



MSA SAFE SITE



The MSA SAFESITE is a remote monitoring tool that can be used to monitor large geographic areas for Oxygen %, LEL, Carbon Monoxide, Hydrogen Sulfide, Chlorine, Ammonia, Radiation, and Chemical Warfare Agents

EQUIPMENT NEEDED FOR SET-UP:

MSA SAFECOM UNIT



This unit requires a power source for operation

SAFE MTX REMOTE UNITS (ALPHA 1, 2, 3, and 4)



These units can operate with a power source or with a battery

TOUGHBOOK COMPUTER



The battery can be used, but a power source is recommended

ETHERNET CABLE



MSA SAFE SITE SET-UP

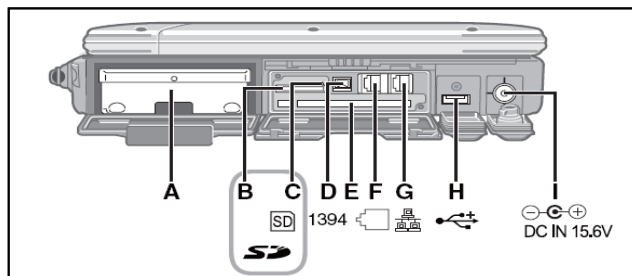


- STEP 1:** Unpack the equipment from the PELICAN cases and place everything on a flat surface.
- STEP 2:** Attach the ETHERNET CABLE to the SAFECOM Unit
This is the unit with the RED rubber case
- STEP 3:** Attach the power cord to the SAFECOM UNIT
This is the unit with the RED rubber case
- STEP 4:** Plug the other end of the ETHERNET CABLE into the Adapter on the side of the TOUGHBOOK Computer



SAFECOM UNIT (Right Side)

The ETHERNET female jack is located on the side of the TOUGHBOOK Computer (It is labeled "G" in this side view picture.)



RIGHT SIDE OF COMPUTER

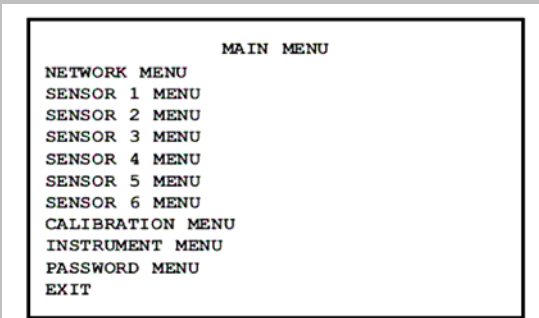


- STEP 5:** Turn the TOUGHBOOK COMPUTER on. The switch is located on the front of the computer
- STEP 6:** Turn the MSA SAFECOM UNIT on by pressing the silver button on the side opposite the ethernet jack
A light will indicate that the SAFECOM unit is on.

STEP 7: Unscrew the front cover of each MTX Remote Unit (Purple case) and press the Power/Accept button to turn it on

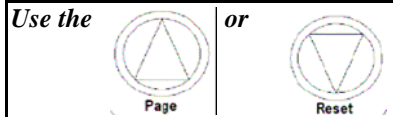
STEP 8: After the MSA setup sequence is complete, zero the sensors by performing the following steps:

Press and release the Power/Accept button and the following menu will appear

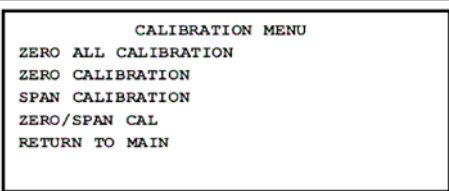


KEY TO SYMBOLS THAT APPEAR ON THE MTX SCREEN

- radio signal strength
- audio alarm
- beacon alarm
- GPS signal present
- communication active
- password protection active
- battery charge indicator.



