



Figure 129: Configuration Screen

- Touch the BACNET tab to access the BACNET control screen.



Figure 130: Miscellaneous Screen

- To allow BACnet communication, touch the BACnet ON tab.
- To add the name, touch the DEVICE NAME tab and enter the name through the on screen keyboard.

TotalAlert Infinity™ HTM Medical Gas Notification System

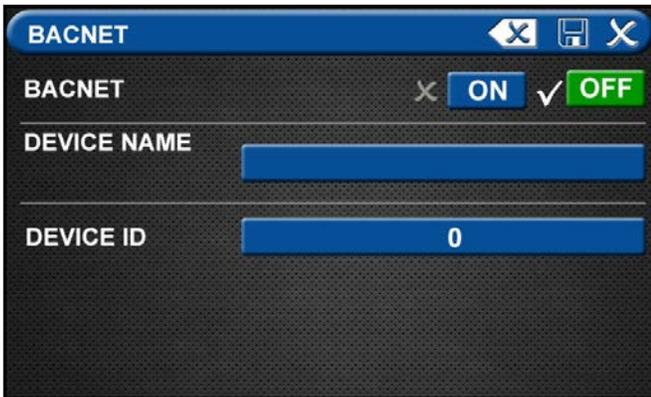


Figure 131: BACnet Screen

- Save the BACnet device name by touching the save button located in the top right corner of the screen.



Figure 132: BACnet Device Name

- To add the ID, touch the DEVICE ID tab and enter the ID number provided by the Building Management System administrator.



Figure 133: BACnet Device ID

- Save settings.
- Touch the X in the top right corner to exit out of the BACnet setup screen.

4.7.5 “Mirroring” Two Alarm Panels

Each alarm panel has an Ethernet port on the back of the front panel assembly. By connecting the alarm to the hospital network, via Ethernet, or directly cabling it to another alarm panel, signals and gas pressures can be pulled from one panel and displayed on another panel

An category 5 CROSS OVER cable is required for connecting alarm panels directly to each other. Otherwise, standard cabling can be used with a facility’s Ethernet hub or switch to connect panels.

Setup of alarm to be “mirrored”

Start on the Configuration screen.

- Enter Security Password



Figure 134: Security Password

- Touch the MISCELLANEOUS tab located on the setup screen

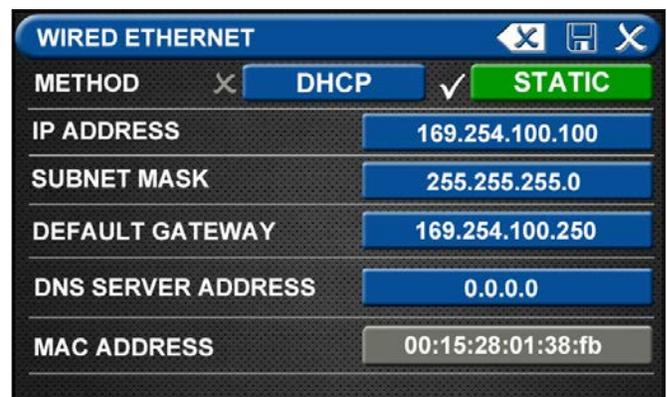


Figure 135: Wired Ethernet Control Screen

TotalAlert Infinity™ HTM Medical Gas Notification System

- Touch Wired Ethernet tab to access the Wired Ethernet control screen (Section 4.7.3).
- Configuration of the Wired Ethernet settings to be performed by facility's IT specialist. Settings for the IP Address, Subnet Mask, Default Gateway, and DNS Server Address to conform to facility's network.
- Touch the Save button to close and return to the MISCELLANEOUS Screen.
- Exit the MISCELLANEOUS screen and return to the Configuration screen.



Figure 136: Configuration Screen

- Touch the REMOTE SIGNALS tab.



Figure 137: Remote Signals Screen

Each alarm panel can mirror signals and pressures from up to 8 remote alarm panels.

- Touch the E01 tab.
- Enter the Remote Ethernet IP address of the alarm panel to be mirrored.
- Touch the save button.

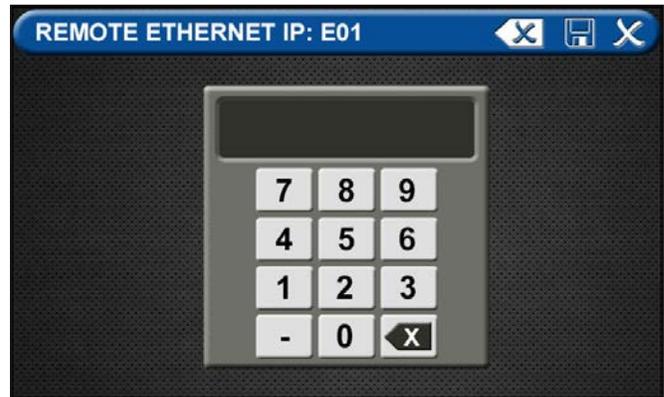


Figure 138: Remote Ethernet IP Address

On the alarm panel that will display the mirrored signal or pressure:

Gas Badge

- Go to Configuration screen



Figure 139: Configuration Screen

- Add new badge to be mirrored by touching the [+]
- Touch the badge number to be configured.
- On the CONFIGURE (AREA) screen, touch A=None/Blank tab to set up badge.

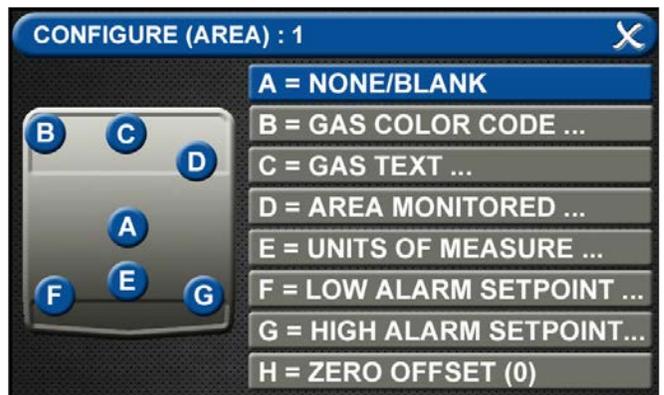


Figure 140: Configure Area Screen

TotalAlert Infinity™ HTM Medical Gas Notification System

- Touch the ETHERNET tab that corresponds to the alarm panel providing the gas pressure to be mirrored.

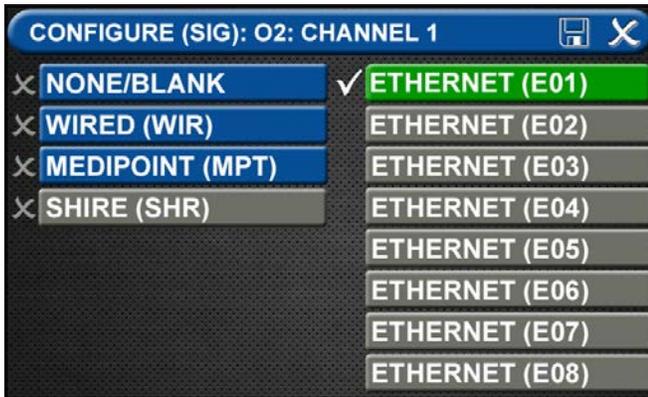


Figure 141: Ethernet Screen

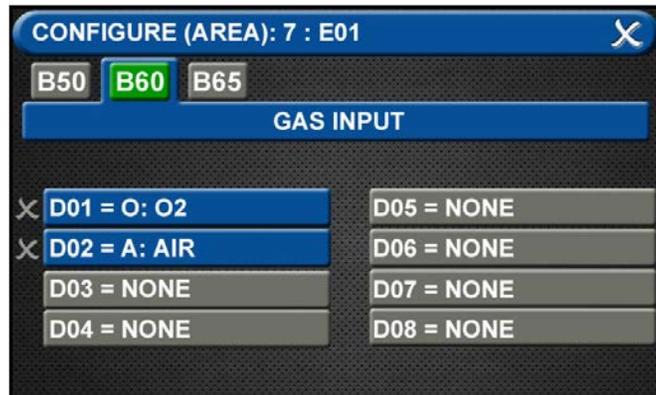


Figure 142: Configure Area Screen

- At the CONFIGURE (AREA) screen (B60 Gas Input), touch the gas to be mirrored.
- Touch the save button.
- Follow the steps for configuring gas badges listed in Section 4.3.

Central Signals

- Go to the Configuration screen



Figure 143: Configuration Screen

A = [Gas Color Code] Tab

- Choose the source signal badge that represents the source gas to be mirrored.

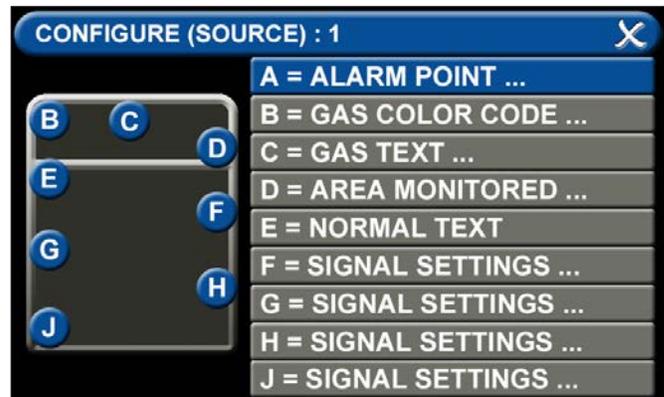


Figure 145: Configure Source Locations

- Touch the GAS COLOR CODE tab to select the proper gas color code.



Figure 146: Gas Color Code Screen

- Select the proper gas color code and standard.
- Touch the save button.

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C = Area Monitored Tab

To add areas to be monitored:

1. Touch the AREA MONITORED tab.

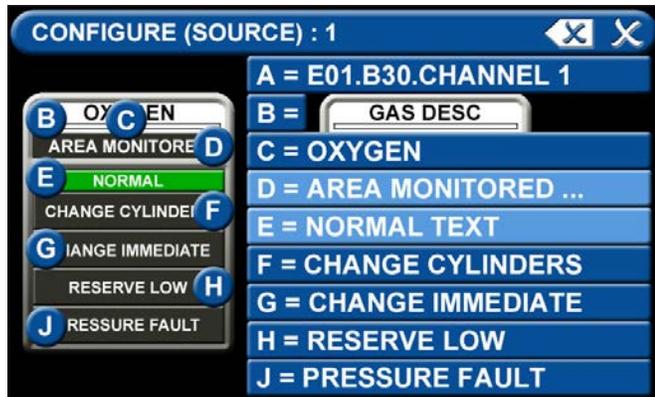


Figure 147: Configure Source Screen

2. Using the keyboard, enter the name of the area monitored
3. Touch the save button.



Figure 148: Location Keyboard

D = Normal Text

- Defaults to Normal condition

E = Alarm Point Tab

- Touch the ALARM POINT tab to assign a channel to the badge.
- Select one of the five CHANNEL tabs.
- Touch the save button.



Figure 149: Configure Channels

Signal Settings (F-J)

- Choose SIGNAL SETTING Tab F-J
- Touch the NONE/BLANK tab.

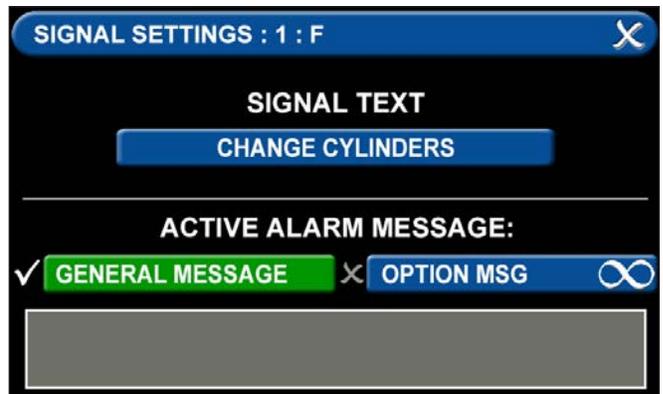


Figure 150: Signal Settings Screen

To select source signal input text:

- Scroll through the options using the right and left arrows at the bottom of the screen.
- Touch the tab for the appropriate option, or select a blank to create a custom alarm.



Figure 151: Signal Settings Screen

- Touch the Save button when you see a check beside your selection to save the selection and return to the SIGNAL SETTINGS screen.

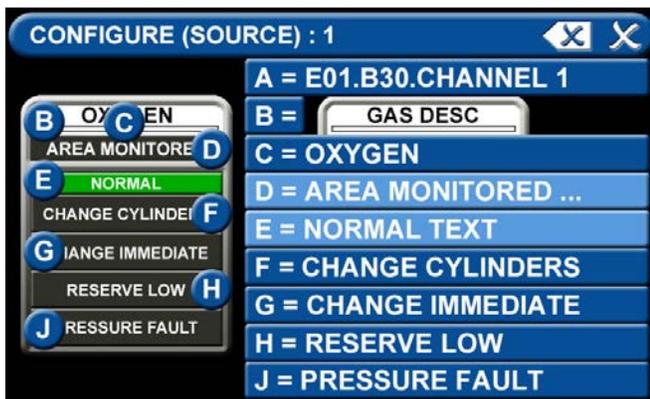


Figure 152: Signal Settings Screen

- To configure the remaining signal settings, repeat the above steps.

4.8 Medipoint/Shire Network

4.8.1 Medipoint Network

The Medipoint alarm system works by identifying each individual gas channel or set or point alarm inputs with a unique ID. The switches are hexadecimal (i.e. A corresponds to 10, B corresponds to 11 etc. for the purposes of panel identification. A channel must be set between 0 and F, 0 being OFF.

The panel with the highest ID must be set as the MASTER panel, all other panels must be set as slave panels. Therefore an alarm system may contain up to 32 panels with the highest number being set as the MASTER.

