

Installation Manual & Operating Instructions

Model 2200L High Voltage Warning Device

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Section 1 - Overview

The ASE Model 2200 is one of a family of High Voltage Y ctpkpi and Line Contact Alarm Devices offered by Allied Safety Systems that provides the most sophisticated high voltage warning protection system in the marketplace. This unit can be installed on almost heavy equipment vehicle and provide a degree of protection that is unmatched. The unit supports one or two sensing antennas for overhead power lines. A single antenna can be used for vehicles utilizing masts such as TV trucks and surveillance vehicles while two antennas provide sufficient coverage for vehicles utilizing booms such as cranes and concrete pump vehicles. The dual antenna approach significantly reduces the effect of antenna shadowing



Basic Wiring Diagram

The ASE Model 2200L consists of two separate panels. One panel is designated the operator panel and the other panel is designated as the remote panel. The operator panel is mounted in the vicinity of the equipment operator and provides the operator visual information by means of a display panel. The remote panel is mounted in a location that is remotely located from the operator panel.

The operator panel consists of a display screen, four pushbuttons and a connector that is connected by an inter-panel control cable to the remote panel. The four pushbuttons consist of a power pushbutton, a lower pushbutton, a raise pushbutton, and a configuration pushbutton. The power pushbutton provides a means to energize the Model 2200L and also provides a means to mute the speaker. The raise and lower pushbuttons are used to raise and lower the alarm setpoint. The display provides the operator with an indication of signal strength and an indication of the alarm setpoint. The operator panel is water resistant. Further information concerning the indications on the operator is located in the Operators Manual (Section 2).

The remote panel consists of a panel with eight connectors on the side of the panel and is also water resistant. The connectors identified on the cover of the panel and provide the following functions:

- 1. Power to the panel
- 2. Connection for the control cable connected to the operator panel
- 3. A connector for the first of two antennas
- 4. A connector for the second of two antennas
- 5. A speaker connection
- 6. A connection for the Warning relay
- 7 A connection for the Alarm relay
- 8. A connection for the Always-on relay

The location of each connection is printed on the cover of the remote panel.

The device provides an alarm if the vehicle should gpetqcej "guxdrkij gf "r rcpg" of a high voltage line. The alarm consists of four high frequency beeps followed by a voice message that alerts the operator of the close proximity of the vehicle to the high voltage line. The voice message may either be in English or may alternate between English and Spanish. During the alarm condition, the word "ALARM" is

flashed on the front of the display.

Additionally, the device provides a warning function that alerts the operator that he is approaching the alarm setpoint. The warning function consists of two low frequency beeps followed by a voice annunciation. The voice annunciation may either be in English or may alternate between English and Spanish or may be disabled altogether. During the alarm condition, the word "WARNING" is flashed on the front of the display. The value at which the warning function activates is set in the configuration menu.

Several of the operating parameters can be set by the operator including:

- 1. English and Spanish or English only annunciation
- 2. Warning annunciation enabled or disabled
- 3. The ability to mute the warning annunciation
- 4. The ability to mute the alarm annunciation
- 5. The warning span setpoint

Several relays are available to interlock controls if so desired. Relays include the following:

- 1. A normally energized Warning relay
- 2. A normally de-energized Warning relay
- 3. A normally energized Alarm relay
- 4. A normally de-energized Alarm relay
- 5. An always-on relay that is energized whenever the equipment is energized

Details of the specific functions mentioned above are included in Section 2 - Operator's Manual

1.1 High Voltage Sensing

Typically, a high voltage proximity warning system is installed in a vehicle that may come into contact with a high-voltage line. An operator panel is mounted in the immediate vicinity of the operator and in plain view. A remote panel is mounted in a location that has relatively convenient access and provides a central location for the connection of other devices including the operator panel. Two antennas are installed on the vehicle and are connected to the remote panel. These antennas detect the electric field (E-field) emitted from the high voltage line. The remote panel selects the highest of the signals from the antennas and compresses the resulting signal. The signal is compared to Warning and Alarm setpoints and provides the operator panel with signals indicating the Signal Level and the Alarm Setpoint. The remote panel also provides power to the operator panel and sound information and power to the remotely located speaker. Additionally, the remote panel provides relays that can be used to interface with the heavy equipment to provide an additional level of protection, if desired.

Normally, the voltage on a power line can vary from 110 VAC to 1,000,000 VAC which equates to approximately 4 decades. Additionally, the distance from the high voltage line to the sensing antenna can extend the range of the E-field signal an additional 3 or 4 decades. To further complicate matters, other factors such as wiring configurations, proximity of structures, and antenna angle can also change and distort the E-field signal level. As a result, the E-field signal level can extend over many decades. The device was designed to indicate a wide range of E-field signal levels into a single number between 1 and 199. An E-field signal level of 199 means that the antenna is dangerously close to a power source regardless of the voltage or distance. This signal compression is accomplished by means of a specially modified amplifier.

1.2 E-field versus Arcing Potential

The E field is an approximate indicator as to the proximity of the antenna to a voltage source; however, it should never be regarded as an indicator of arcing potential. Arcing potential is primarily dependent upon the change of E-field per unit of distance. For example, if two objects differ in potential by 10,000 volts, the arcing potential is increased if the distance is decreased. Additional factors may also influence arcing potential.

Section 2 - Operators Manual

2.1 Basic Operation

The ASE Model 2200L High Voltage Warning System operator panel consists of a display screen, a power pushbutton, a lower pushbutton, a raise pushbutton, and a configuration pushbutton. A connector on the side of the panel is used to connect the operator panel to the remote panel. The panel is mounted on a sturdy swivel mount.

2.2 Operator Panel Display

The display provides a variety of information for the operator. The Signal Level provides the operator with an indication of the highest weighted signal level sensed on the proximity antennas. The second line displays the setting of the alarm setpoint. The alarm setpoint can be set by the operator by using the Raise and Lower pushbuttons. At the bottom of the screen, the pushbuttons are identified for nighttime operation.

2.3 Warning Condition

When approaching a high-tension line, the first indication will be a warning display and a warning annunciation. The warning annunciation consists of two low frequency beeps followed by a voice annunciation. The voice annunciation can either in English or, if selected, English alternated with a Spanish voice annunciation. Additionally, the warning display will blink at approximately once per second . This pattern continues until the warning condition is cleared.

The warning occurs at a signal level below the alarm setpoint. This level can be set by the operator while in the configuration mode.



Normal Display Screen



Display Screen with Warning Condition

Additionally, the warning annunciations may be disabled in the configuration mode. Although the annunciation may be disabled, the Warning message is still displayed during a Warning condition.

2.4 Muting the Speaker During a Warning Condition

When a Warning condition is in effect, the speaker may be partially muted by momentarily pressing the power pushbutton.

The ability to mute the Warning annunciation is set in the configuration menu. Additionally, if the Warning is disabled, the Warning annunciation is completely muted.

2.5 Alarm Condition

When approaching a high-tension line, an alarm condition will occur when the displayed signal level equals or exceeds the displayed alarm setpoint. The alarm annunciation consists of four high frequency beeps followed by a voice annunciation. The voice annunciation consists of either an English message or an English message followed by a message in Spanish depending on the panel configuration.



Display Screen with Alarm Condition

For example, if the alarm setpoint is set at 100, an

alarm will annunciate when the signal level increases to 100 or greater. During the alarm condition, the "ALARM" indication blinks at approximately once per second.

The alarm condition will clear when the signal level drops 2 signal units below the alarm setpoint. In this example where the Alarm setpoint is set at 100, the Alarm will reset at a signal level of 98.

2.6 Muting the Speaker During an Alarm Condition

When an Alarm condition occurs, the Alarm annunciation always initiates at full volume. The Alarm annunciation may be partially muted by momentarily pressing the Power pushbutton and will remain partially muted while the existing Alarm condition exists. When the speaker is partially muted, the speaker volume is lowered: however, the speaker can be heard clearly by the operator during normal operation, but possibly may not be heard by personnel in the immediate area.

When the Alarm condition is no longer in effect, the speaker is no longer muted. For example, if the Alarm condition clears and a Warning condition is in effect, the speaker will not be muted.

The ability to partially mute the Alarm annunciation is set in the configuration menu.

2.7 Antenna Fault

The system also warns the operator if an antenna has failed. For example, if Antenna 1 fails during operation, the display will provide a "ANTENNA 1 FAULT" indication in addition to a voice annunciation announcing that the system has a fault. The screen will also display a Signal Level of 00 and an Alarm Setpoint of 00. This fault indication will occur if there is an open in the antenna lead or if the antenna is shorted to ground.



Antenna 1 Fault

Conversely, if Antenna 2 fails during operation, the display will provide a "ANTENNA 2 FAULT" indication and a voice annunciation indicating a system fault. The screen will also display a Signal Level of 00 and an Alarm Setpoint of 00.



The display also notifies the operator if both antennas are inoperable. This is normally utilized during troubleshooting of the antennas. If an antenna fault is displayed, a system fault message is annunciated.



2.8 Powering Up and Powering Down

The panel is powered up by pressing power pushbutton. The panel is powered down by pressing the power pushbutton for approximately 3 seconds and is indicated by the blanking of the screen. When the panel is powered down but not de-energized at the source, the panel will continue to monitor for power line proximity. In the event the heavy equipment exceeds the warning or alarm the speaker will annunciate and the relays will actuate as designed; however the screen will be blank. This prevents an operator from inadvertently turning off the proximity warning device during equipment operation.

Section 3 Technicians Manual

3.1 Configuration - General Information

Several features of the Model 2200 can be configured to provide the operator with advanced functions. These advanced functions include:

Selection of English Only or English and Spanish annunciations Enabling or disabling the Warning function Enabling the partial muting of the Warning function Enabling the partial muting of the Alarm function Changing the Warning Span

WARNING!

It should be noted that changing any of the configuration settings may adversely affect the safety of the heavy equipment in which the Warning System is installed. Careful consideration should be given before changing any configuration settings.

Additionally, during configuration, the Warning Device is disabled. Do not operate the heavy equipment while configuring the system.

Pressing the CONFIG pushbutton places the Warning Device into the Configuration Mode and shows the current configuration settings. The device is initially configured for a WARNING SPAN of 80%, annunciations in English and Spanish, Warning enabled, and both Warning and Alarm partial muting enabled.



3.2 Configuration - English Only or English and Spanish

Pressing the CONFIG pushbutton again displays the English Only or English and Spanish configuration screen. The black square indicates that ENGLISH AND SPANISH mode of annunciation is currently selected. The selection of ENGLISH ONLY or ENGLISH AND SPANISH is accomplished by pressing the RAISE or LOWER pushbuttons.

The operator can exit this configuration screen by pressing the CONFIG pushbutton.

WARNING! During configuration, the Warning Device is unable to warn the operator as to the proximity of high voltage lines. DO NOT configure this device during operation of heavy equipment.



Configuration - English and Spanish Selected



Configuration - English Only Selected

3.3 Configuration - Mute Warning

The warning "system has a method to"partially mute the Warning"annunciation. This reduces "the volume of the speaker "to a level that can be heard" by the equipment operator "and personal in the immediate vicinity. This allows the operator to converse with other personnel while in a Warning condition.

Pressing the Raise pushbutton disables the mute function and all Warning annunciations are always played at full volume. Conversely, the Lower pushbutton enables the mute function. The mute function allows the operator mute the Warning annunciation by momentarily pressing the Power pushbutton.

The operator can exit this configuration screen by pressing the CONFIG pushbutton.



Configuration - Mute Warning Enabled



Configuration - Mute Warning Disabled

3.4 Configuration - Warning Enabled/Disabled

The Warning'System can be configured to''disable the Warning''annunciation function. This''will not affect the Alarm''function. Pressing the Raise''pushbutton enables the 'Warning annunciation. Conversely, pressing the'' Lower pushbutton disables the Warning annunciation.

Please note that disabling the Warning function only disables the Warning voice annunciations. The relays and the Warning message on the display still function normally.

The operator can exit this configuration screen by pressing the CONFIG pushbutton.



Configuration - Warning Enabled



Configuration - Warning Disabled

Warning!

Please consider the consequences of disabling the warning annunciation prior to disabling this function. If the operator incurs a warning situation, and the warning annunciation does not occur, it is possible that the heavy equipment operator will continue to operate in close proximity to a high voltage line thereby increasing the chance of equipment damage, injury or death.

3.5 Configuration - Mute Alarm

The warning "system has a method to"r artially mute the Alarm "annunciation. This reduces "the volume of the speaker to"a level that can be heard by "the equipment operator and "personal in the immediate "vicinity. This allows the "qperator to converse with "qther personnel while in an "Alarm condition.

Pressing the Raise pushbutton disables the mute function and Alarm annunciations are always played at full volume.

Conversely, the Lower pushbutton enables the mute function. The mute function allows the operator mute the Alarm annunciation by momentarily pressing the Power pushbutton.

The operator can exit this configuration screen by pressing the CONFIG pushbutton.



Configuration - Mute Alarm Disabled



Configuration - Mute Alarm Enabled

3.6 Configuration - Warning Span Percentage

The Warning Device provides both warnings and alarms. When approaching a high voltage line, a warning occurs before an alarm condition. The Warning Span Percentage determines the signal level at which a Warning condition will occur. The factory default setting is 80%. This means that if the Alarm Setpoint is set at 100, the Warning condition will occur at a Signal Level of 80% of 100 which equals 80.



Configuration - Warning Span

Correspondingly, an Alarm Setpoint of 50 will have a Warning setpoint of 40.

The Warning Span Percentage is adjustable between 60 and 90 percent. The unit is shipped with a default Warning Span Percentage of 80 signal units. Consideration should be given to adjusting the Warning Span Percentage to give the operator sufficient warning to prevent an Alarm Condition. For example, a crane with a very long boom should generally use a smaller Warning Span Percentage to give the operator additional warning that he is approaching an Alarm condition.

The Warning Span Percentage is adjusted upward by pressing the Raise pushbutton. Conversely, pressing the Lower pushbutton adjusts the Warning span downward.

Pressing the CONFIG pushbutton exits the configuration mode and returns the Proximity Warning Device to normal operation.

WARNING!

Great care should be taken when selecting a warning span percentage. This setting determines when the warning condition will occur in relation to the alarm condition. For example, cranes with long or high speed slewed booms will require the warning span percentage to be set lower.

Section 4 - Installation Manual

Installation of the Model 2200 Warning Device is straightforward and should be installed by a competent electrical technician.

4.1 Installation of the Operator Panel

The Operator Panel is shipped with a sturdy articulated mount and can be mounted in almost any position. Ideally, the panel should be mounted in such a position that the operator is able to have a reasonably clear view of the panel without obstructing his view of the work area.

4.2 Installation of the Remote Panel

The remote panel should be mounted in a location that would allow reasonable protection of the panel and the connectors on the panel. After the remote panel is mounted, connect the cable between the remote panel and the operator panel. The connector on the remote panel is labeled "OPERATOR PANEL". There is only a single connector on the operator panel. This cable has a four pin male connector at both ends.

4.3 Installation of the Speaker

The speaker is waterproof and must be mounted outside the of the operator cab. The speaker is rated at 20 Watts and would be too loud if the speaker was mounted inside the cab area. A cable is included that has a brown, four pin male connector at one end and should be connected to the black four pin female connector at the other end. Connect the brown connector to the rear of the speaker and the black connector to the connector on the remote panel labeled "SPEAKER".

4.4 Supplying Power to the Unit

Power to the unit requires a 12VDC or 24VDC at 2 amps. It is unnecessary to provide a protective fuse since the panel is adequately protected from electrical fault. A three pin male connector with twenty feet of electrical cord is provided to supply power to the Remote Panel. The power should be supplied by the ignition

switch. The red lead is connected to the ignition switch and the black lead is connected to a reliable ground. The panel is protected from reverse voltage in the event that the leads are inadvertently reversed. This device may be used with negatively or positively grounded vehicles.

4.5 Selection and Installation of Cable Reels

Allied Safety Systems uses either Conductix cable reels or PAT for installation. Both reels provide cables that are extremely robust and cost effective. Additionally, they are modified at the factory to fit our requirements. The cable reels are then shipped directly to us and are further modified at our location. The modification includes the removal of the ground wire from the brush assembly and the termination of the cable.

Each cable reel is mounted on two Unistrut strut channels with mounting plates. Each mounting plate has two mounting holes that are 9/16" in diameter. Four 3/8" studs are welded to the crane boom at the mounting location. It is recommended that studs be mounted onto the crane boom using a proper stud welder to reduce any distortion that may be caused by the use of normal welding. This mode of installation allows easy maintenance in the event of damage to the cable reel and/or cable reel mount. The choice of



Unistrut Channels with Mounting Plates

Unistrut channels with mounting plates depends upon the weight of the cable reel.

The cable reel is mounted on the Unistrut Channels with Mounting Plates using either strut channel nuts or strut channel studs.

Each installation requires cable reel(s). It should be noted that the cable reel on the left side of the boom feeds from the bottom of the reel while the cable reel on the right side of the boom feeds from the top of the reel.

4.6 Installation of Antennas on Fixed Booms

The antennas are identified by cables that have a single 3 pin male connector at one end of the 2 conductor cable and nothing connected at the other end of the cable.

If the antennas are to be installed on a fixed boom crane or to the boom of a concrete pump truck, the cable should be threaded through fixed roller guides at locations on both sides of the boom. The spacing of the location of the roller guides should be sufficient to prevent the antennas from drooping excessively to prevent the antennas from being snagged or worn during operation. Fairlead roller



Fairlead Roller Guide With Bottom Plate Adapter

guides are easily attached using a stud gun with or without a fairlead roller guide bottom plate adapter.

4.7 Installation of Antennas on Hydraulic Cranes

Installation on a hydraulic crane is a bit more complicated because there is limited room between the roller guides on each section of the boom when the boom is fully retracted. Additionally, the flange end of each boom section is often tilted. Installation of fairlead roller guides is dependent upon the make and model of the crane; however, most installations can be accomplished using off-the-shelf

Unistrut components such as 90 degree angle brackets and studs welded to the web located at the end of each boom section.

The antenna should be run from the base of the boom to the tip of the boom. Spacing between each antenna and the boom should be at least two inches. If the antenna is installed flush with the boom, the sensitivity of antenna will be significantly reduced. The excess antenna wire should be at the tip of the boom. The two conductors of each antenna should be securely



Fairlead Roller Guide

connected together and protected from the weather.

The tip of the antenna is securely fastened to the tip of the boom. We highly recommend the use of our terminator fairlead. The antenna lead is wrapped with serving twine and preferably covered with shrink tubing. The ends of the antenna leads are electrically connected together, taped, and secured with shrink tubing.

4.8 Connecting the Remote Panel to the Operator Panel

Connecting the remote panel to the operator panel involves connecting a supplied cable between the connector on the Operator Panel to the connector labeled Operator Panel located on the Remote Panel. The cable is a twenty foot cable with a four-pin connector on each end. Both ends of the cable are identical and are interchangeable.

4.9 Relay Connections

There are 5 relays available for use and are located in the remote panel. Two of the relays are associated with the warning function, two of the relays are associated with the alarm function, and one relay is always energized. All of the relays are single pole, single throw relays.

4.10 Warning Relays

The Warning relays consist of two relays. The Warning-On relay is energized whenever a Warning or Alarm is in effect and, conversely, is de-energized whenever both the Warning and Alarm conditions are cleared.



The Warning-Off relay is deenergized whenever a Warning or Alarm is in effect

and, conversely, is energized whenever both the Warning and Alarm conditions are cleared.

Each of these relays are single pole - double throw relays and are rated for 2 amps and are fused in the remote panel.

4.11 Alarm Relays

The Alarm relays consist of two relays. The Alarm-On relay is energized whenever an Alarm condition is in effect and, conversely, is deenergized whenever Alarm condition is cleared.

The Alarm-Off relay is deenergized whenever an Alarm condition is in effect and, conversely, is energized whenever the Alarm condition is cleared.



Each of these relays are single pole - double throw relays and are rated for 2 amps and are fused in the remote panel.

4.12 Always-On Relay

The Always-On relay is a single pole-double throw relay that always remains energized as long as the microprocessor within the device is functioning. This is generally used in circumstances where it is imperative that the device PWD must be energized before the equipment be operated.



The fuse for the relay are rated for 2 amps and is located in the remote panel.

4.13 Powering Up

Insure that both antennas are properly connected to the remote panel and that the cable between the remote panel and the operator panel is installed. Insure that the power cable is properly connected. Press the power button until the display is lighted. This should take approximately one second.

If the display does not light, the power to the panel is probably not present. Check that the equipment ignition switch is turned on. If the power switch is turned on and the polarity of the wires to the remote panel are correct and the panel still does not energize, please call the factory before proceeding.

4.14 Powering Down

Powering down requires that the power pushbutton be pressed for approximately 3 seconds.

Section 5 - Operation of Heavy Equipment in the Vicinity of Power Lines

5.1 Maintaining a Safe Distance

Operation in the vicinity of live power lines requires the operator to be knowledgeable of OSHA requirements, local code requirements, company requirements, and any other requirements that may apply. In any event, heavy equipment that is capable of contacting high voltage lines should approach no closer than 10 feet or minimum distance required by OSHA.



Note that the unsafe area extends ten feet either side of the power lines in a vertical plane. Intentionally draping a boom over power lines or intentionally operating under power lines is considered an unsafe practice. The equipment is not designed to intentionally operate under conditions that would constitute unsafe practices. If the heavy equipment is intentionally located in the unsafe area, any operations in that area are considered to be unsafe. Equipment should always be located and operated in the safe area.

The warning device is not meant to be a substitute for vigilance. Great "care should always be taken to avoid power lines. Pqy gt "hpg warning devices are only designed to alert the operator in the event that his attention is distracted.

5.2 Setting Up the ASE Model 2200 for Operation

When preparing to work in the vicinity of power lines, the heavy equipment must be set up in a safe area. In the case of a crane, the boom should be extended at an angle of approximately 45 degrees until the boom is approximately 10 feet above the power lines and the load line is no closer to the power lines than ten feet. At that point, the alarm setpoint should be set at the Signal Level value. For example, if the signal level indicates 80, the alarm setpoint should be set at 80. This will assure the operator that the alarm will occur before any part of the crane comes within ten feet of the power line.

Attention

The instructions for setting up the ASE Model 2200L are only <u>RECOMMENDATIONS</u>. Operators that are unfamiliar with the operation of the ASE Model 2200L should familiarize themselves with the operation of the ASE Model 2200L while in the vicinity of power lines prior to attempting actual operations. This familiarization should be accomplished under the supervision of someone who has been trained in the operation of the ASE Model 2200L.

Section 6 - Specifications

Voltage Input	12 or 24 VDC
Current (panel Off)	250 ma
Current - Panel On	500ma
Current While Annunciating	750ma max
Operator Panel Size	8" x 6" x 3"
Remote Panel Size	8" x 6" x 3"
Connectors	Gold Plated and Weatherproof
Switches	Weatherproof
Relay rating	2 Amp
Display Size	4.5" x 3.5"
Speaker Wattage	20 Watts rms
Antenna Length	Sized for Customer
Power Supply Lead Length	Sized for Customer
Speaker Lead Length	Sized for Customer
Relay Lead Length	Sized for Customer

Section 7 - Troubleshooting

7.1 Alarm and Warning annunciations only occur in English.

In order to get both English and Spanish annunciations, it must be selected in the configuration menu. The menu will be displayed by pressing the Config pushbutton. When the configuration menu is present, the first selection is English and Spanish or English only. By pressing the raise pushbutton, the selection will show English and Spanish. Continue pressing the Config pushbutton until the normal operational screen is displayed.

7.2 When a warning condition occurs, the warning annunciation does not work.

The warning annunciation may be enabled or disabled in the configuration menu.

7.3 When the ASE Power line Warning Device is turned off with the power switch, the panel annunciates whenever the boom of the crane approaches the power line.

This is normal. When the crane is first energized, the o ckp panel is fully off. If the panel is turned on and then subsequently turned off, only the screen is turned off. This prevents the operator from turning off the panel while operating the crane and essentially leaving him without any protection.