Use the buttons to move the cursor to the CALIBRATION MENU line and press the Power/Accept button and the following menu will appear:

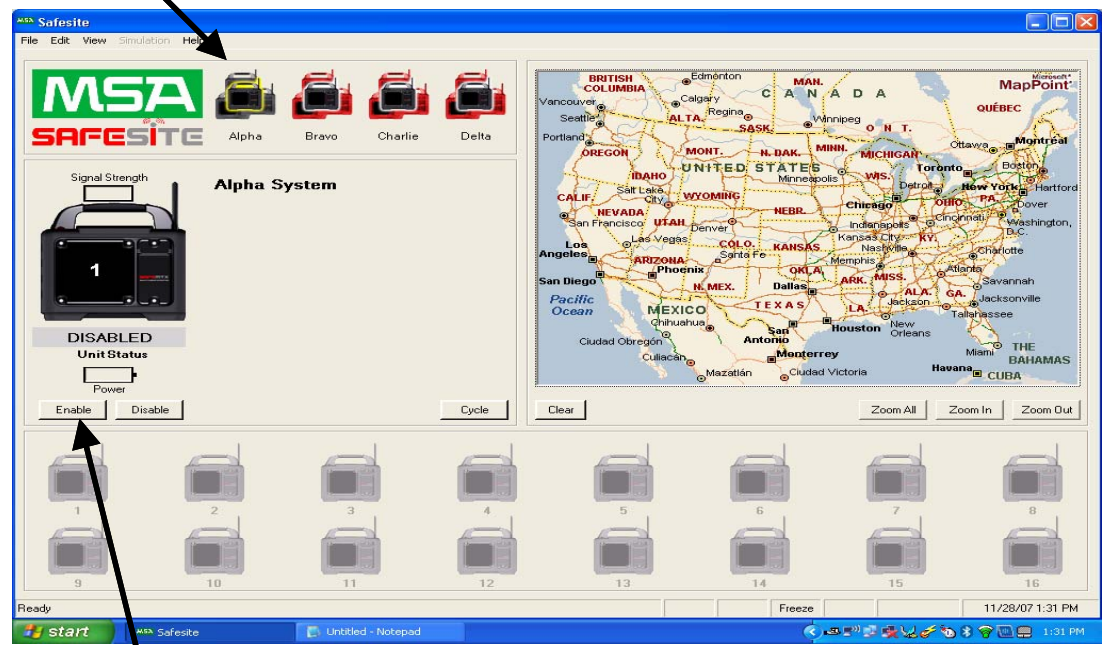


Use the arrows again to highlight the ZERO ALL SENSORS Press the Power/Accept button the zero process will initiate

NOTE: It may take a few minutes for the sensors to calibrate and for the main menu to return

STEP 9: Open the MSA SOFTWARE by double clicking on the icon that appears on the desktop of the computer

STEP 10: Once the SAFESITE Program is running, press on the ALPHA icon on the top row.



STEP 11: Choose the "ENABLE" tab that appears under the ALPHA Icon. After the system is enabled, choose unit 1 on bottom portion of the screen. Once that image of the remote unit with a "1" appears in the middle of the screen, choose the "ENABLE" tab. If properly connected, the meter readings for that unit will appear next to the image of the remote unit.

STEP 12: Step 11 may occur automatically when the program starts. The additional units (2 - 4) can be activated by clicking on the shaded out icon in the lower portion of the screen. By pressing the "ENABLE" tab, the remote should connect.



- STEP 12 Continued:** Click on this box and then click the "ENABLE" tab to activate MTX REMOTE UNIT 2
- STEP 13:** The MTX REMOTE UNITS from the other jurisdictions cannot be received by the Baltimore County SAFECOM Unit. In order to incorporate their units, you must hook their SAFECOM to our SAFECOM with an ethernet cable that is plugged into the ethernet jack opposite of the one that currently in use. Click on BRAVO to activate their units.
- STEP 14:** Press the LOCATE Icon to enter the address that is being monitored. This causes a map of that location to zoom in. If the map still does not appear, chose "VIEW" from the dropdown menu at the top of the screen and click "MAP"
- STEP 15:** Deploy the SAFESITE SENSORS. By pressing the "CYCLE" icon, the system will automatically cycle through the units that have been enabled. If an alarm occurs on one sensor while you are monitoring another, the system will announce "MSA SAFESITE ALERT" and the remote unit that is causing the alarm will flash. Click on that unit to view the meter readings. The one with the alarm will be flashing and the specific action level reading will be highlighted.