An alarm system is set up by allocating a number (1 to 9) or letter (A to F) to each set of plant inputs or point alarm inputs. Typically on a 4 gas system with point alarms:

- 1 - Oxygen Manifold Alarms
- 2 - Nitrous Oxide Manifold Alarms
- 3 - Air Plant Alarms
- 4 - Vacuum Plant Alarms
- A - Ward 1 to 4 Point Alarms
- B - Ward 5 to 8 Point Alarms

Therefore on every panel where Oxygen is to be displayed the appropriate gas number is set to 1.

4.8.2 Medipoint Network Setup

Go to the PRIMARY SETTINGS tab (from the configuration screen) to setup the HTM SETTINGS for the Medipoint Network. (See Figure 4.153)

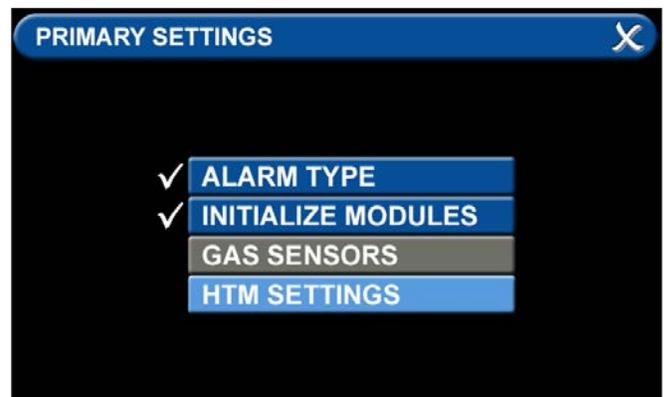


Figure 153: Medipoint Network Setup

TotalAlert Infinity™ HTM Medical Gas Notification System

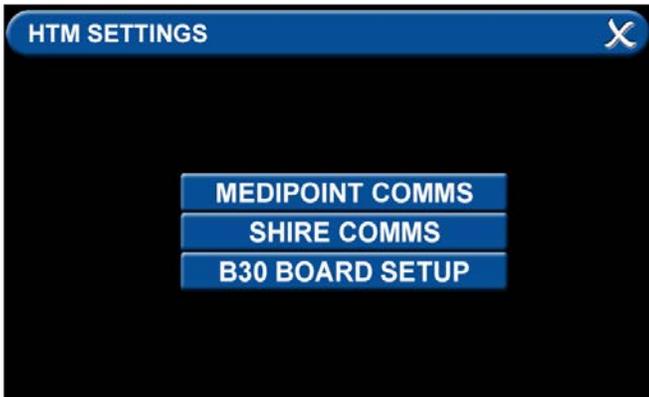


Figure 154: Medipoint Network Setup

- To communicate with a Medipoint network, press the MEDIPOINT COMMS tab.
- Communication (B30) can be toggled OFF or ON by pressing the correlating tabs. Alarm Role between MASTER and SLAVE can also be selected by pressing the correlating tab.
- Setup the PANEL ADDRESS by pressing the + or - tab to the correct setting.
- Press save icon to complete setup.

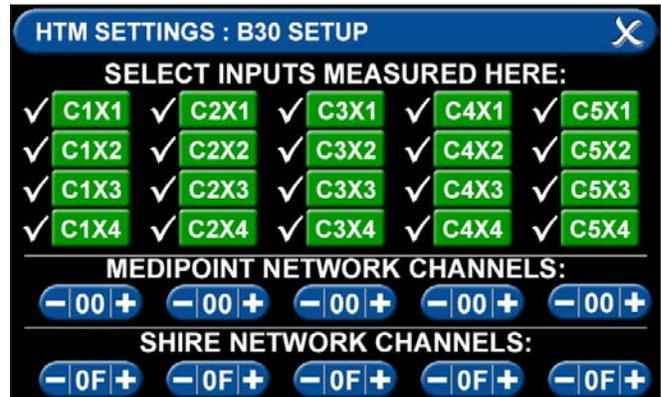


Figure 156: Medipoint Network Setup

- Select the inputs for signals that will be wired locally to the alarm.
- Individual tabs can be toggled off and on by adding or eliminating the check mark by the inputs where you are landing the wires on the B30 board. Also, if you are transmitting MEDIPOINT signals, set the appropriate network channels by pressing the + or - tab to the correct setting.
- Press save icon to complete setup.

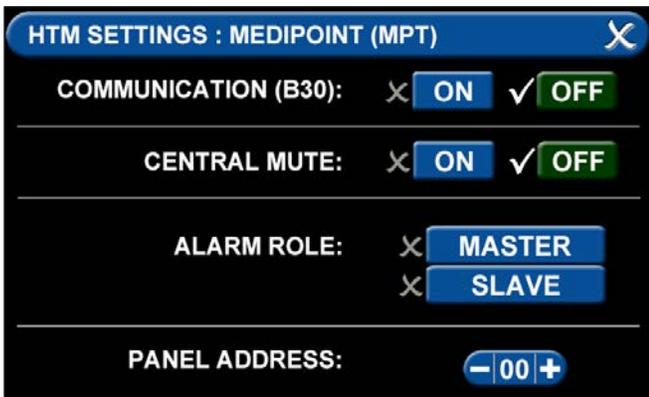


Figure 155: Medipoint Network Setup

- To transmit and receive signals, the HTM Settings tab has to be initialized (Figure 153).
- Press the B30 BOARD SETUP tab (Figure 154).

4.8.3 Medipoint Network Gas Badge Setup

To setup gas badges to communicate on the Medipoint network:

- Go to configuration screen and select the gas badge.



Figure 157: Configuration Screen

- Touch ALARM POINT tab to configure gas badge

TotalAlert Infinity™ HTM Medical Gas Notification System

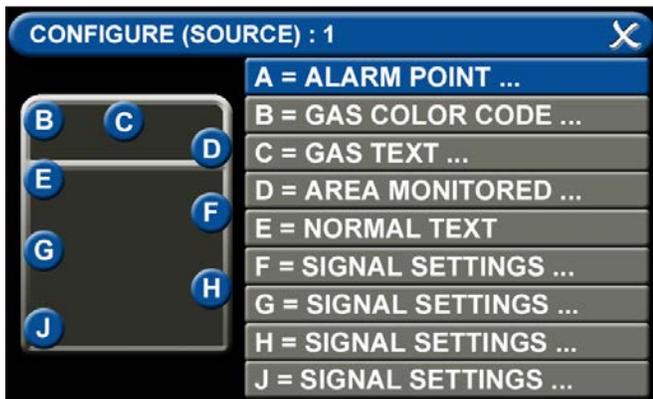


Figure 158: Configure Source Locations

A = Alarm Point Tab

- Touch ALARM POINT tab to configure gas badge

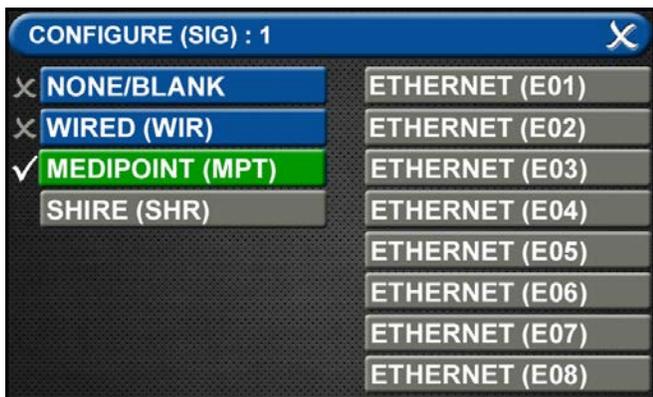


Figure 159: Configure Source

- Select MEDIPOINT (MPT) tab



Figure 160: Channel ID

- Use (-) and (+) to select the Gas Channel ID to be displayed.
- Press Save Icon to complete setup.

B = Gas Color Code Tab



Figure 161: Gas Color Code Tab

To select the color code for the appropriate gas based on your standard and country:

1. Touch the B = GAS COLOR CODE tab (Figure 4.63)
2. Scroll through the gas types using the right and left arrows at the bottom of the screen.
3. Touch the tab for the appropriate code, or select a "custom" tab to create a unique source badge.
4. Touch the Save button when you see a check beside your selection. This will automatically fill in tabs C-J with default values for the gas selected. If changes are needed follow the next steps below.

C = Gas Text Tab



Figure 162: Gas Text Keyboard

To add areas to be monitored:

5. Touch the AREA MONITORED tab.
 6. Touch on the 01 tab.
- Using the keyboard, enter the name of the area. To change the name of the gas:
1. Touch the C = [GAS TEXT] tab.
 2. Touch the Erase button on the keyboard to delete the gas name.
 3. Enter the new gas name. Touch the [<AÑ] to toggle to symbols. Touch the [1AZ] key to toggle back to

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letters and numbers.

4. Touch the Save button.

D = Area Monitored



Figure 163: Area Monitored

Touch the D = (Area Monitored) Tab

On the SOURCE LOCATION screen:

1. Touch the 01 tab. 1.
2. Using the keyboard, enter the name of the location for the source equipment being monitored (e.g., ROOM 1). Enter multiple locations as needed (e.g., Manifold Room, Roof Top, Source Room).
3. Touch the Save button. A check appears when the location is saved. Note: To edit the location, touch the Pencil button.
4. Touch the X button to close and return to the CONFIGURE (SOURCE) screen.

Each Plant (Source) badge has room for 4 signal inputs (E-J) (Figure 4.85). The first tab E is used to show the alarm in "Normal" condition. The (F-H) inputs are used for warning inputs such as "Change Cylinders" and flash yellow when active. The last input (J) is used for the fault condition and flashes red when in fault mode.

To select source signal input text:

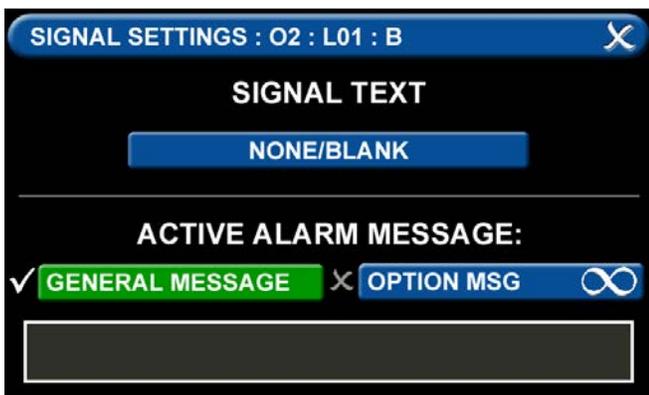


Figure 164: Signal Settings Screen

1. Scroll through the options using the right and left arrows at the bottom of the screen.
2. Touch the tab for the appropriate option, or select a blank to create a custom alarm.
3. Touch the Save button when you see a check beside your selection to close and return to the SIGNAL SETTINGS screen.
4. Touch the X button in the upper right to close and return to the CONFIGURE (SOURCE) screen.

Active Alarm Instruction:

To set facility instructions for active alarms, touch either the GENERAL MESSAGE or OPTION MSG tab. The alarm defaults to GENERAL MESSAGE. See Section 4.6 for how to set up custom instructions.

4.8.4 Shire Network Setup

Go to the PRIMARY SETTINGS tab (from the configuration screen) to setup the HTM SETTINGS for the SHIRE Network. (See Figure 4.153)

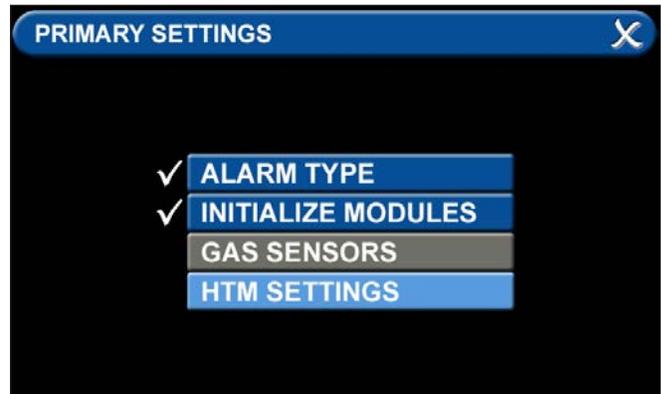


Figure 165: Shire Network Setup

- To communicate with a SHIRE network, press the SHIRE COMMS tab.

TotalAlert Infinity™ HTM Medical Gas Notification System

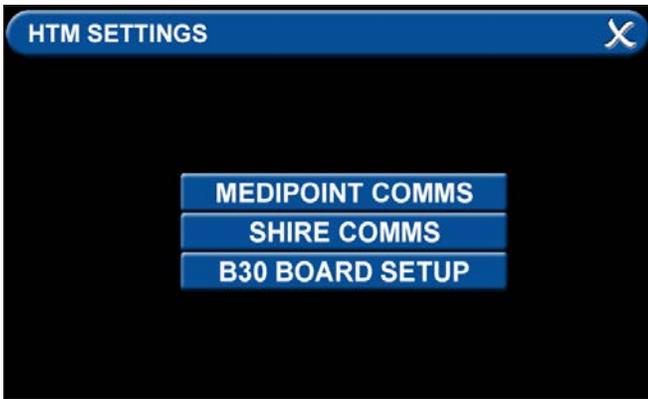


Figure 166: Shire Network Setup

- Communication (B30) can be toggled OFF or ON by pressing the correlating tabs. Alarm Role can also be defined by selecting the CENTRAL or REPEATER tabs. On a Shire network you select one device to be the central, and all other devices on the shire network are repeaters.
- Press save icon to complete setup.

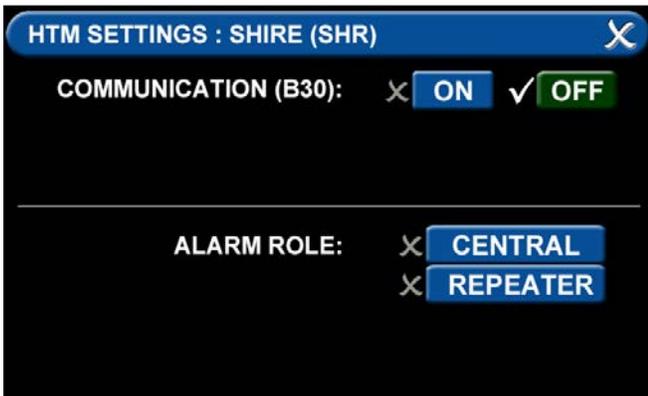


Figure 167: Shire Network Setup

- To transmit and receive signals, the HTM Settings tab has to be initialized (Figure 166).
- Press the B30 BOARD SETUP tab (Figure 167).

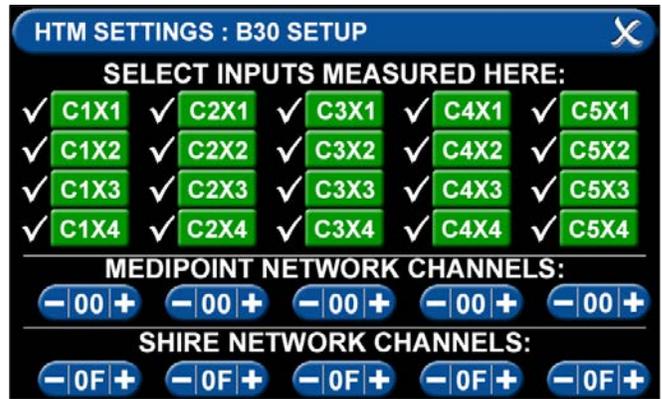


Figure 168: Shire Network Setup

- Select the inputs for signals that will be wired locally to the alarm.
- Individual tabs can be toggled off and on by adding or eliminating the check mark by the inputs where you are landing the wires on the B30 board. Also, if you are transmitting SHIRE signals, set the appropriate network channels by pressing the + or - tab to the correct setting.
- Press save icon to complete setup.

4.8.5 Shire Network Gas Badge Setup

To setup gas badges to communicate on the SHIRE network:

- Go to configuration screen and select the gas badge.



Figure 169: Configuration Screen

- Touch ALARM POINT tab to configure gas badge

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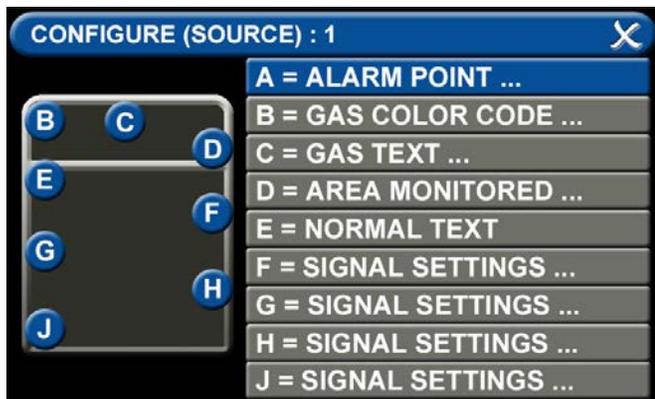


Figure 170: Configure Source Locations

A = Alarm Point Tab

- Touch ALARM POINT tab to configure gas badge

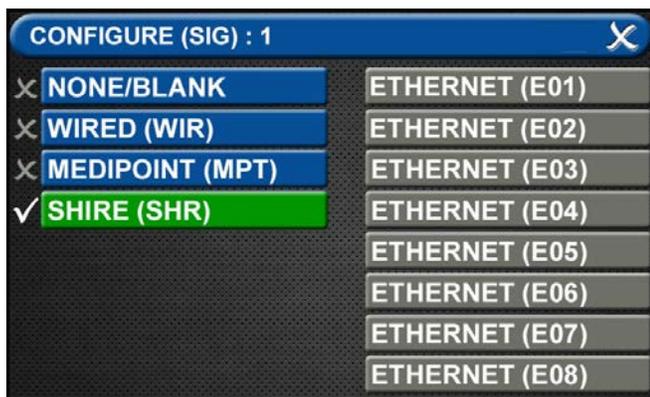


Figure 171: Configure Source Locations

- Select SHIRE (SHR) tab



Figure 172: Channel ID

- Use (-) and (+) to select the Gas Channel ID to be displayed.
- Press Save Icon to complete setup.

B = Gas Color Code Tab



Figure 173: Gas Color Code Tab

To select the color code for the appropriate gas based on your standard and country:

1. Touch the B = GAS COLOR CODE tab (Figure 4.63)
2. Scroll through the gas types using the right and left arrows at the bottom of the screen.
3. Touch the tab for the appropriate code, or select a “custom” tab to create a unique source badge.
4. Touch the Save button when you see a check beside your selection. This will automatically fill in tabs C-J with default values for the gas selected. If changes are needed follow the next steps below.

C = Gas Text Tab



Figure 174: Gas Text Keyboard

To add areas to be monitored:

5. Touch the AREA MONITORED tab.
6. Touch on the 01 tab.

Using the keyboard, enter the name of the area. To change the name of the gas:

1. Touch the C = [GAS TEXT] tab.
2. Touch the Erase button on the keyboard to delete the gas name.
3. Enter the new gas name. Touch the [<ÁÑ] to toggle to symbols. Touch the [1AZ] key to toggle back to

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- letters and numbers.
4. Touch the Save button.

D = Area Monitored



Figure 175: Area Monitored

Touch the D = (Area Monitored) Tab
On the SOURCE LOCATION screen:

1. Touch the 01 tab. 1.
2. Using the keyboard, enter the name of the location for the source equipment being monitored (e.g., ROOM 1). Enter multiple locations as needed (e.g., Manifold Room, Roof Top, Source Room).
3. Touch the Save button. A check appears when the location is saved. Note: To edit the location, touch the Pencil button.
4. Touch the X button to close and return to the CONFIGURE (SOURCE) screen.

Each Plant (Source) badge has room for 4 signal inputs (E-J) (Figure 4.85). The first tab E is used to show the alarm in "Normal" condition. The (F-H) inputs are used for warning inputs such as "Change Cylinders" and flash yellow when active. The last input (J) is used for the fault condition and flashes red when in fault mode.

To select source signal input text:

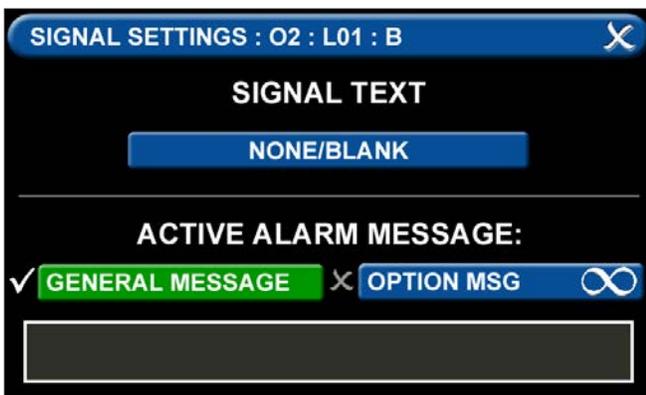


Figure 176: Signal Settings Screen

1. Scroll through the options using the right and left arrows at the bottom of the screen.
2. Touch the tab for the appropriate option, or select a blank to create a custom alarm.
3. Touch the Save button when you see a check beside your selection to close and return to the SIGNAL SETTINGS screen.
4. Touch the X button in the upper right to close and return to the CONFIGURE (SOURCE) screen.

Active Alarm Instruction:

To set facility instructions for active alarms, touch either the GENERAL MESSAGE or OPTION MSG tab. The alarm defaults to GENERAL MESSAGE. See Section 4.6 for how to set up custom instructions.

4.9 Website

4.9.1 Navigating the Website

Accessing the Web Page

1. Start a web browser such as Microsoft Internet Explorer.
2. Enter the Device's IP address in the browser's address bar:
Example: http://10.10.5.10
3. After you enter the device name or IP address, the alarm's home page will be displayed.

NOTE:

To learn the IP address, touch the MISCELLANEOUS tab on the configuration screen then touch the WIRED ETHERNET tab.

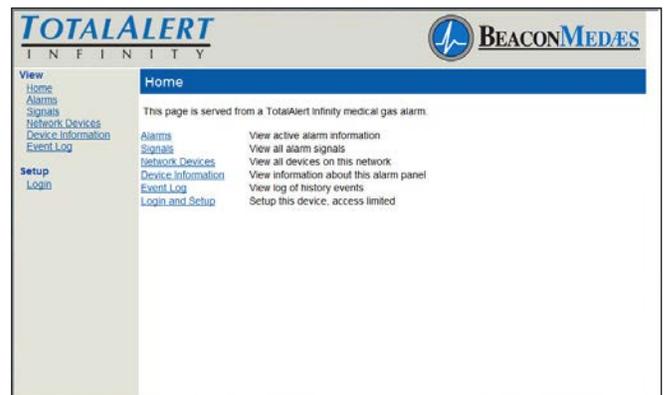


Figure 177: Typical Alarm Panel Home Page

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Alarms

1. Click Alarms to view current alarms (Figure 4.159).
2. Click Refresh to view the most recent information.



Figure 178: Alarms Page

NOTE:

The Alarms page provides a snapshot of the current alarm conditions. If a new alarm occurs, the page is not updated until the page is reloaded by Autorefresh or by clicking on Alarms or Refresh links.

Signals

1. Click Signals to view all local signals monitored by this alarm panel (Figure 4.160).
2. Click Refresh to view the most recent information

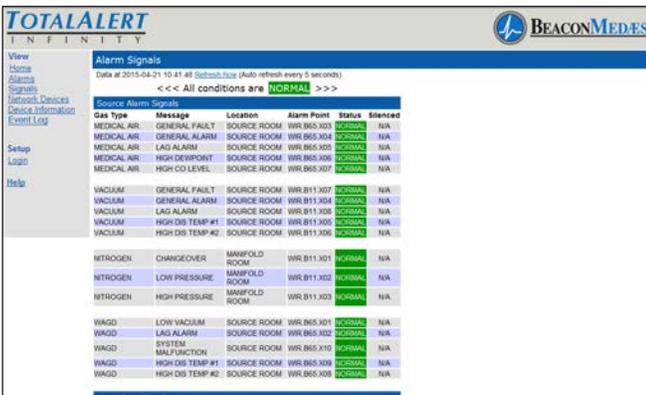


Figure 179: Alarm Signals Page

NOTE:

The Signals page provides a snapshot of the current alarm conditions. If a new alarm occurs, the page is not updated until the page is reloaded by Autorefresh or by clicking on Signals or Refresh links.

Network Devices

1. To view all devices on the network, click Network Devices (Figure 4.161).
2. Click Refresh to view the most recent information.
3. Click the Device link to jump to the home page of the listed alarm.
4. Click the Details tab to show detailed information about the device.



Figure 180: Network Devices Page

NOTE:

The Network Devices page provides a snapshot of the current alarm network. If a device is added to the network the page is not updated until the page is reloaded by Autorefresh or by clicking on Network Devices or Refresh links.

Device Information

Click Device Information to view the Device Information page (Figure 4.162).

Event Log

1. Click Event Log to view the Event Log page (Figure 4.162).
2. Click Refresh to view the most recent information.
3. To create a downloadable text file, click the Create a Downloadable text file link.
4. Right click the link to save the event log to a file.

TotalAlert Infinity™ HTM Medical Gas Notification System

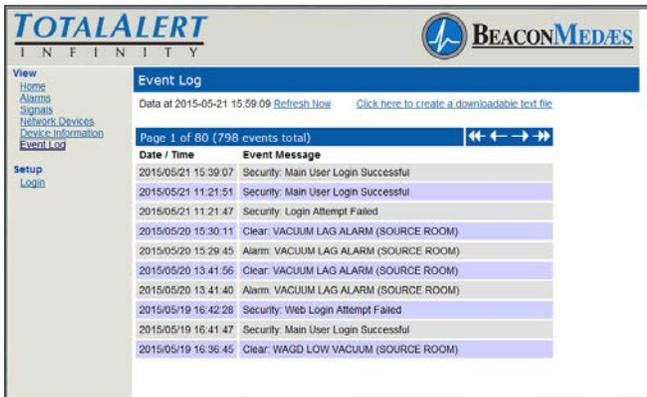


Figure 181: Event Log

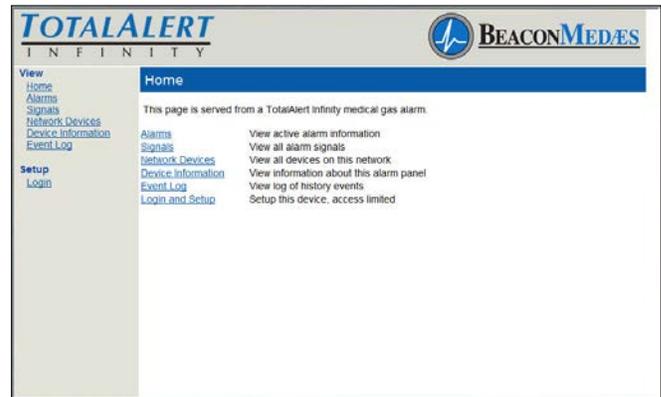


Figure 182: Typical Alarm Panel Home Page

NOTE:

The Event Log page provides a snapshot of the event log. If a new event occurs the page is not updated until the page is reloaded by Autorefresh or by clicking on Event Log or Refresh links. **Maximum number of logged events is 1000.**

Login to Setup Pages

1. Click Login and Setup.
2. The web browser will request a username and password (Figure 4.164). The factory defaults are:
Username: TotalAlert
Password: 1212123.

NOTE:

If the on-screen password has been changed from the default password, use the newly assigned password.

4.9.2 Website Set-Up

Accessing the Web Page

1. Start a web browser such as Microsoft Internet Explorer.
2. Enter the Device's IP address in the browser's address bar:
Example: http://10.10.5.10

NOTE:

To learn the IP address, touch the MISCELLANEOUS tab on the configuration screen then touch the WIRED ETHERNET tab.

3. After you enter the device name or IP address, the alarm's home page will be displayed (Figure 4.163).

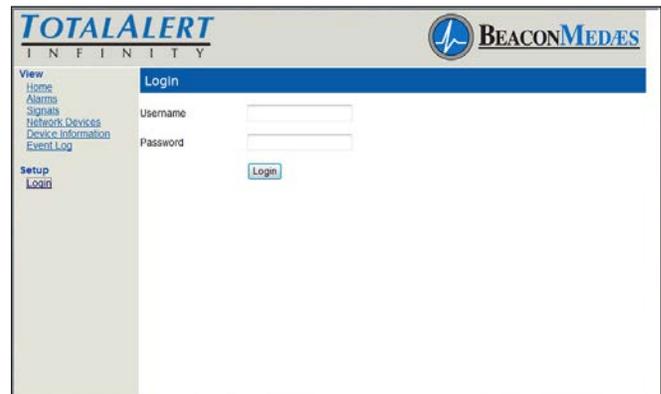


Figure 183: Login Dialog

3. The left sidebar will now contain the setup links (Figure 4.165).

TotalAlert Infinity™ HTM Medical Gas Notification System

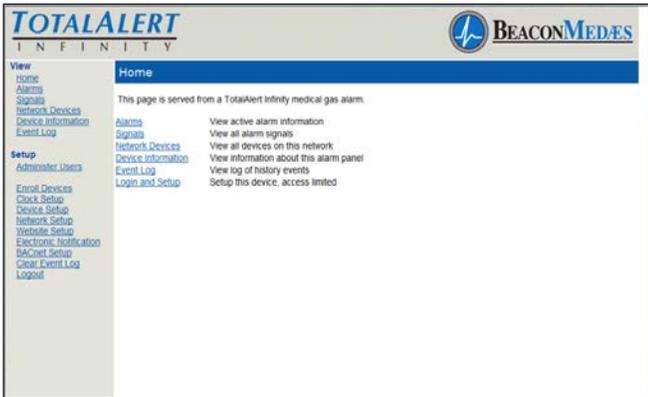


Figure 184: Logged In

NOTE:

Logging in applies only to the computer on which the login occurs. If more than one PC is being used to access the alarm web pages, each one must be logged in individually. The computer stays logged in until the user closes the browser.

Administer Users

Each TotalAlert Infinity™ panel allows for three total Administer Users

1. Click on Administer Users to access the Administer Users Setup page (Figure 4.166)
2. Enter the User Name and Password then click Submit.

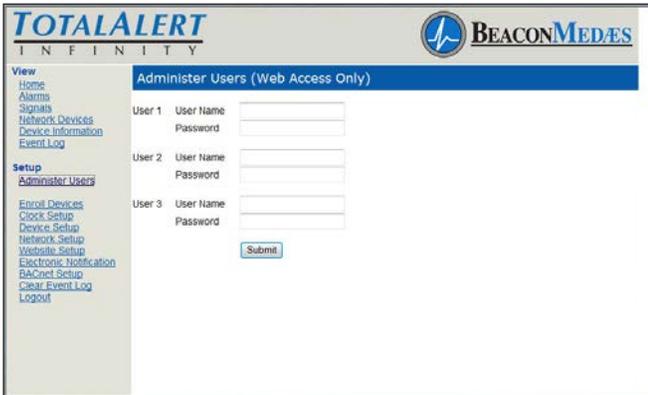


Figure 185: Administer Users

Enroll Devices

The TotalAlert Infinity™ provides the ability to enroll up to 100 TotalAlert Embedded devices connected to the medical gas network. Central and combination alarms are the only alarms that allow for enrolled devices. TotalAlert Infinity™ Area alarms can now be enrolled via Ethernet to the TotalAlert Infinity™ central alarm. This allows for the user to see the fault condition (gas type

and pressure reading) and which Area panel the condition is for.

1. Click on Enroll Devices to access the Enroll Devices Setup page (Figure 4.167).
2. Enter the device IP address and Serial Number. The Device Name, Location, and Device Type will automatically fill (Network will refresh).
3. Click Submit.
4. To delete an enrolled device, click Del box of device to delete and click Submit.



Figure 186: Enroll Device Setup

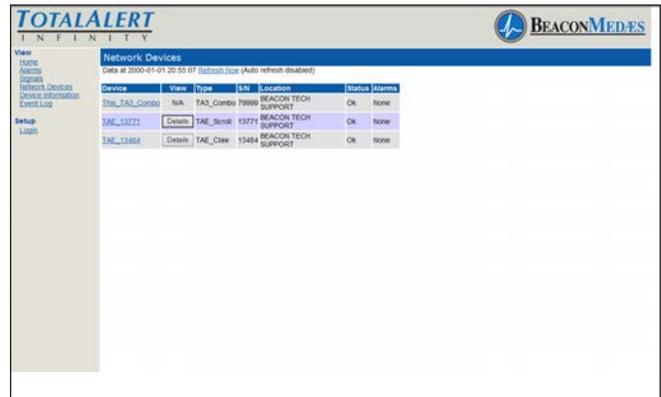


Figure 187: Network Devices Screen

Set Clock

1. Click Clock Setup to access the Clock Setup page (Figure 4.170).
2. Set the current date by inputting the year, month, and day.
3. Set the current time by inputting the current hour and minutes.
4. Click the SET tab to complete. When the SET tab is pressed, the date and time are set on the system and seconds are set to zero.

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Figure 188: Clock Setup

Device Setup

This setup page is used to configure alarm name, location, facility name, and contact information. The page also provides input for TotalAlert1 compatibility if the TotalAlert Infinity™ needs to be enrolled on the TotalAlert 1 network.

1. Click Device Setup to access the Setup Device page (Figure 4.171).
2. Enter the Alarm name.
3. Enter the location.
4. Enter the facility name.
5. Enter the Contact Information.
6. Click Submit.



Figure 189: Setup Device Page

To provide input for the TotalAlert 1 network:

1. Click Device Setup to access the Setup Device page (Figure 4.171).
2. Select Compatible Location of the TotalAlert Infinity™ alarm by using pull down menu.
3. Enter the Area for the TotalAlert Infinity™.
4. Enter Floor location.
5. Enter Direction.
6. Enter Compatibility Mode.
7. Click Submit.

CAUTION:

The Information Systems personnel should be notified before changing any of the network settings. Changing the settings may prevent the equipment from working properly.

Network Setup

1. Click Network Setup to access Network setup page (Figure 4.172)

2. Select the DHCP Mode (Enabled/Disabled).

If Disabled:

1. Enter the IP Address.
2. Enter the Subnet Mask.
3. Enter the Default Gateway

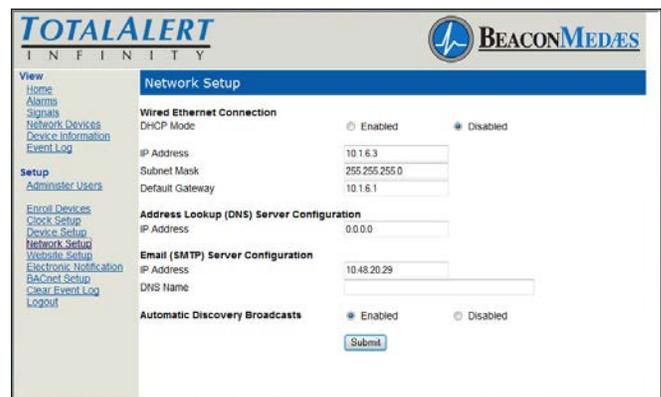


Figure 190: Network Setup Page

The TotalAlert Infinity™ Alarm allows for Automatic Discovery Broadcast on other TotalAlert devices. This setting allows for other TotalAlert devices to find the TotalAlert Infinity™ alarm on the network and automatically enroll the device.

To enable Automatic Discovery:

1. Select Enabled on the Network Setup page to set Automatic Discovery Broadcasts.
2. Click Submit.

Website Setup

The TotalAlert Infinity™ Website has several options for the Auto-refresh feature on the web page. This determines the frequency by which Status pages are automatically updated.

1. Click Website Setup to access Auto-refresh time menu (Figure 4.178 from 5 seconds to 4 minutes to refresh. Select Disable to remove Auto-refresh and manually update data when needed.
2. Click Submit.

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Figure 191: Website Setup Page

Electronic Notification

This setup page is used to configure electronic notification (e-mail, pager, phone text message). The alarm panel acts as an SMTP client. An SMTP server is required for electronic notification to function. The TotalAlert Infinity™ website has the ability to setup email notification for all messages, all gases, or specifically up to 3 gases.

By setting up the Electronic Notification, key personnel can receive notifications of all alarm events.

An SMTP e-mail server must be configured in order for Electronic Notifications to function. Click "Set Up Email Server" to configure the server (Figure 4.179).

1. Click Electronic Notification to access the Electronic Notification setup page (Figure 4.180).
2. Enter an e-mail address. Up to twelve e-mail addresses can be set up.
3. Choose All Messages, All Gases, or Specific Gases (up to 3) from pull down menu.
4. Click Submit.

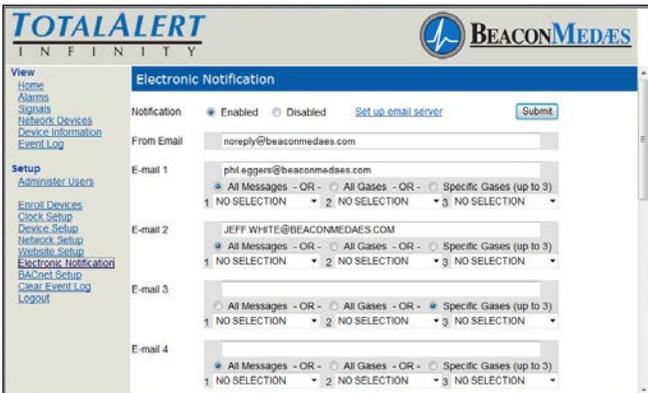


Figure 192: Electronic Notification Setup Page

BACnet Setup

The BeaconMedæ TotalAlert Infinity™ HTM control systems utilize the TCP/ IP family of protocols for communication and each alarm has a unique IP address.

Each BACnet enabled TotalAlert Infinity™ alarm conforms to the BACnet protocol.

- Protocol Implementation Conformance

Each BACnet enabled TotalAlert Infinity™ alarm has available a Protocol Implementation Conformance Statement (PICS). The PICS is a written document created by BeaconMedæ that identifies the particular options specified by BACnet that are implemented in the TotalAlert Infinity™ alarm.

- BACnet Conformance

BACnet Vendor ID: 543

Alarm Profile: BACnet Smart Sensor (B-SS)
BIBB (BACnet Interoperability Building Blocks) Supported:

- Read Property - B (DS-RP-B)
- Dynamic Device Binding - B (DM-DDB-B)
- Dynamic Object Binding - B (DM-DOB-B)

Object Type Support: Analog value, Binary value, Device.

Data Line Layer Options: ISO 8802-3 ("Ethernet") LAN
Character Set Support: ISO 10646 (UTF-8) Encoding.

1. Click BACnet Setup to access BACnet Setup page (Figure 4.157).
2. Enter BACnet Device ID#.
3. Enter BACnet Device Name.
4. Choose to Enable or Disable BACnet Communication.
5. Click Submit



Figure 193: BACnet Setup Page

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Clear Event Log

1. Click Clear Event Log to access the Clear Event Log page (Figure 4.180).
2. Click Clear Event Log.

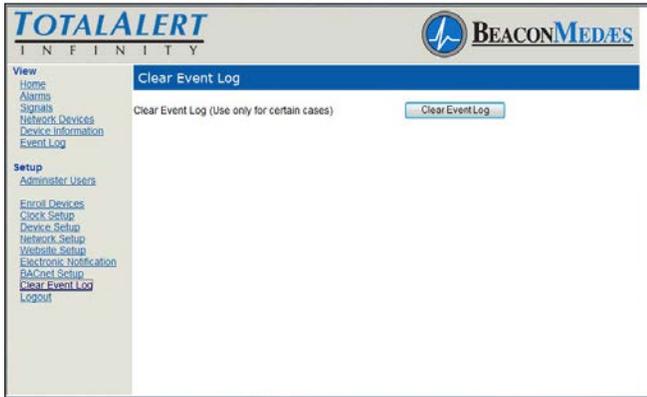


Figure 194: Clear Event Log

CAUTION:

Be sure to save the event log prior to clearing it. It is impossible to recover the event log after it is cleared.

4.10 Wireless Ethernet Set-Up

The TotalAlert Infinity™ Medical Gas Notification System allows for Wifi 802.11 b/g/n interface which provides access to the alarm panel web page with any web enabled device. Operating information and Event History can be viewed and downloaded to the web enabled device.

Wireless Ethernet Settings Tab

On the Miscellaneous screen, select the WIRELESS ETHERNET tab.



Figure 195: Wireless Ethernet Tab

The WIRELESS ETHERNET screen allows for customization of the WIFI settings. All of the tabs on this screen are set to default status.

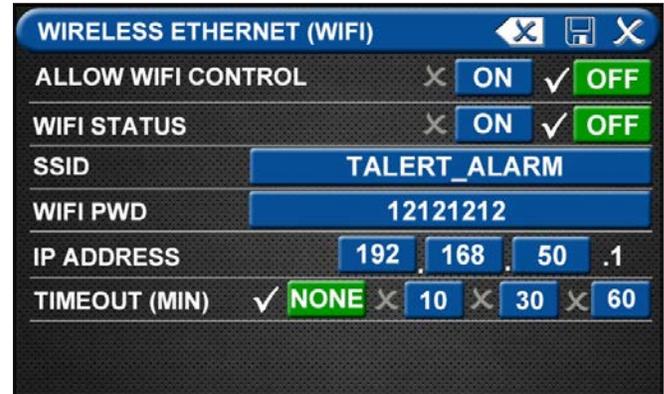


Figure 196: Wireless Ethernet Screen

- Touch the WIRELESS ETHERNET tab.
- To turn the WIFI on, touch the WIFI STATUS/ ON tab.
- To change the WIFI password—STRONGLY RECOMMENDED—touch the WIFI PWD tab. Using the keyboard, enter a new password.
- Touch the Save button to close and return to the WIFI SETTINGS screen.
- To add the WIFI settings to the INFORMATION screen, touch the ALLOW WIFI CONTROL / ON tab. The INFORMATION screen will now display a WIFI tab (Figure 4.184).

NOTE:

This will allow WIFI to be turned on/off without a password.



Figure 197: Wireless Ethernet Screen

- Save settings.
- Turn on the Web enabled device.
- Find the wireless Ethernet network on the device with the SSID name.

TotalAlert Infinity™ HTM Medical Gas Notification System

- Type in the password (default is 121212) on the web enabled device.
- Open the browser and enter the IP address (default is 192.168.50.1) to go to the TotalAlert Infinity™ home page. This page displays active alarms, gas pressure signals, Network devices, device information, and the event log.

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5.0 Retrofit

5.1 Retrofit of MP26 or MP125 Concealed Mounted Alarm Panels

5.1.1 Remove Components from Existing Alarm

1. Open the old alarm panel to be retrofitted and ensure that the retrofit kit to be installed is correct according to the number of Signal inputs, Relay outputs, and/or Gas Sensor signals (See Appendix A).
2. Test Central and Area alarm signals to validate wiring and document all signal wires coming into the box with alarm type and locations prior to disconnecting. This information will be required to setup the new alarm.
3. Turn off the supply power to the alarm.
4. Disconnect the ribbon cable(s) to the panel door and remove. Remove Trim Plate.
5. Disconnect all labeled wiring from the PCB and remove the PCB and all other removable hardware and spacers.

CAUTION: Verify that power has been turned off prior to working on the alarm.

5.1.2 Install New Components

1. Install the Trim Ring to the concealed backbox using the previous hinge screws (Figure 5.1).

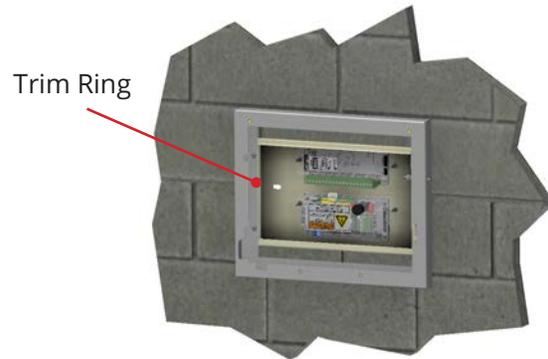


Figure 5.1: MP26 Retrofit Installation

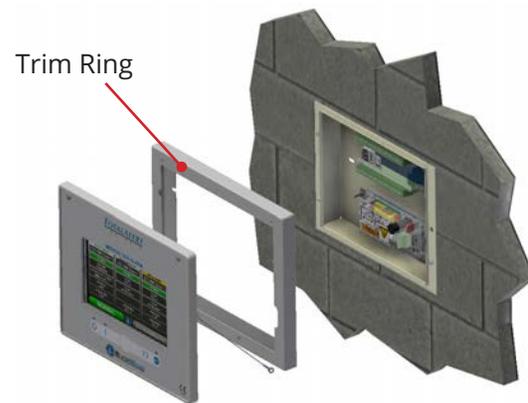


Figure 5.2: MP125 Retrofit Installation

2. Install the new power supply on the existing top two studs in the backbox (note the position of the green terminal block in reference to the Mains Power).
3. Install additional module on the existing bottom two studs in the backbox. For MP125, use the supply adapter bracket to mount the module.
4. Locate the Earth cable from the power supply and fasten it to the Earth stud on the backbox.
5. Remove the four screws from the power supply plastic shield and remove the shield.

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6. Connect the Live and Neutral wires to the terminal block on the power supply and the Mains Earth to the Earth stud on the backbox.
7. Place the power supply shield back in place, ensuring that all high voltage wires are secured behind the cover and install the four corner screws.



Figure 5.3: Front Panel Mounting

Central Wiring

1. For retrofit of a Central alarm panel the existing BeaconMedaes Line Monitoring contact wires can be connected to the appropriate terminal block locations on the B30 board along with any Medipoint or Shire communication wires. Refer to HTM Central Wiring Diagram (Section 3.1).

Remote Sensors

1. New TotalAlert Infinity Digital Gas Sensors must be installed to work with the TotalAlert Infinity alarm panel.
2. **CAUTION:** If Orifice fitting is not installed at the sensor connection, ensure that the pressure on the pipeline in the alarm area has been released before removing any components from the pipeline connection.
3. Remove existing pressure switch from the hospital pipeline and disconnect field wiring.
4. Install new digital gas sensor in the pipeline port.
5. Remove the strain relief and housing from the gas sensor to access the terminal block. Insert field wiring through strain relief and housing, connecting to the terminal block. Note the polarity.
6. Reinstall housing and strain relief and tighten cord grip to secure field wiring.
7. Return pressure to the hospital pipeline and check sensor connections for leaks.

Area Wiring

1. Connect all the gas sensor wires to the appropriate terminal block locations on the B60 board, noting polarity. Refer to HTM Area Wiring Diagram (Section 3.2).

5.1.3 Install Second Fix Kit

1. Install the Front display panel to the trim ring at the bottom hinge using the screws provided.
2. Connect the lanyard to the threaded standoff on the trim ring and secure with M4 nylock nut provided. Note: Do not tighten nut all the way, the lanyard eyelet should move freely when opening and closing the front display panel.
3. Connect the green Earth wire on the front display panel to the existing Earth stud in the backbox.
4. Connect the grey RS-485 communication cable provided on the front display panel to the power supply.
5. Turn on the Mains power to the alarm and wait for the alarm to boot up.
6. Setup the new alarm by referring to the Quick Setup Guide.

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Appendix A:

Variable B Alarm Type and Size	
Allowable Value	Description
B00	Blank
A10	Area Alarm, Up to 8 Area Gases
M01	Master, 0 Inputs, 16 Relay Outputs
M02	Master, 0 Inputs, 32 Relay Outputs
M10	Master, 20 Inputs
M11	Master, 20 Inputs, 16 Relay Outputs
C10	Combination, up to 20 Inputs, Display up to 6 Area Gases
C40	Combination, 6 Relay Outputs and up to 4 Inputs for 4-20mA devices

NOTE:

Standard configurations listed above. For special configurations contact BeaconMedaes Customer Service +44 (0) 1246 474 242.

Notes:

* Limitations on Combination Panels:

- C10, C11, C12 Combinations
 - » 0-10 source signal Inputs used, Display up to 6 Area gases
 - » 11-20 source signal Inputs used, Display up to 4 Area gases
- C40
 - » 0-20 source signal Inputs used, Display up to 4 4-20mA devices
 - » 21-27 source signal Inputs used, Display up to 2 4-20mA devices

Retrofit Alarm Models

A3- ___ - R
A

Available Gas Sensors
Description
Oxygen
Nitrous Oxide
Medical Air
Medical Vacuum
Nitrogen
Carbon Dioxide (CO2)
HE-O2 (HE over 80%)
Laboratory Air
Laboratory Vacuum
Surgical Air
O2-N2O

Example: TotalAlert Infinity™ Central Alarm with 20 Inputs and 16 Relay Outputs

Example Model Number: A3-M11-R

Example: TotalAlert Infinity™ Area Alarm with four gases - Oxygen, Nitrous Oxide, Medical Air, and Vacuum

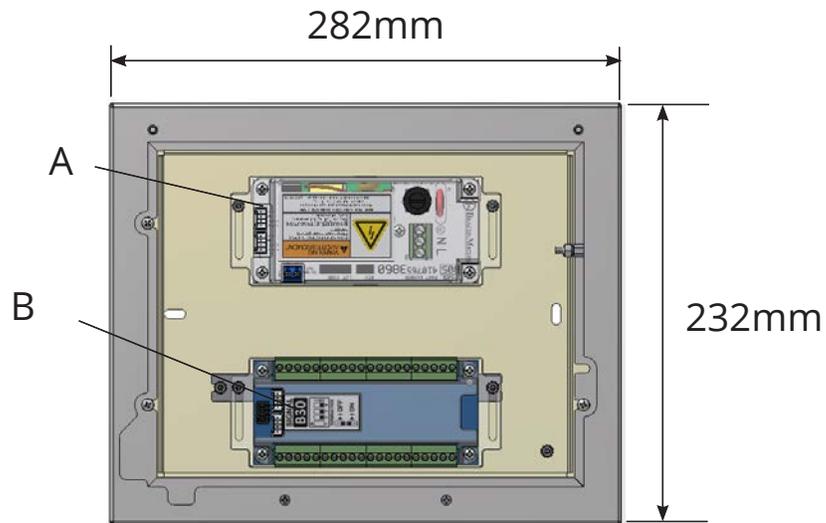
Example Model Number: A3-A10-R

TotalAlert Infinity™ HTM Medical Gas Notification System

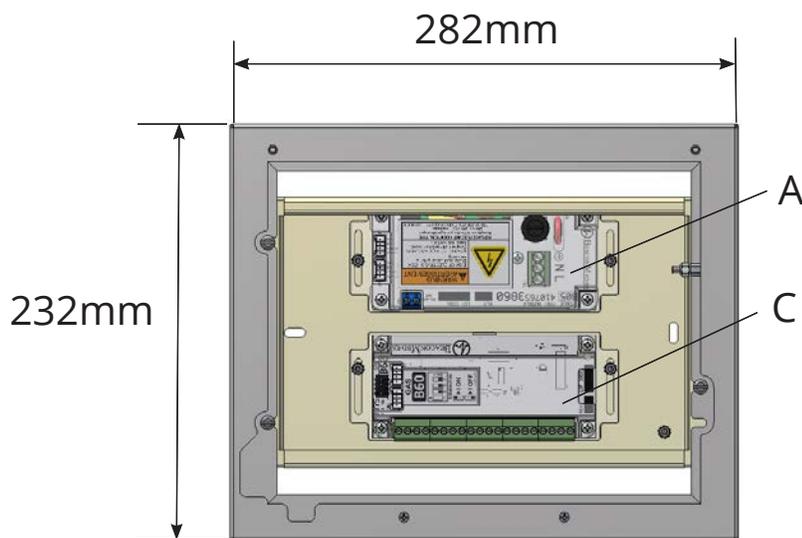
Typical Retrofit Layouts (Recommended Installation)

Module Components	
Letter Designator	Description
A	B05 Power Supply
B	B30 Module (Signals, 20 Inputs)
C	B60 Module (Gas Input, 8 gases, 1 output)

Dimensions



MP125 Retrofit



MP26 Retrofit

6.0 Maintenance

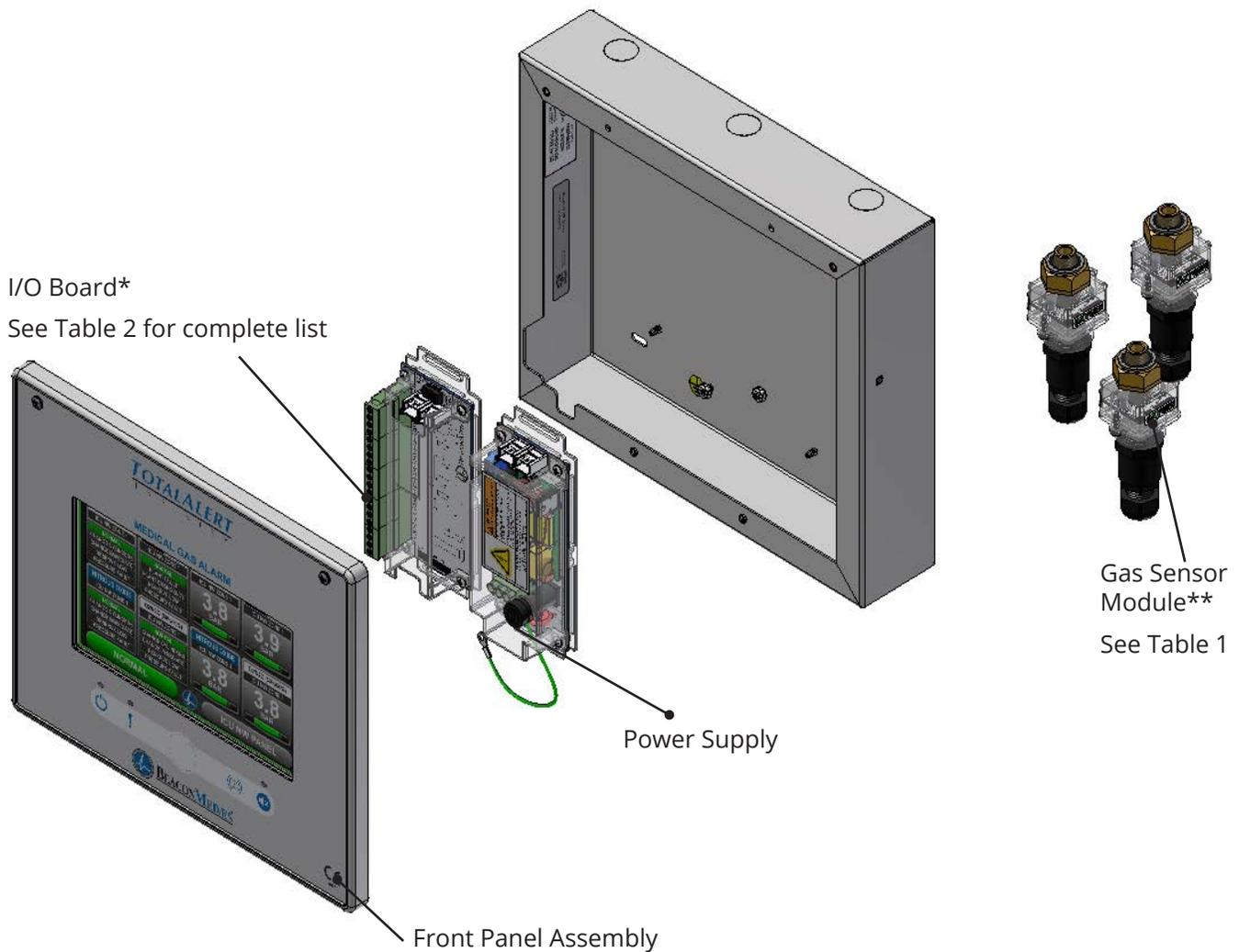


Figure 6.1: Maintenance

NOTE: For additional service parts, see parts list manual (Part #4107 9017 56).

TotalAlert Infinity™ HTM Medical Gas Notification System

***Table 1: Gas Sensor Module Options
(Service replacement only)**

Part Number	Gas Sensor Assembly
4107 2131 25	O2 Sensor Assembly
4107 2131 26	N2O Sensor Assembly
4107 2131 28	MedAir Sensor Assembly
4107 2131 32	MedVac Sensor Assembly
4107 2131 35	N2 Sensor Assembly
4107 2131 30	CO2 Sensor Assembly
4107 2131 31	HE-O2 Sensor Assembly
4107 2131 29	LAB-AIR Sensor Assembly
4107 2131 33	LAB-VAC Sensor Assembly
4107 2131 34	Surgical Air Sensor Assembly
4107 2131 27	O2-N2O Sensor Assembly

****Table 2: I/O Boards
(Service replacement only)**

Part Number	I/O Boards	Description
4107 4016 36	B03 Advance Module	Advanced features board
4107 4016 37	B05 Power Module	Power supply
4107 4016 40	B30 (HTM Signal Input Board)	20 Line Contact Monitoring Inputs
4107 4016 41	B4X (Relay Board)	16 Relay Outputs
4107 4016 42	B50 (4-20mA Combination Board)	4 Inputs for 4-20mA Signals
4107 4016 43	B60 (Gas Input Board)	8 Gases

Cleaning:

Use clean dry microfiber cloth or soft lint-free cloth to remove any smudges located on the touchscreen. Make sure not to apply too much pressure on the screen when cleaning it. Never use paper towels or tissue paper which contain wood fibers that will scratch any plastic surface.

Periodic Maintenance:

Inspect the alarm periodically and perform a self test (see Section 4.1.6 - Information Screen). This ensures proper operation of the alarm. Any damaged components inside the alarm should be replaced by an authorized BeaconMedæx service technician.

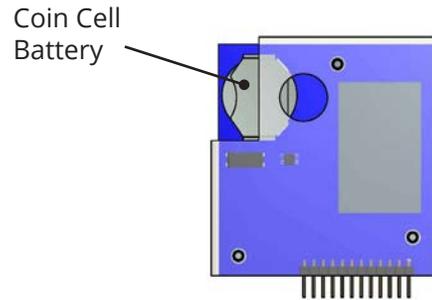
For TotalAlert Infinity™ alarms, Order Service Replacement Kit by calling Customer Service at 1-800-4MED-GAS.

Batteries:

The backup batteries and the coin cell battery on the Advanced Module needs to be replaced every 5 years.



**Do Not Dispose of in General Waste”
Follow local ordinances related to the proper disposal of batteries.**



B03

Figure 6.2: Coin Cell Battery

Backup Battery Testing:

Open front panel and locate the grey power cable connecting to back of front panel. Disconnect grey cable from front panel (power will be removed at this point). If batteries are working, power LED light located on front panel will be on. If power LED light is not on, battery's need to be replaced.

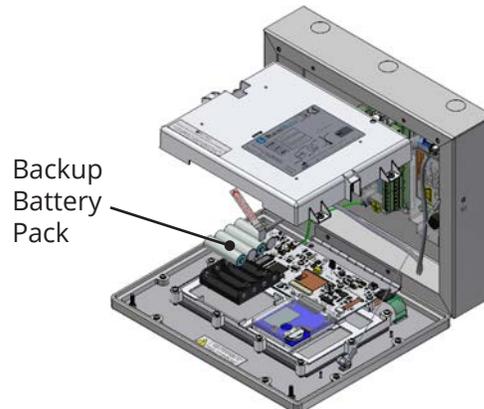


Figure 6.3: Rechargeable Battery

7.0 Troubleshooting

Symptom	Possible Cause	Corrective Action
No LED power indicator illuminated on alarm front panel	AC power is not turned on	Check AC power source.
	Blown power supply fuse	Replace fuse.
	AC power wiring is not connected	Check AC entrance wiring at power supply terminals.
	Power supply DC wire harness is not connected properly between the power supply and the main board	Check connections on each end including orientation of cable connectors. Reconnect if necessary.
	Faulty power supply assembly	Replace power supply
No green "heartbeat" power indicator is illuminated on connected boards	Board has not been initialized	Initialize board per instructions in manual.
	Board dip switches are not set correctly.	Set dip switches per diagram on board label.
	Cable not connected correctly	Check cable connections between boards.
No green "heartbeat" power indicator is illuminated on gas sensor	Sensor not connected to the Gas Input Board.	Verify correct sensor connection to Gas Input Board.
	Gas Input Board does not have power (no "heartbeat")	Verify that Gas Input Board has been initialized and that dip switches are set correctly. See item 2 above.
Fast green "heartbeat" power indicator is illuminated on gas sensor (2 beats per second)	Sensor is reading out of range	Verify gas pressure in pipeline. If normal, replace sensor.
Red LED illuminated above warning indicator (!).	Active warning	Navigate to the warning screen by pressing the Information button, then selecting Warnings.
Lost Connection Warning	Alarm has lost network communication with manually enrolled device	Correct communication problem with networked device or remove the enrolled device from the Enrolled Devices list.
	The alarm has lost connection to a connected/ initialized board.	Check connections and cable to board.
Sensor active and Unassigned Warning	Sensor is wired to the sensor input board, but not assigned/programmed	Assign the wired gas sensor to a valid gas input.
F1 displayed on Area badge	Gas sensor is not connected or has shorted.	Check gas sensor connection. If connection is good, replace sensor.
F2 displayed on Area badge	Gas sensor is reading below range (fault low).	Verify gas sensor connections and pipeline pressure. If connection and pressure are good, replace sensor.
F3 displayed on Area Badge	Gas sensor is reading above range (fault high).	Verify gas sensor connections and pipeline pressure. If connection and pressure are good, replace sensor.
F4 displayed on Area Badge	Gas sensor connected is wrong type of gas.	Connect the correct type gas sensor.

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Troubleshooting (continued)

Symptom	Possible Cause	Corrective Action
Area Display pressure/ vacuum reading not matching pipeline.	Bad gauge on pipeline	Verify gauge used on pipeline
	Incorrect unit of measure	Check unit of measure, if incorrect, reprogram unit of measure.
	Gas sensor out of calibration	Adjust Zero Offset to correct reading. (Note: there is a max offset of ± 0.3 bar/60 mmhg). If sensor cannot be adjusted enough, replace sensor.
High or Low alarm, with normal pressure displaying on Area display	Alarm set points have been changed.	Verify / correct alarm set points.
Screen is blank, power on LED is illuminated	Screen backlight will time out and shut off. Motion sensor will awaken screen when motion is sensed within 5 ft of screen.	If screen does not awaken when approaching alarm, touch screen to awaken. Possible faulty motion sensor.
Audible alarm does not reactive after 15 minutes	Maintenance mode has been entered without correcting all alarm conditions.	Turn Maintenance mode to OFF.

8.0 Central Alarm Signal Input Data

Module	Board Input	Alarm Message	Source Location
B30	C1X1		
	C1X2		
	C1X3		
	C1X4		
	C2X1		
	C2X2		
	C2X3		
	C2X4		
	C3X1		
	C3X2		
	C3X3		
	C3X4		
	C4X1		
	C4X2		
	C4X3		
	C4X4		
	C5X1		
	C5X2		
	C5X3		
	C5X4		

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9.0 Non-Latin Language Website

9.1 Website Login

1. Accessing the Web Page.
Connect Ethernet cable from computer to ethernet port on main display board.

Start a web browser such as Chrome, FireFox, and Safari (Browser needs to be able to interpret HTML5)

2. Enter the Device's IP address in the browser's address bar:
Example: <http://169.254.100.100>
(IP address of the computer needs to be in the range with this device)

3. After you enter the IP address, the alarm's home page will be displayed. (See Figure 232)

NOTE:

To learn the IP address, touch the MISCELLANEOUS tab on the configuration screen then touch the WIRED ETHERNET tab.



Figure 232

Login to Setup Pages

1. Click Login in Setup Section.
2. The web browser will request a username and password (Figure 233). The factory defaults are:

Username: TotalAlert
Password: 121212

NOTE:

If the on-screen password has been changed from the default password, use the newly assigned password.

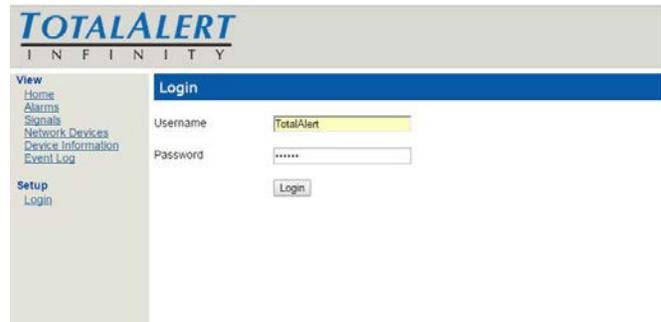


Figure 233

3. The left side bar will now contain the "Label Setup" link. (See Figure 234)

4. Click on Label Setup to enter the main label screen for non-latin language input.

NOTE:

Logging in applies only to the computer on which the login occurs. If more than one PC is being used to access the alarm web pages, each one must be logged in individually. The computer stays logged in until the user closes the browser or until the device has been rebooted.

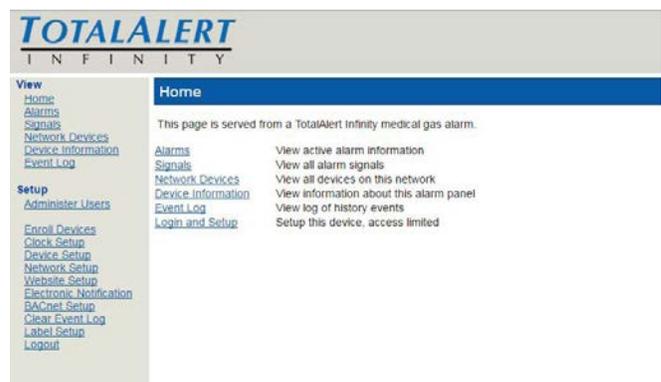


Figure 234

TotalAlert Infinity™ HTM Medical Gas Notification System

The TotalAlert Infinity alarm main label setup screen allows for setting up Area, Central, and Combination alarms with non-latin language characters. NFPA, HTM, and ISO colors can all be selected within this setup.

9.2 Area Alarm Configuration - Website

The TotalAlert Infinity website allows for setup of various parameters of the Area Alarm badges with non-latin language characters. These parameters include: Gas type, Gas color (NFPA, HTM, ISO, or custom), Units of Measure, Locations monitored, High and Low pressure alarm Instructions.

1. Choose Area Badge Setup button. (See Figure 235)



Figure 235

2. Setup display is similar to what is displayed on the alarm home screen. (See Figure 236). To Setup panel status label, select "Panel Status Label" button.

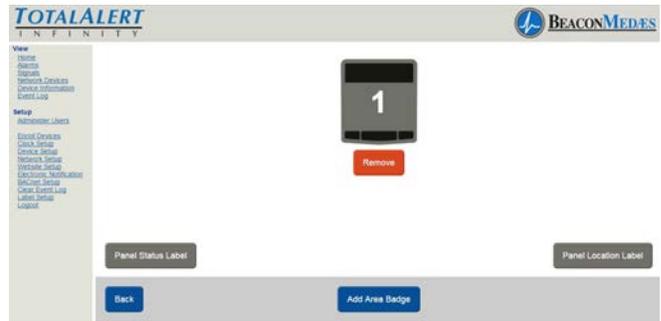


Figure 236

3. Enter non-latin language text for meaning of "Normal". Click save button to enter. (See Figure 237) Choose "Back" button to return to the main setup screen.



Figure 237

4. To setup Panel Location Label, select "Panel Location Label". Enter the non-latin language for the location of the panel. Click save button to enter. (See Figure 238) Choose "Back" button to return to the main setup screen.



Figure 238

5. Add up to 8 Area Alarm badges by selecting the "Add Area Badge" button to match

TotalAlert Infinity™ HTM Medical Gas Notification System

how many area alarms are displayed on the alarm's LCD. (See Figure 239)



Figure 239

6. From home screen, Click on the area badge to setup non-latin language parameters. (See Figure 240)



Figure 240

7. Starting at the top of the Area Badge parameter box, select gas type from pull down menu (Gas color options will be updated by default). Then select the Gas color, based from the required standard (NFPA, HTM, ISO). Custom colors can also be added by entering the RGB numbers.

The non-latin language input field (located at the bottom of the parameter tab) defaults in English with the gas previously selected. Enter the non-latin language in this field. The badge will update with the new input on the website page. (See Figure 241)

8. To save, select "Save Gas Label" button.



Figure 241

9. To setup location of gas monitored, select Location tab on badge (located just under the gas label). Enter non-latin language characters for the location of gas being monitored. (See Figure 242)

10. To save, select "Save Location Label" button.



Figure 242

The TotalAlert Infinity alarm allows for setting up custom Units which is typically done for 4-20mA devices. Units have to match the pressure or vacuum numerical values.

11. To setup units of measure (other than the defaults on the alarm) select UNITS tab on badge. Enter non-latin language characters for the Units of Measure of gas being monitored. (See Figure 243)

12. To save, select "Save Units of Measure Label" button.

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Figure 243

TotalAlert Infinity alarm allows for customized instructions for each high and low pressure fault condition.

13. To setup the instructions for a low pressure fault condition, select the lower left corner of the badge (location of the red blinking light when alarm goes into fault). Enter non-latin language characters for the low pressure alarm instructions. (See Figure 244) This can be two lines of text. Press the return key while typing if you wish to move to the second line of text early.

14. To save, select “Save Low Alarm Instructions” button.



Figure 244

15. To setup the instructions for a high pressure fault condition, select the lower right corner of the badge (location of the red blinking light when alarm goes in to fault). Enter non-latin language characters for the high pressure alarm instructions. (See Figure 245)



Figure 245

16. To save, select “Save High Alarm Instructions” button. Touch the Back button to return to the main label screen. (See Figure 246)

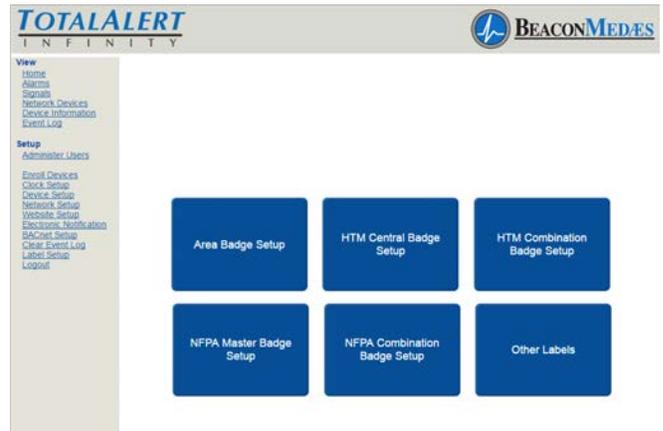


Figure 246

The TotalAlert Infinity alarm allows the user to setup non-latin language characters for the active alarm screens (both Low and High), as well as the Information Screen tabs located on the alarm. Touch the “Other Labels” tab for setup.

17. To setup the active alarm screen Low, from the pull down menu, choose “Active Alarm Screen Message Low”. Then input the non-latin language character for “LOW” in the writable tab.

18. To save, select “Save Label” button. (See Figure 247)

TotalAlert Infinity™ HTM Medical Gas Notification System

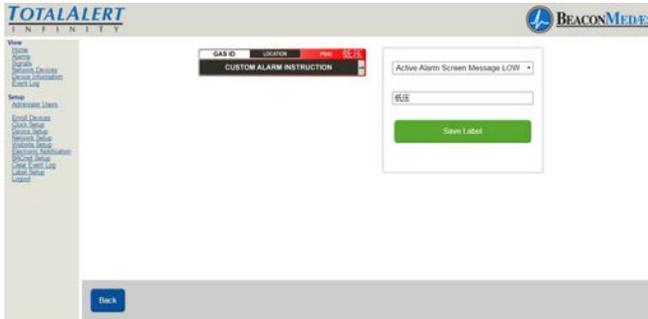


Figure 247

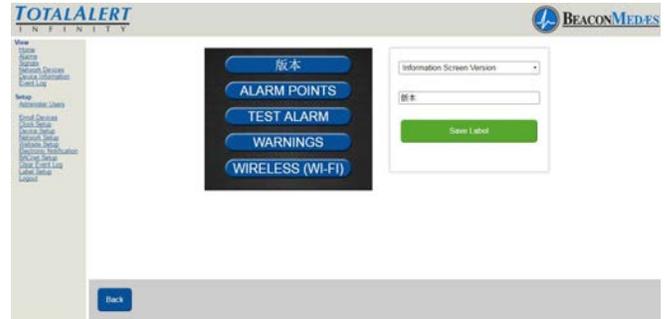


Figure 249

17. To setup the active alarm screen High, from the pull down menu, choose “Active Alarm Screen Message High”. Then input the non-latin language character for “HIGH” in the writable tab.

18. To save, select “Save Label” button. (See Figure 248)



Figure 248

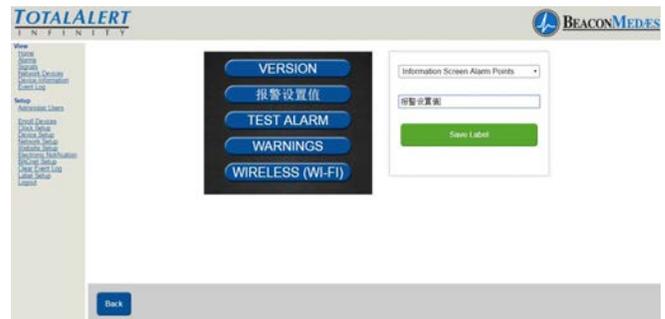


Figure 250

19. To setup Information Screen from the pull down menu, Choose “Information Screen Version”. Then input the non-latin language character for “Version” in the writable tab. (See Figure 249)

20. To save, select “Save Label” button.

Repeat the procedure for setting up the Alarm Points, Test Alarm, Warning, and Wireless (Wi-Fi). See Figures 250 thru 253. Save the label after each non-latin language addition.

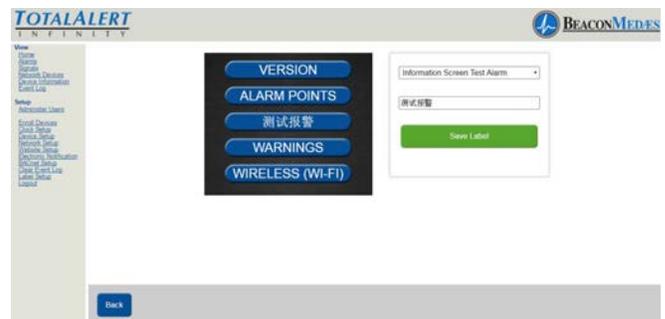


Figure 251

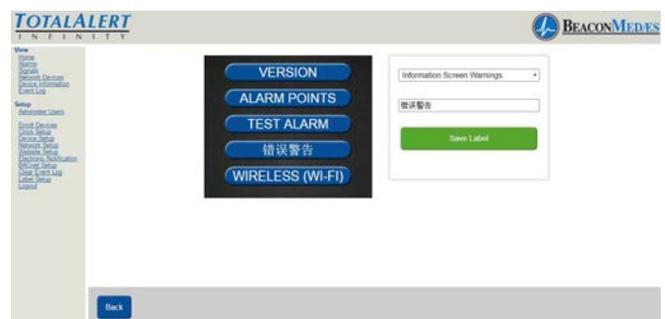


Figure 252

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Figure 253



Figure 256

21. Then go to physical alarm screen.
22. Go to config screen.
23. Put in password.

26. If units of measure was setup from website, then go to configuration screen and choose the Area badge that requires the website units. Choose E “units of measure” then choose the units tab.



Figure 254



Figure 257

24. Touch Security Tab.



Figure 255

25. Touch Reboot Software Tab (alarm will reboot - blinking led power light while loading data)

9.2 Central Alarm Configuration - Website

1. Accessing the Web Page. Start a web browser such as Chrome, FireFox, and Safari (Browser needs to be able to interpret HTML5)
2. Enter the Device’s IP address in the browser’s address bar:
Example: `http://169.254.100.100`
3. After you enter the IP address, the alarm’s home page will be displayed. (See Figure 258)

TotalAlert Infinity™ HTM Medical Gas Notification System

NOTE:

To learn the IP address, touch the MISCELLANEOUS tab on the configuration screen then touch the WIRED ETHERNET tab.



Figure 258

Login to Setup Pages

1. Click Login in Setup Section.
2. The web browser will request a username and password (See Figure 259). The factory defaults are:
Username: TotalAlert
Password: 121212

NOTE:

If the on-screen password has been changed from the default password, use the newly assigned password.



Figure 259

3. The left side bar will now contain the “LabelSetup” link. (See Figure 260)

4. Click on Label Setup to enter the main label screen for non-latin language input.

NOTE:

Logging in applies only to the computer on which the login occurs. If more than one PC is being used to access the alarm web pages, each one must be logged in individually. The computer stays logged in until the user closes the browser or until the device has been rebooted.



Figure 260

The TotalAlert Infinity Central alarm is designed to allow the setup of 5 Channels (source badges) with 4 conditions per channel, for a total of 20 signals. Before starting, have a complete listing of Gas-Signal-Location (See Section 9.5).

1. Choose Central Badge Setup button. (See Figure 261)

TotalAlert Infinity™ HTM Medical Gas Notification System



Figure 261

2. Setup display is similar to what is displayed on the alarm home screen. (See Figure 262). To Setup panel status label, select "Panel Status Label" button.



Figure 262

3. Enter non-latin language text for meaning of "Normal". Click save button to enter. (See Figure 263) Choose "Back" button to return to the main setup screen.



Figure 263

4. To setup Panel Location Label, select "Panel Location Label". Enter the non-latin language for the location of the panel. Click save button to enter. (See Figure 264) Choose "Back" button to return to the main setup screen.



Figure 264

Add up to 5 Central Alarm badges by selecting the "Add Central Badge" button to match how many area alarms are displayed on the alarm's LCD. (See Figure 265)

TotalAlert Infinity™ HTM Medical Gas Notification System

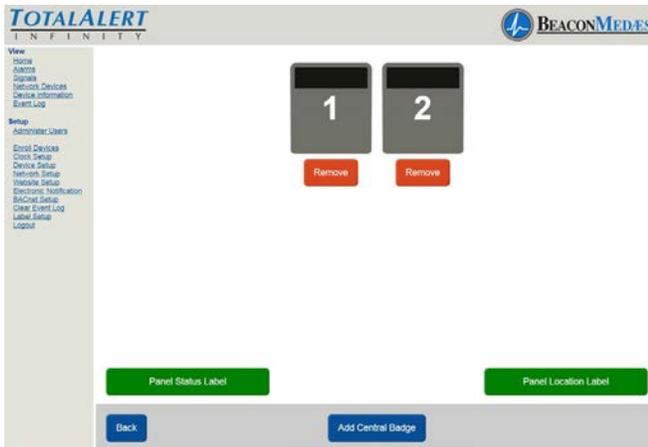


Figure 265

6. From home screen, Click on the central badge to setup non-latin language parameters. (See Figure 266)

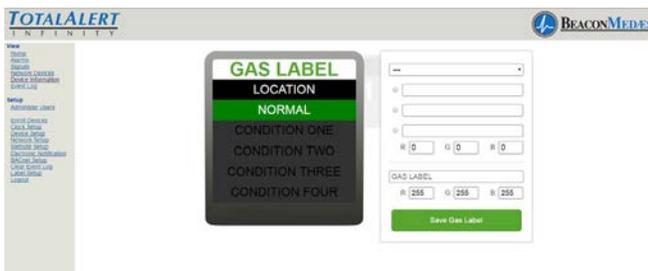


Figure 266

7. Starting at the top of the Central Badge parameter box, select gas type from pull down menu (Gas color options will be updated by default). Then select the Gas color, based from the required standard (NFPA, HTM, ISO). Custom colors can also be added by entering the RGB numbers.

The non-latin language input field (located at the bottom of the parameter tab) defaults in English with the gas previously selected. Enter the non-latin language in this field. The badge will update with the new input on the website page. (See Figure 267)

8. To save, select "Save Gas Label" button.



Figure 267

9. To setup location of gas monitored, select Location tab on badge (located just under the gas label). Enter non-latin language characters for the location of gas being monitored. (See Figure 268)

10. To save, select "Save Location Label" button.



Figure 268

11. To enter a non-latin language for the meaning of the word "NORMAL" pertaining to alarm condition, select Normal tab on badge (located just under location tab). Enter non-latin language characters for the location of gas being monitored. (See Figure 269)



Figure 269

TotalAlert Infinity™ HTM Medical Gas Notification System

TotalAlert Infinity Central alarm allows for setup of 4 alarm conditions (ie. Change Cylinders, Change Immediate, Reserve Low, Pressure Fault). A customized instruction can be created for each condition.

12. To setup first alarm condition, select “CONDITION ONE” tab on badge (located just under the NORMAL label). Enter non-latin language characters for the Condition One (ie. Change Cylinders). Then enter non-latin language for instructions in the “Alarm Condition One Instructions” section. (See Figure 270)

13. To save, select “Save Location Label” button.



Figure 270

14. Repeat step 12 and 13 to setup Conditions Two, Condition Three, and Condition Four. (See Figure 271)



Figure 271

15. Choose “Back” button to return to the main setup screen.

16. To setup the Information Screen from the pull down menu, first select Other Labels tab, then Choose “Information Screen Version” from pull down menu. Then input the non-latin language character for “Version” in the writable tab. (See Figure 272)

17. To save, select “Save Label” button.

Repeat the procedure for setting up the Alarm Points, Test Alarm, Warning, and Wireless (Wi-Fi). Figures 273 thru 276. Save the label after each non-latin language addition.

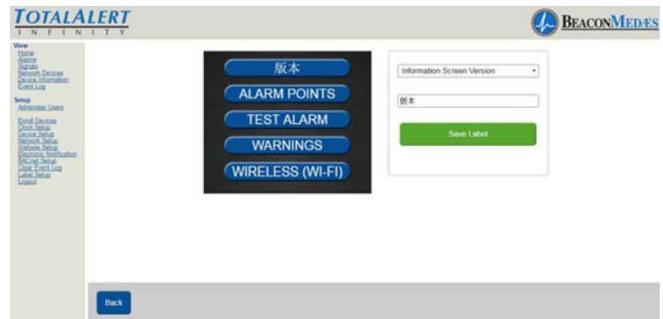


Figure 272



Figure 273

TotalAlert Infinity™ HTM Medical Gas Notification System



Figure 274



Figure 277



Figure 275

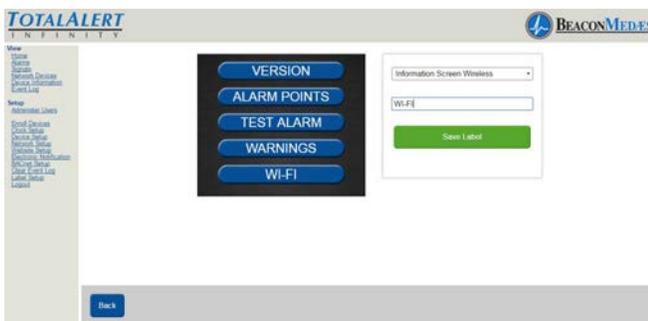


Figure 276

30. Touch Security Tab



Figure 278

31. Touch Robot Software Tab (alarm will reboot - blinking LED power light while loading data)



Figure 279

18. Choose "Back" button to return to the main setup screen.

19. Then go to physical alarm screen.

20. Go to config screen.

21. Enter password.

32. Blank home screen will show on alarm.

TotalAlert Infinity™ HTM Medical Gas Notification System



Figure 280

9.4 Combination Alarm configuration - Website

1. Accessing the Web Page.
Start a web browser such as Chrome, FireFox, and Safari (Browser needs to be able to interpret HTML5)
2. Enter the Device's IP address in the browser's address bar:
Example: `http://169.254.100.100`
(IP address of the computer needs to be in the range with this device)
3. After you enter the IP address, the alarm's home page will be displayed. See Figure 281

NOTE:

To learn the IP address, touch the MISCELLANEOUS tab on the configuration screen then touch the WIRED ETHERNET tab.



Figure 281

Login to Setup Pages

1. Click Login and Setup.
2. The web browser will request a username and password (Figure 282). The factory defaults are:
Username: TotalAlert
Password: 121212

NOTE:

If the on-screen password has been changed from the default password, use the newly assigned password.

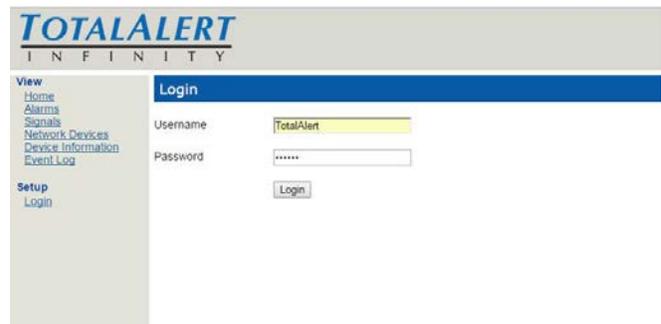


Figure 282

3. The left side bar will now contain the "Label Setup" link. (See Figure 283)
4. Click on Label Setup to enter the main label screen for non-latin language input.

TotalAlert Infinity™ HTM Medical Gas Notification System

NOTE:

Logging in applies only to the computer on which the login occurs. If more than one PC is being used to access the alarm web pages, each one must be logged in individually. The computer stays logged in until the user closes the browser or until the device has been rebooted.

tion of source and area badges.

2. Setup display is similar to what is displayed on the alarm home screen. (See Figure 285) To Setup panel status label, select "Panel Status Label" button.



Figure 283

The TotalAlert Infinity Combination alarm is designed to combine the functionality of an Area alarm and a Central alarm.

1. Choose HTM Combination Badge Setup button. (See Figure 284)



Figure 285

3. Enter non-latin language text for meaning of "Normal". Click save button to enter. (See Figure 286) Choose "Back" button to return to the main setup screen.



Figure 284



Figure 286

4. To setup Panel Location Label, select "Panel Location Label". Enter the non-latin language for the location of the panel. Click save button to enter. (See Figure 287) Choose "Back" button to return to the main setup screen.

The configuration screen shows a combina-

TotalAlert Infinity™ HTM Medical Gas Notification System



Figure 287

5. To setup the Central badge select the source badge number 1. (See Figure 288) Use the “Add Area Badge” or “Add Central Badge” for the correct number of central and area badges to match the alarm display needed.



Figure 288

6. From home screen, Click on the central badge to setup non-latin language parameters. (See Figure 289)

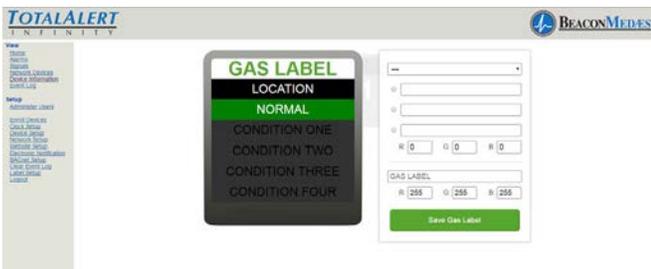


Figure 289

7. Starting at the top of the Central Badge parameter box, select gas type from pull down menu (Gas color options will be updated by default). Then select the Gas color,

based from the required standard (NFPA, HTM, ISO). Custom colors can also be added by entering the RGB numbers.

The non-latin language input field (located at the bottom of the parameter tab) defaults in English with the gas previously selected. Enter the non-latin language in this field. The badge will update with the new input on the website page. (See Figure 290)

8. To save, select “Save Gas Label” button.



Figure 290

9. To setup location of gas monitored, select Location tab on badge (located just under the gas label). Enter non-latin language characters for the location of gas being monitored. (See Figure 291)

10. To save, select “Save Location Label” button.



Figure 290

11. To enter a non-latin language for the meaning of the word “NORMAL” pertaining to alarm condition, select Normal tab on badge (located just under location tab).

TotalAlert Infinity™ HTM Medical Gas Notification System

Enter non-latin language characters for the location of gas being monitored. (See Figure 291)



Figure 291

TotalAlert Infinity Central alarm allows for setup of 4 alarm conditions (ie. Change Cylinders, Change Immediate, Reserve Low, Pressure Fault). A customized instruction can be created for each condition.

12. To setup first alarm condition, select "CONDITION ONE" tab on badge (located just under the NORMAL label). Enter non-latin language characters for the Condition One (ie. Change Cylinders). Then enter non-latin language for instructions in the "Alarm Condition One Instructions" section. (See Figure 292)

13. To save, select "Save Location Label" button.



Figure 292

14. Repeat step 12 and 13 to setup Conditions Two, Condition Three, and Condition Four. (See Figure 293)



Figure 293

15. Choose "Back" button to return to the main setup screen.

Repeat steps 5 thru 15 for all Central Badges.

To setup Area badges select the Area badge number 4 or 8 (See Figure 294)

*Up to 6 Area badges can be added and shown by selecting the "Add Area Badge" button located at the bottom of the page.

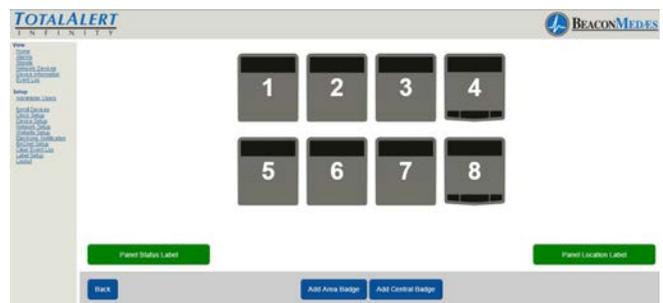


Figure 294

16. From home screen, Click on the area badge to setup non-latin language parameters. (See Figure 295)

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Figure 295

17. Starting at the top of the Area Badge parameter box, select gas type from pull down menu (Gas color options will be updated by default). Then select the Gas color, based from the required standard (NFPA, HTM, ISO). Custom colors can also be added by entering the RGB numbers.

The non-latin language input field (located at the bottom of the parameter tab) defaults in English with the gas previously selected. Enter the non-latin language in this field. The badge will update with the new input on the website page. (See Figure 296)

18. To save, select "Save Gas Label" button.



Figure 296

19. To setup location of gas monitored, select Location tab on badge (located just under the gas label). Enter non-latin language characters for the location of gas being monitored. (See Figure 297)

20. To save, select "Save Location Label" button.



Figure 297

The TotalAlert Infinity alarm allows for setting up custom Units which is typically done for 4-20mA devices. Units have to match the pressure or vacuum numerical values.

21. To setup units of measure (other than the defaults on the alarm) select UNITS tab on badge. Enter non-latin language characters for the Units of Measure of gas being monitored. (See Figure 298)

22. To save, select "Save Units of Measure Label" button.



Figure 298

TotalAlert Infinity alarm allows for customized instructions for each high and low pressure fault condition.

23. To setup the instructions for a low pressure fault condition, select the lower left corner of the badge (location of the red blinking light when alarm goes into fault). Enter non-latin language characters for the low pressure alarm instructions. (See Figure 299) This can be two lines of text. Press the

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return key while typing if you wish to move to the second line of text early.

24. To save, select “Save Low Alarm Instructions” button.



Figure 299

25. To setup the instructions for a high pressure fault condition, select the lower right corner of the badge (location of the red blinking light when alarm goes in to fault). Enter non-latin language characters for the high pressure alarm instructions. (See Figure 300)



Figure 300

26. To save, select “Save High Alarm Instructions” button. Touch the Back button to return to the main label screen. (See Figure 301)



Figure 301

The TotalAlert Infinity alarm allows the user to setup non-latin language characters for the active alarm screens (both Low and High), as well as the Information Screen tabs located on the alarm. Touch the “Other Labels” tab for setup.

27. To setup the active alarm screen Low, from the pull down menu, choose “Active Alarm Screen Message Low”. Then input the non-latin language character for “LOW” in the writable tab.

28. To save, select “Save Label” button. (See Figure 302)



Figure 302

29. To setup the active alarm screen High, from the pull down menu, choose “Active Alarm Screen Message High”. Then input the non-latin language character for “HIGH” in the writable tab.

30. To save, select “Save Label” button. (See

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Figure 303)

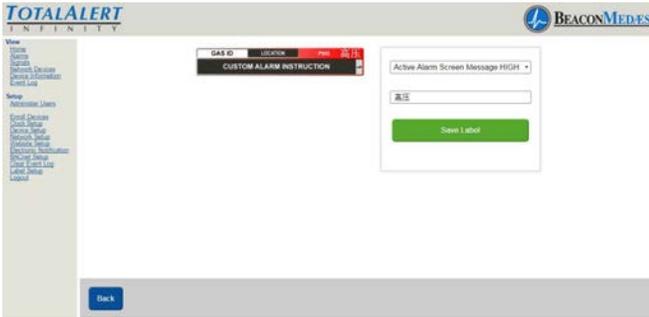


Figure 303

31. To setup Information Screen from the pull down menu, Choose "Information Screen Version". Then input the non-latin language character for "Version" in the writeable tab. (See Figure 304)

32. To save, select "Save Label" button.

Repeat the procedure for setting up the Alarm Points, Test Alarm, Warning, and Wireless (Wi-Fi). See Figures 305 thru 308. Save the label after each non-latin language addition.

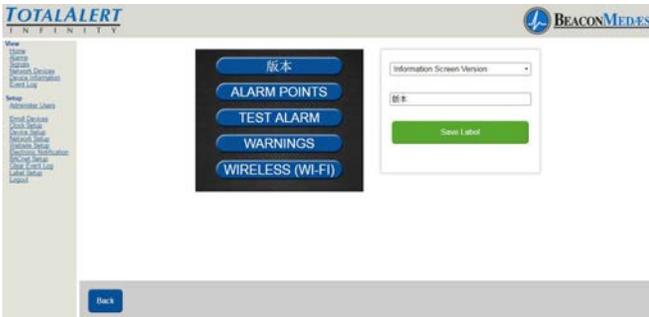


Figure 304



Figure 305



Figure 306



Figure 307

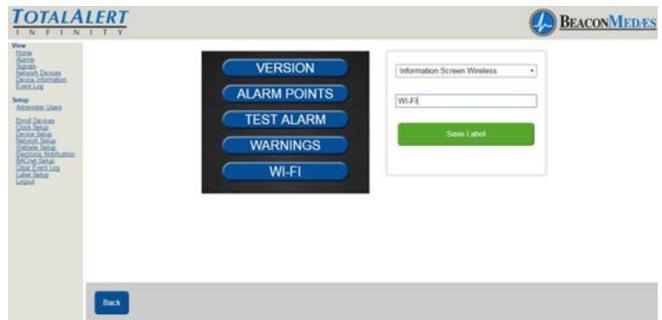


Figure 308

21. Then go to physical alarm screen.

22. Go to config screen.

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23. Put in password.



Figure 309

24. Touch Security Tab.



Figure 310

25. Touch Reboot Software Tab (alarm will reboot - blinking led power light while loading data)



Figure 311

26. If units of measure was setup from web-site, then go to configuration screen and choose the Area badge that requires the website units. Choose E “units of measure” then choose the units tab.



Figure 312

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1059 Paragon Way Rock Hill, SC 29730
(888) 4-MEDGAS (888) 463-3427
Fax (803) 817-5750
www.beaconmedaes.com