7.4 The only message on the screen is that there is a fault on Antenna 1. What does this mean? Do I still have any protection?

If a message occurs that one or both antennas are faulty, it means that the either the antenna connectors are disconnected or there is an open or a short to ground in the antenna(s). If this message is displayed, you do not have any protection. It is imperative that this condition be corrected.

7.5 The alarm relay does not operate when an alarm condition

occurs.

All of the relays are fused in the remote panel with fuses rated at 3 amps. Check these fuses. If a fuse has blown, there is something wrong in the relay circuitry on the customer side. These relays are quite robust and are rated much higher than the fuses. The rating of the fuses are shown on the fuses and are printed on the circuit board in the immediate vicinity of the fuse.

WARNING!

Only replace fuses with fuses of the same value. Replacing the fuses with values other than the appropriate value may result in equipment damage, injury and/or death.

Section 8 - Frequently Asked Questions

8.1 If an alarm or warning condition is in effect, what will happen if the configuration menu is selected?

The Pqy gt hpg Warning Device will not sense high voltage power lines during configuration. The Alarm Setpoint and the Signal Level will both read zero during configuration.

8.2 What would happen if an alarm or warning condition is occurring and the panel is turned off?

If the Model 2200L has power applied, but has not been subsequently turned on by pressing the power pushbutton, the Model 2200L will not recognize an alarm or warning condition. The Model 2200L is not provided with a wake-up function.

On the other hand if the Model 2200L had been turned on, and had subsequently been turned off by pressing the pushbutton on the front of the panel, the display screen will be turned off; however, the annunciation will continue. If the alarm and warning conditions clear, the annunciations will cease. If a warning or alarm condition occurs again, the annunciation will commence again.

8.3 The speaker is very loud, is there a way to mute the speaker?

When a warning or alarm occurs the speaker always annunciates at full volume. If enabled, the power pushbutton may be momentarily pressed to partially mute the speaker.

8.4 If I connect the power to the Model 2200L and reverse the power leads, will this damage the unit?

The Model 2200 is polarity protected. If the power leads are reversed, the panel will not turn on.

8.5 If the Model 2200L is turned off and then turned back on the alarm setpoint returns to a value of ten. Is this normal?

Whenever the Model 2200 is turned on by pressing the power pushbutton, the alarm setpoint is set to a value of 10.

8.6 What kind of values does the signal level and alarm setpoint display?

The values represented are unitless. A scale was chosen that would represent a meaningful representation of the electrical field in the vicinity of a high voltage line.

8.7 If the configuration button on the operator panel is pressed and the panel is in the configuration mode, does this disable the alarms and warnings?

Not at all. If a warning or alarm condition occurs, the Warning or Alarm message is written in large letters at the bottom of the panel and the annunciations and relays operate normally.

8.8 The voice annunciation is still annunciating after the alarm or warning condition has cleared. Is this normal?

The warnings, alarms, and voice annunciations always complete their annunciations before clearing or changing condition. This avoids confusion in the event an annunciation would be terminated in the middle of the annunciation.

ANTENNA MALE 3 PIN PLUG PIN 1 <u>RED</u> PIN 2 <u>BLACK</u> PIN 3 <u>SHIELD</u> SHIELDED PC	POWER CORD WIRING FEMALE 3 PIN PLUG PIN 1 <u>RED</u> PIN 2 <u>BLACK</u> PIN 3 <u>SHIELD</u> PANEL TO PANEL CABLE MALE 4 PIN PLUG PIN 1 <u>WHITE</u> PIN 2 <u>GREEN</u> PIN 2 <u>RED</u>	SPEAKER WIRING FEMALE 4 PIN PLUG PIN 1 <u>WHITE</u> PIN 2 <u>GREEN</u> PIN 3 <u>BLACK</u> PIN 4 <u>RED</u>
DRTION	+12VDC	SPLICE
RED BLACK SHIELD ANTENNA PORTION	REDREDBLACKNCSHIELDNCMALE4WHITEPINGREENPINBLACKPINREDPINPIN3	GRA/BLA SPEAKER 1 GRAY SPEAKER 2 BLACK GND RED +12 VDC

SPEAKER PLUG