MSA SAFE SITE TROUBLESHOOTING

COMMUNICATION ERROR
Once you have verified that all components are turned on and connected, click on the shaded unit and pressed ENABLE. If that doesn't work, click through the MTX menu and choose "NETWORK MENU". Verify that the MODBUS ID matches the unit number (1, 2, 3, or 4). If it doesn't, use the arrows to change to the number that represents the MTX Remote Unit (1, 2, 3, or 4)

TO SILENCE HORN
If you desire to silence the audible alarm on the MTX unit (Horn), you must press the Power/Accept button and scroll to the "Instrument Menu" icon. Scroll to the "Horn enable" icon and choose "OFF". You must do this for EACH UNIT if you do not want a loud audible alarm, The MSA Safesite alert will still activate on the computer even if the horn is off.

PUMP FAILURE
*The MSA SAFESITE has a passive diffusion sensor set-up. Pump failure indicates that the pump was accidentally turned on. Press the Power/Accept button and choose the "Instrument Menu". Chose "Pump Enable" and verify that the pump is turned **OFF***

MSA SAFE SITE MONITORING DATA

MTX UNIT 1			
SENSOR	ALARM SET POINT 1	ALARM SETPOINT 2	ALARM SETPOINT 3
OXYGEN	19.5%	18.0%	22.0%
Lower Explosive Limit	10.0%	20.0%	30.0%
Chlorine (Cl2)	.5 PPM	1.0PPM	1.5 PPM
Ammonia (NH3)	10 PPM	20 PPM	30 PPM
Chemical Warfare Agents	20 PPM	40 PPM	60 PPM
Radiation	1.5 mREM/Hr	2.0 mREM/Hr	4.0 mREM/Hr

MTX UNIT 2			
SENSOR	ALARM SET POINT 1	ALARM SETPOINT 2	COMMENTS
OXYGEN	19.5%	18.0%	22.0%
Lower Explosive Limit	10.0%	20.0%	30.0%
Chlorine (Cl2)	.5 PPM	1.0PPM	1.5 PPM
Ammonia (NH3)	10 PPM	20 PPM	30 PPM
Chemical Warfare Agents	20 PPM	40 PPM	60 PPM
Radiation	1.5 mREM/Hr	2.0 mREM/Hr	4.0 mREM/Hr

MTX UNIT 3			
SENSOR	ALARM SET POINT 1	ALARM SETPOINT 2	COMMENTS
OXYGEN	19.5%	18.0%	22.0%
Lower Explosive Limit	10.0%	20.0%	30.0%
Hydrogen Sulfide	5 PPM	10 PPM	15 PPM
Carbon Monoxide	35 PPM	50 PPM	100 PPM
Chemical Warfare Agents	20 PPM	40 PPM	60 PPM
Radiation	1.5 mREM/Hr	2.0 mREM/Hr	4.0 mREM/Hr

MTX UNIT 4			
SENSOR	ALARM SET POINT 1	ALARM SETPOINT 2	COMMENTS
OXYGEN	19.5%	18.0%	22.0%
Lower Explosive Limit	10.0%	20.0%	30.0%
Hydrogen Sulfide	5 PPM	10 PPM	15 PPM
Carbon Monoxide	35 PPM	50 PPM	100 PPM
Chemical Warfare Agents	20 PPM	40 PPM	60 PPM
Radiation	1.5 mREM/Hr	2.0 mREM/Hr	4.0 mREM/Hr

MSA SAFE SITE TIDBITS

CYCLE: If you press the "CYCLE" tab on the software screen, the program will automatically display the four remote sensors in a 5 second cycle. To return one meter to stationary viewing, tap or click on that remote MTX sensor icon.

TOUGHBOOK: The Toughbook computer works through the traditional mouse application or as a touchscreen

RANGE: Approximatel 1/2 mile

BATTERY LIFE:

NOTES: