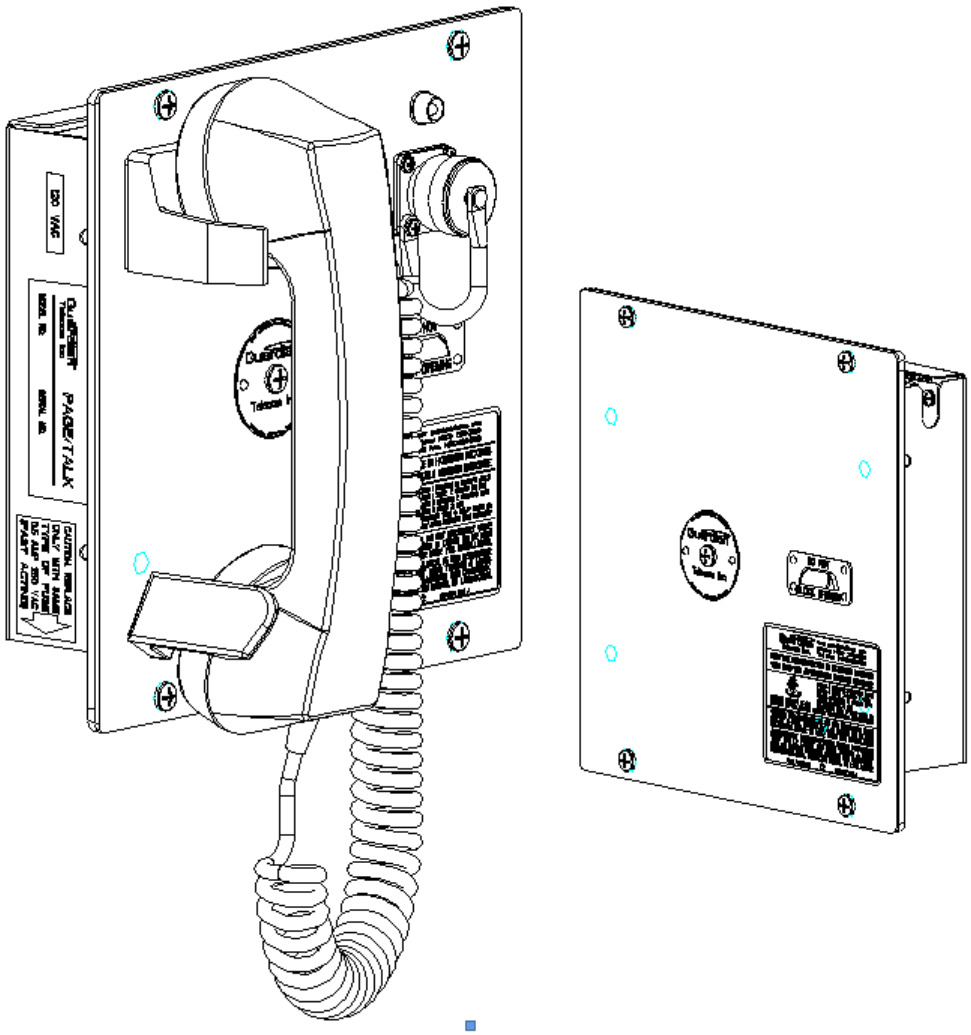
Guardian Telecom

A DIVISION OF CIRCA ENTERPRISES

Page/Talk Modules

Models PTR, PTA, PPR & PPA

Installation & Operation



PTR / PPR **PTA / PPA**

P006207 Rev. C 180117 1/17/2018 10:15 AM

Ph: 403.258.3100 \ email:info@guardiantelecom.com \ www.guardiantelecom.com

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Overview

Page/Talk Modules

Guardian's Page/Talk Systems provide reliable and easy to use paging and communication within industrial environments such as plants, mines, mills and factories. Individuals can be paged from any station and two or more persons can communicate on any available line.

The Modules described in this manual are designed for use in harsh, industrial environments and are identical for single talk line or five talk line configurations. Modules are available with handsets, connectors for headsets and as standalone amplifiers. Each Module provides up to twelve watts of paging power for an external loudspeaker. A page button on the handset of models with a handset enables one-hand paging operation.

Modules are available for indoor or outdoor use. They may be used along with appropriate enclosures as a complete station or they may replace modules in existing stations, either as an upgrade or to replace a malfunctioning unit. Features of models vary according to their purpose, however all modules have the same profile and electronic circuitry, and will fit into any enclosure. For example amplifier modules do not have a handset. Some models do not have an ambient noise sensor on the faceplate; these are intended for outdoor use where the door of the enclosure would prevent the sensor from picking up the ambient noise and for other applications where an ambient noise sensor is not required. The models that do have ambient noise sensors on the faceplate can replace any other module either on a temporary or permanent basis. This is a great convenience and cost saving feature, since only one spare module needs to be stocked and a serviceman only has to carry around one module when testing a system. Modules are secured with four screws for ease of replacement.

If a PTR (Handset Module) is installed in an indoor housing as a Desk Set Amplifier the Desk Set and the Wall Station can, at the same time be used independently of each other. The two can be separated by up to fifty feet. This feature can save the cost of a complete indoor station if circumstances permit.

The modular design of the system offers great flexibility in the ways that components can be combined. For a description of the various configurations available see Page/Talk Replacement Modules.

In order to avoid acoustical feedback from a loudspeaker receiving a signal from the station, a jumper on the main circuit board of every station provides for the associated speaker to be muted when the Page button is pressed. Group muting is also available for the same purpose. This feature mutes adjoining speakers when the page button on any station in the group is pressed.

Guardian's modules, stations and related equipment are compatible with systems provided by most other manufacturers.

Note: Some models of Guardian modules include an ambient noise sensor on the faceplate that controls the output of the associated loudspeaker. Other models do not have an ambient noise sensor on the faceplate and can be used without the capability of adjusting the loudspeaker output, or in the case of outdoor stations an ambient noise sensor may be installed in the enclosure and connected to the circuit board with a harness. Features are included only if they are specifically mentioned in the description.

Products with descriptions beginning with PT are for Guardian Page/Talk systems; those beginning with PP are for Gaitronics Page/Party® systems. PT modules can be converted to PP with the addition of kit P/N P5541 or kit P/N P5542.

Page/Talk Replacement Modules

Part No.	Description
P5500	PTR - Handset module with ambient noise sensor
P5501	PTR - Handset module with ambient noise sensor and headset connector
P5502	PTR - Handset module
P5503	PTR - Handset module with headset connector
P5504	PTA - Amplifier module with ambient noise sensor
P5505	PTA - Amplifier module
P5506	PPR - Handset module with ambient noise sensor and 16 Pin Harness for Gaitronics enclosure
P5507	PPR - Handset module with ambient noise sensor, headset connector and 16 Pin Harness for Gaitronics enclosure
P5508	PPR - Handset module with 16 Pin Harness for Gaitronics enclosure
P5509	PPR - Handset module with 16 Pin Harness and ambient noise sensor kit for Gaitronics outdoor enclosure
P5510	PPR - Handset module with 16 Pin Harness and headset connector for Gaitronics enclosure
P5511	PPR - Handset module with 16 Pin Harness, headset connector and ambient noise sensor kit for Gaitronics outdoor enclosure
P5512	PPA - Amplifier module with 16 Pin Harness and ambient noise sensor kit for Gaitronics enclosure
P5513	PPA - Amplifier module with 16 Pin Harness for Gaitronics enclosure
P5514	PPA - Desk set amplifier module with 24 Pin Harness and ambient noise sensor for Gaitronics enclosure
P5515	PPA - Desk set amplifier module with 24 Pin Harness, ambient noise sensor and reed switch kit for Gaitronics enclosure
P5516	PPA - Desk set amplifier module with 24 Pin Harness
P5517	PPA - Desk set amplifier module with 24 Pin Harness and reed switch kit for Gaitronics enclosure

NOTE: MODELS WITH HEADSET CONNECTORS ARE NOT APPROVED FOR USE IN HAZARDOUS LOCATIONS

Replacement Parts

Part No.	Description
P004747	Handset - Push To Page
P002786	Cradle - Handset
P002254	Reed Switch - With Harness
P004371	Handset Retainer
P004593	Microphone - Ambient Noise Sensor
P005925	PCB Guard (Cover)
P005944	Dust Cap - Headset Connector
P005955	PCB - Main Board
P006102	Connector - Headset Panel Jack Harness
P006130	LED - Red Panel With Harness
P005919	Faceplate - Standard Module
P005920	Faceplate - Standard Module With Headset Connector
P005922	Faceplate - Outdoor Module
P006141	Faceplate - Outdoor Module With Headset Connector
P005921	Faceplate - Amplifier Module
P006151	Faceplate - Amplifier Module Without Ambient Noise Sensor
P005794	Connector Harness - 16 Pin
P006070	Connector Harness - 24 Pin

Page/Talk Options and Accessories

Housings

P5520	Indoor standard housing
P5521	Indoor desk amplifier housing
P5522	Outdoor ambient noise housing
P5523	Outdoor housing

Switch And Access Plates

P5530	Five line switch plate
P5531	Single line access plate

Kits And Accessories

P5540	Push to page head set
P5541	16 pin Gaitronics amplifier connector harness kit
P5542	24 pin Gaitronics desk amplifier connector harness kit
P5543	Headset connector panel jack harness kit
P5544	Indoor desk amplifier housing harness kit
P5545	Outdoor housing ambient noise harness kit
P5546	Gaitronics desk set reed switch harness kit
P5547	Indoor housing back plate kit
P5548	Indoor housing flush mount kit

Features

Faceplate

- Stainless steel with four screws

Ambient Noise Monitor (Optional)

- monitors the ambient noise and adjusts speaker volume accordingly
- initial level adjustment on faceplate

System Indicator LED.

- indicates if handset is off hook

Handset

- page switch on handset
- noise canceling dynamic microphone
- electronic hook switch provides durability

Headset (optional)

- plug in headset

Speaker Muting

- a jumper on the circuit board selects muting of the associated speaker to avoid acoustic feedback

Controls

- speaker volume – (internally and externally accessible)
- ambient noise level monitoring
- microphone gain
- receiver volume
- side tone level

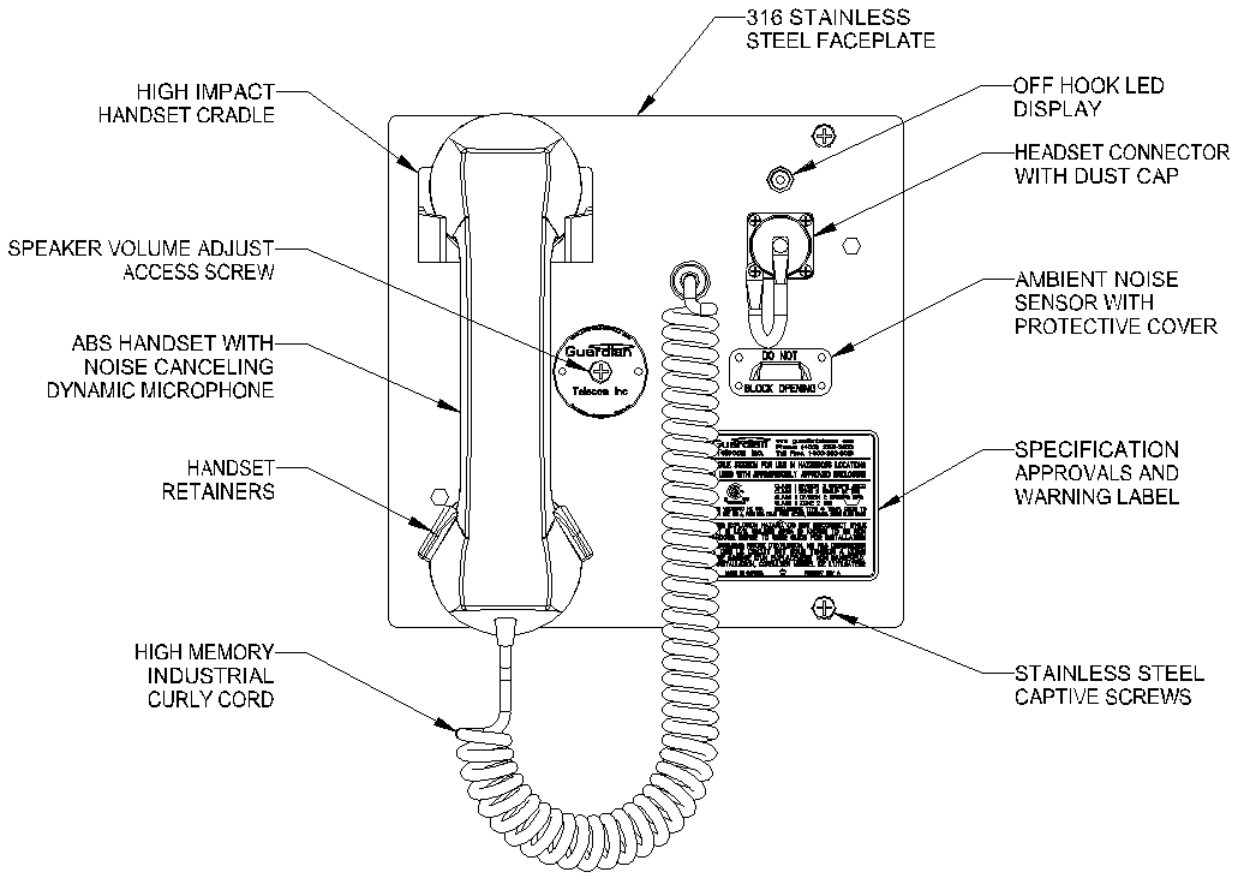

Figure 1 - Features (All Options Shown)

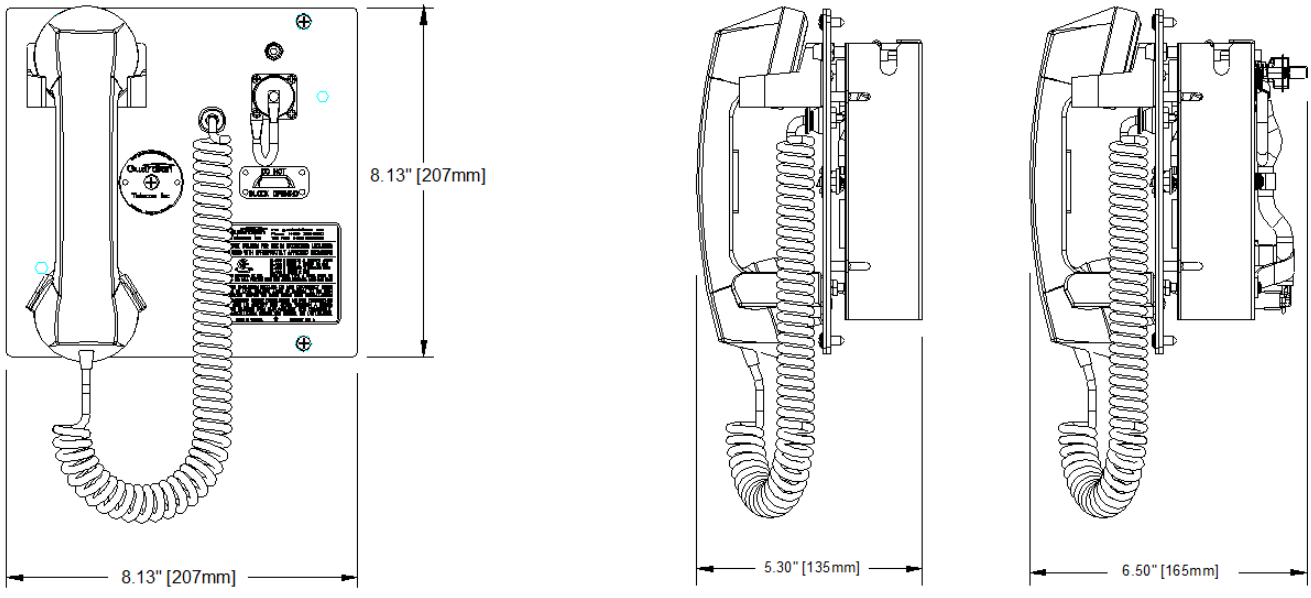

Figure 2 - Dimensions PTR & PPR

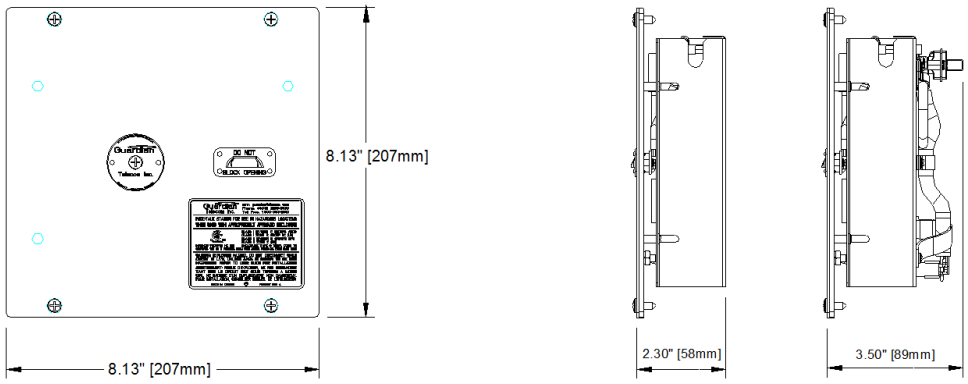

Figure 3 - Dimensions PTA & PPA

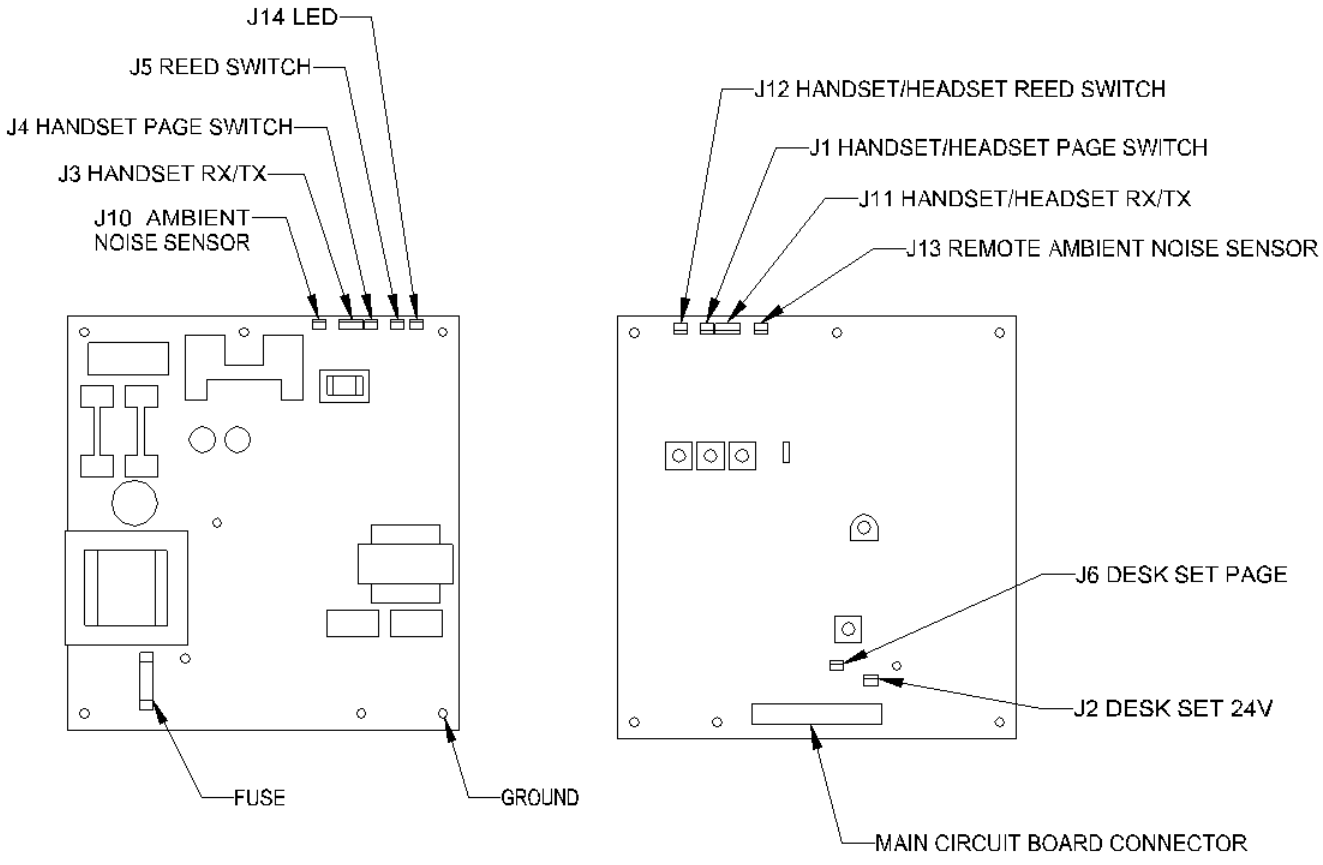

Figure 4 - Harness Connections

Figure 5 - PTR in Guardian Indoor Housing

Figure 6 - PTR in Guardian Outdoor Housing

Figure 7 - PPR in Gaitronics Outdoor Housing

Figure 8 - PPR in Gaitronics Indoor Housing

Assignment	*Designation*	*Description*	*Jacket Color*	*Stripe Color*	*Wire Gauge*
System Power	J4A/J5A J4A/J5A J4A/J5A	HOT COM GND	Black White Green		14 AWG 14 AWG 14 AWG
Ambient Noise Microphone	J6A J6A	MIC + MIC -	n/a n/a	n/a n/a	n/a n/a
Speaker	J7A J7A	SPK + SPK -	n/a n/a	n/a n/a	n/a n/a
Page Line	J2A/J3A J2A/J3A	PA Page Line PB "	Blue Red	Red Blue	18 AWG "
Channel	J2A/J3A J2A/J3A	1A Channel 1 1B "	Red L. Brown	 Red	18 AWG "
	J2A/J3A J2A/J3A	2A Channel 2 2B "	Violet L. Brown	 Violet	18 AWG "
	J2A/J3A J2A/J3A	3A Channel 3 3B "	Blue L. Brown	 Blue	18 AWG "
	J2A/J3A J2A/J3A	4A Channel 4 4B "	Brown L. Brown	 Brown	18 AWG "
	J2A/J3A J2A/J3A	5A Channel 5 5B "	Yellow L. Brown	 Yellow	18 AWG "
Group Muting of Loudspeakers	J2A/J3A J2A/J3A	Mute Park	Orange		18 AWG
Spare Conductor (Special Order)	n/a	Extra	Red		12 AWG

Note:
Channels 2 to 5 connections remain empty for single Talk Line hookup.

If this station is in a Group Muting series, but is not to be muted when paging calls are made from other stations in the group, connect the wires assigned to this function to the Park terminals.

Figure 9 - Electrical Connections

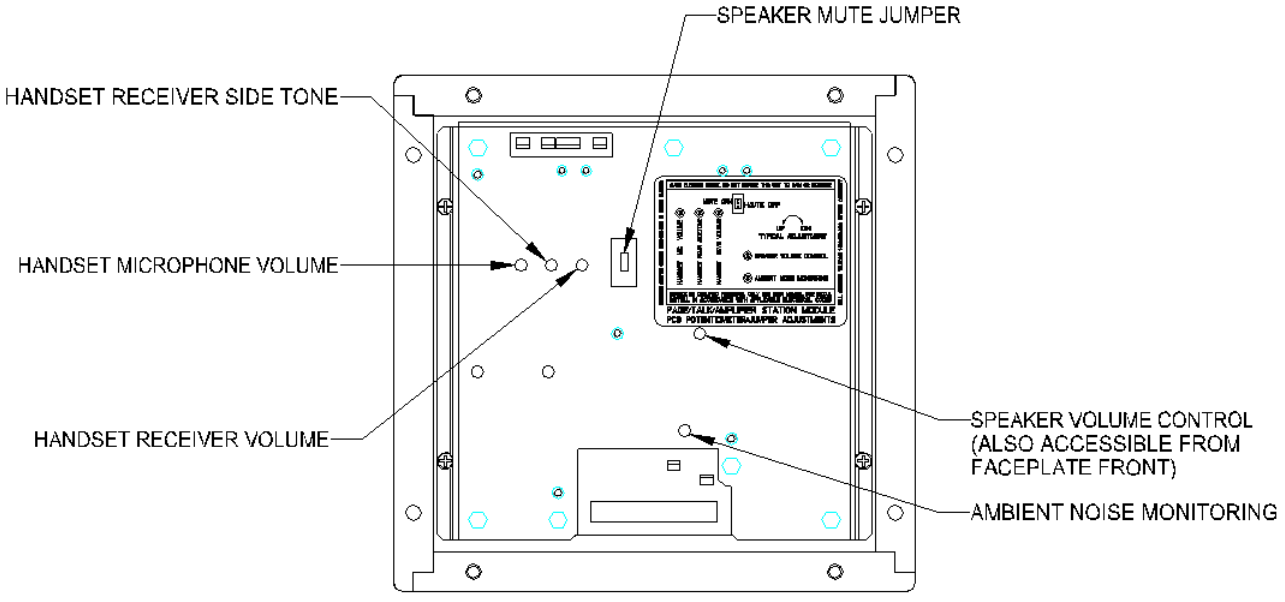

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Figure 10 - Adjustments

Installing the Module in a Guardian Enclosure

<u>WARNING</u> - high voltages are present in this equipment when it is connected to the power source.

- Ensure that the module is set up for the correct voltage.
- If this is a new installation install the enclosure and switch plate or lower cover plate, according to the instructions provided.
- Ensure that none of the electrical connection circuits are live.
- Set the speaker mute jumper on the circuit board to the desired position.
- Insert the module into the enclosure ensuring that the connector is properly seated.
- Tighten the four screws on the faceplate.
- Apply power to the system.
- Wait at least 20 seconds then adjust speaker volume to the desired level using the potentiometer accessible through the screw hole in the faceplate. Use a small flat tip screwdriver to make the adjustment.
- Test the installation by making a call as described in the operating section.

Tip: *check the label on the main circuit board cover.*

See: *Group Muting*

Note: *Adjust speaker volume while ambient noise at the station is at a minimum.*

Replacing a Module in a Gaitronics Indoor Enclosure

<u>WARNING</u> - high voltages are present in this equipment when it is connected to the power source.

- Disconnect power to the station.
- Ensure that the module is set up for the correct voltage.
- Remove the existing module by undoing the four screws and gently pulling the module loose from the connector.
- The Guardian replacement module requires an adapter harness to be compatible with a Gaitronics enclosure. With a 16 pin connector the harness part no. is P5541 or with 24 pin connector part no. is P5542. If the module was ordered with the appropriate harness it will already be installed. If the harness is not already installed refer to the instructions accompanying the harness kit for installation on the module.
- Set the speaker mute jumper on the circuit board of the replacement module to the desired position.
- Insert the module into the enclosure ensuring that the connector is properly seated.
- Tighten the four screws on the faceplate.
- Apply power to the system.
- Wait at least 20 seconds then adjust speaker volume to the desired level using the potentiometer accessible through the screw hole in the faceplate. Use a small flat tip screwdriver to make the adjustment.
- Test the installation by making a call as described in the operating section.

Tip: *check the label on the main circuit board cover.*

See: *Group Muting*

Note: *Adjust speaker volume while ambient noise at the station is at a minimum.*

Replacing a Module in a Gaitronics Outdoor Enclosure

WARNING - high voltages are present in this equipment when it is connected to the power source.

- Disconnect power to the station.
- Ensure that the module is set up for the correct voltage.
- Remove the existing module by undoing the four screws and gently pulling the module loose from the connector.
- The Guardian replacement module requires an adapter harness to be compatible with a Gaitronics enclosure, with 16 pin connector harness part no. P5541 or with 24 pin connector part no. P5542. If the module was ordered with the appropriate harness it will already be installed. If the harness is not already installed refer to the instructions accompanying the harness kit for installation on the module.
- To provide ambient noise sensing adjustment of the associated loudspeaker a microphone kit, part no. P5545 must be installed. Refer to the instructions accompanying the kit.
- Set the speaker mute jumper on the circuit board of the replacement module to the desired position.
- Insert the faceplate ensuring that the connector is properly seated.
- Tighten the four screws.
- Apply power to the system.
- Wait at least 20 seconds then adjust speaker volume to the desired level using the potentiometer accessible through the screw hole in the faceplate. Use a small flat tip screwdriver to make the adjustment.
- Test the installation by making a call as described in the operating section.

Tip: *check the label on the main circuit board cover.*

See: *Group Muting*

Note: *Adjust speaker volume while ambient noise at the station is at a minimum.*

Accessing the interior of the Station

Follow these instructions should it be necessary to access the interior of a station for adjustments or repairs.

- Remove power from the wall station. Follow local safety guidelines.
- Remove the module as follows:
  - Remove the lower access plate/switch plate.
  - Undo the four captive screws securing the module.
  - Gently pull the top of the module faceplate away from the enclosure a couple of times; then push it back into place.
  - Using two hands pull out the bottom of the module faceplate to release it from the connector.
- Perform the necessary adjustments or repairs.
- Replace the module ensuring that the connector is properly seated.
- Apply power to the wall station.
- Test the installation by making a call as described in the operating section.

Note: *Be careful when removing the module. The circuit board is on the faceplate.*

Ambient Noise Level Adjustment

The Ambient Noise Sensor on Guardian's Page/Talk stations automatically adjusts the volume of the associated loudspeaker up to 10dB, so that pages can be heard over the background noise.

There are two controls on the circuit board to adjust the Ambient Noise Sensor mechanism. The Paging Speaker Volume Control – which is accessible either from the faceplate or from the back of the module – sets the volume of the speaker to a comfortable level when the ambient noise is at a minimum. The Ambient Noise Monitor Adjustment Control determines how the speaker volume tracks the ambient noise. That is if the speaker is not loud enough with a high ambient noise the control can be adjusted to increase the volume. Alternatively if the speaker is too loud with a high ambient noise the control can be adjusted to decrease the volume. It is usually not necessary to change the setting of the Ambient Noise Monitor Adjustment Control since it is set at the factory for average conditions. Adjustment could be necessary if for some reason the Ambient Noise Sensor Microphone is shielded from the source of ambient noise or some similar situation exists.

See: *Figure 10 - Adjustments*

Alternative·Speaker·Configurations¶

Note:·Total·impedance·on·the·amplifier· circuit· should·not·be·less·than· eight·ohms·for·continuous· operation·such·as· background·music·and· not·less·than·four·ohms· for·intermittent· operation· such·as·paging.··Suitable· resistors·can·be·wired·in· series·or·in·parallel· with· speakers·to·maintain·an· acceptable·impedance.¶
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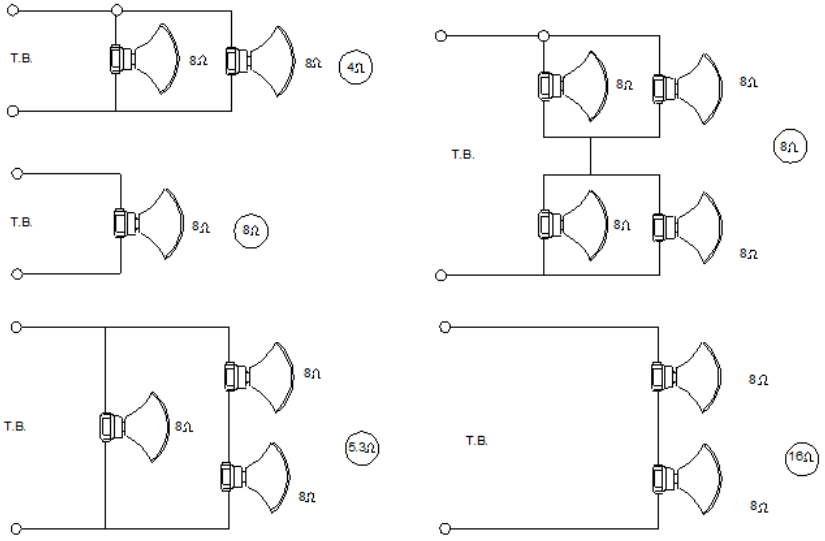


* T.B.- TERMINAL BLOCKS (SPEAKER + , -)

Group Muting

In order to avoid acoustical feedback it may be desirable in certain circumstances to mute speakers associated with adjoining stations when making a paging call. This can be accomplished by interconnecting the "Group Mute" terminals of each station in the group, and setting the speaker mute jumpers on the circuit boards to the appropriate position.

See: Figure 9 - Electrical Connections and Figure 10 - Adjustments

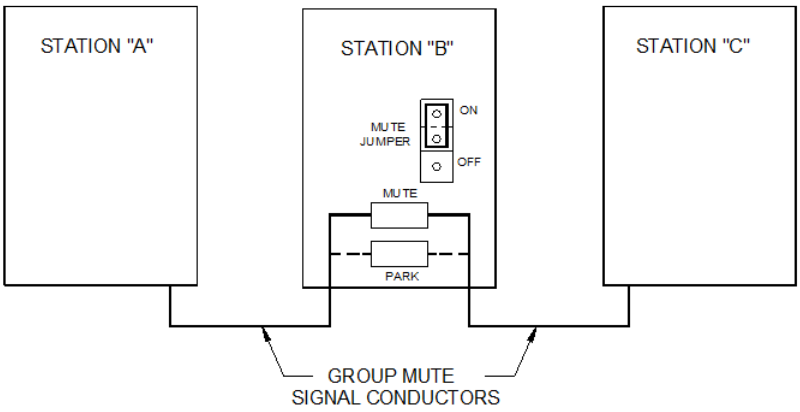
Note: Putting the mute jumper of a station in the on position will mute the associated speaker when the page button is pressed. If the jumper is in the off position the speaker will not be muted when the page button is pressed.

If group muting is used the associated speaker of any station in the group with its mute jumper in the on position will be muted when a paging call is made from any station in the group, including the associated station. Any speaker associated with a station with its mute jumper in the off position will not be muted when a paging call is made from any station in the group, including the associated station.

Note: Paging calls originating from stations outside the group will be heard regardless of the position of the Mute jumper.

If it is desired to bypass a station in a group, connect the group paging wires to the PARK terminals of that station.

EXAMPLE OF GROUP MUTING



If the Group Mute Signal Conductors are attached to the Park terminals of station "B" that station will be bypassed and paging from stations "A" or "C" will have no effect on the output of the loudspeaker associated with Station "B".

If the Group Mute Signal Conductors are attached to the Mute terminals of station "B" the condition of the loudspeaker associated with that station will depend on the setting of the Mute On/Off jumper. If the jumper is in the ON position the loudspeaker will be muted if a paging call is made from any of the three stations. If the jumper is in the OFF position the paging call will not be muted if a paging call is made from any of the three stations.

Paging calls from outside the Group will always be heard, regardless of the position of the mute jumper.

Operating the Single Line Station

Initiating a Call

- Remove the handset.
- Ensure that the line is free.

Broadcasting a Page

- Press and hold the **Page** button on the handset.
- Broadcast the page. (e.g. "Joe, I need to talk to you, pick up a handset.")

Connecting with a Second Party

- When the second party picks up their handset, both parties are connected and can carry on a conversation.

Freeing the Line

- Place the handset back on the cradle.
- Check to ensure that the off-hook detector LED is out.

Note: *There is one talk line on the single line station.*

Note: *Continue holding down the Page button while broadcasting the page.*

Note: *The second party can be located at any other station.*

Operating the Five Line Station

Initiating a Call

- Remove the handset.
- Select a free line using the **Line** selector.

Broadcasting a Page

- Press and hold the **Page** button on the handset.
- Broadcast the page that includes the number of the line you are using. (e.g. "Joe, talk to me on line one.")

Connecting with a Second Party

- When the second party selects the appropriate channel and picks up their handset, both parties are connected and can carry on a conversation.

Freeing the Line

- Place the handset back on the cradle.
- Check to ensure that the off-hook detector LED is out.

Note: *There are five talk lines on the five line station.*

Note: *Continue holding down the Page button while broadcasting the page.*

Note: *The second party can be located at any other station.*

Troubleshooting

Note: *If access to the interior of the station is required refer to the appropriate section.*

See: *Accessing the interior of the Station*

Station Is Dead but Associated Speaker Is Working

- No Repair Possible, Return Module for Repair.

See: *Warranty and Product Return*

Station Is Dead and Associated Speaker Is Not Working

- Ensure power is being supplied to the station.
- Check the fuse located on the circuit board and replace if necessary. Correct the problem that caused the fuse to fail.

See: *Specifications for correct fuse rating*

Handset Microphone Volume Too Low

- Adjust TX level control on circuit board.

Handset Receiver Volume Too Low

- Adjust RX level control on circuit board.

Feedback or Distortion

- Adjust sidetone level control on circuit board.
- Inspect the line and connections for shorts and grounds.
- Ensure that the line balance assembly is loading the lines properly. 33 Ohms for Talk lines and 33 to 133 Ohms for Page lines

Sidetone

- Adjust sidetone level control on circuit board.

Station Stays On or Off Hook (LED Status Indicator On)

1. Ensure power is being supplied to the station.
2. Test the proximity switch in the handset receiver cradle by moving a small, permanent magnet over the area while listening on the handset for the line to open and close.
3. If the movement of the magnet switches the on/off hook condition, the magnet in the receiver cartridge of the handset may be weak – try another handset. It is not necessary to wire in the new handset to perform this test – if the new handset switches the on/off hook condition, replace the existing handset with the new unit.
4. If the movement of the magnet does not appear to switch the on/off hook condition the handset itself may be defective – try another handset.
5. If these remedies do not correct the problem return the module for repair.

See: *Warranty and Product Return*

Excessive Noise on Line

- Verify no other station's handset is off the hook.

Crosstalk

- Inspect wire terminations for crossed wire pairs.

Specifications

ELECTRICAL REQUIREMENTS	
INPUT VOLTAGE	24 - 30VDC, 20 - 26 / 90-140 / 200-260 VAC
AC INPUT FREQUENCY	50/60HZ
INPUT VOLTAGE/CURRENT/FUSE	24VDC/0.5AMP/1A SLOW BLOW 24VAC/0.5AMP/1A SLOW BLOW 120VAC/0.1AMP/0.5A 250V 230VAC/0.05AMP/0.25A 250V
HANDSET AMPLIFIER	
OUTPUT LEVEL	1.5VRMS NOMINAL INTO 33 OHM LOAD
OUTPUT LIMITER	1.5VRMS NOMINAL
TRANSMIT GAIN	50dB
FREQUENCY RESPONSE	250 – 4000HZ
DISTORTION	1.0% MAXIMUM THD @ 1000HZ
SPEAKER AMPLIFIER	
OUTPUT LEVEL	12 WATTS MAXIMUM WITH NOMINAL VOLTAGE
AMPLIFIER GAIN	0.5VRMS AT RATED OUTPUT
FREQUENCY RESPONSE	250 – 4000HZ
DISTORTION	1% MAXIMUM THD @ 1000HZ 10WATTS
INPUT IMPEDANCE	200K OHMS, NOMINAL
LOAD IMPEDANCE	4 TO 16 OHMS (NOT LESS THAN 8 OHMS FOR CONTINUOUS SERVICE)
ENVIRONMENTAL	
WEATHER TIGHT	ENCLOSURE GASKET
DUST TIGHT	ENCLOSURE GASKET
MECHANICAL	
FACEPLATE AND SWITCH PLATE	STAINLESS STEEL
PTR (PPR) DIMENSIONS (H X W X D)	8 1/8 X 8 1/8 X 5 ¼ (6 ½)INCHES/206 X 206 X 133 (165) MM
PTA (PPA) DIMENSIONS (H X W X D)	8 1/8 X 8 1/8 X 2 ¼ (3 ½)INCHES/206 X 206 X 58 (89) MM
PTR (PPR) NET WEIGHT	4.5 LBS/2 KG
PTA (PPA) NET WEIGHT	3.7 LBS/1.7 KG
HANDSET MATERIAL	HIGH IMPACT ABS
MICROPHONE	NOISE CANCELING DYNAMIC
COMPLIANCE	
MODELS WITHOUT HEADSET CONNECTORS ARE APPROVED FOR USE IN HAZARDOUS AREAS WHEN INSTALLED IN CONFORMANCE WITH CSA CERTIFICATE OF COMPLIANCE 1289924 (LR65547). PLEASE VISIT WWW.GUARDIANTELECOM.COM TO OBTAIN A COPY OF THE PRODUCT COC.	

Warranty

Guardian Telecom warrants your product to be free of defects in material and workmanship for a period of one year. Guardian Telecom will repair or replace any defective unit that is under warranty free of charge.

This warranty is null and void if any non-authorized modifications have been made to this product, or if it has been subjected to misuse, neglect, or accident. This warranty covers bench repairs only; such repairs must be made at Guardian Telecom or an authorized service depot. Guardian Telecom is not responsible for costs incurred for on-site service calls, freight, or brokerage.

A return authorization must be obtained prior to warranty claims or repairs.

Disclaimer

The products covered by this manual are designed for use in Industrial Environments and/or Hazardous Locations. Due to the range of possible applications for these instruments the manufacturer will not be responsible for damages or losses of any kind suffered as a result of the use of this product, including consequential damages.

Warning

High voltages may be present in this product, ensure that power is removed before installing, performing maintenance or making repairs.

Service Telephone Number

1-800-363-8010 Toll Free In North America

Guardian Telecom provides a customer service telephone number which is toll-free within North America. If you need assistance when installing or operating this product, please call the toll-free telephone number between regular business hours (7:30AM-5:00PM), Mountain Standard Time. If you are calling outside of regular business hours, please leave a detailed message, and a member of Guardian Telecom's Service Department will return your call as soon as possible. If your product requires service, Guardian personnel will supply you with an RMA (Return Materials Authorization) number over the telephone or through our web site product return page. This number must be included with your return address and the name of the person to contact.

Guardian Telecom
Toll-free 1-800-363-8010
Ph. (403) 258-3100
Fax. (403) 253-4967
www.guardiantelecom.com

Feedback

Guardian Telecom continually strives to make reliable, durable, and easy to use products. If you, as an installer or user of our equipment, have any suggestions for improvements to this or any of our products or documents, including this manual, we would appreciate hearing from you.

Guardian Product Return

Guardian products have been quality tested and are in full working order when shipped from the factory, given the rugged nature of these products shipping is not expected to damage a unit. In the unlikely event of a malfunction, Guardian follows the three step procedure below.

Step I - On-Site Correction

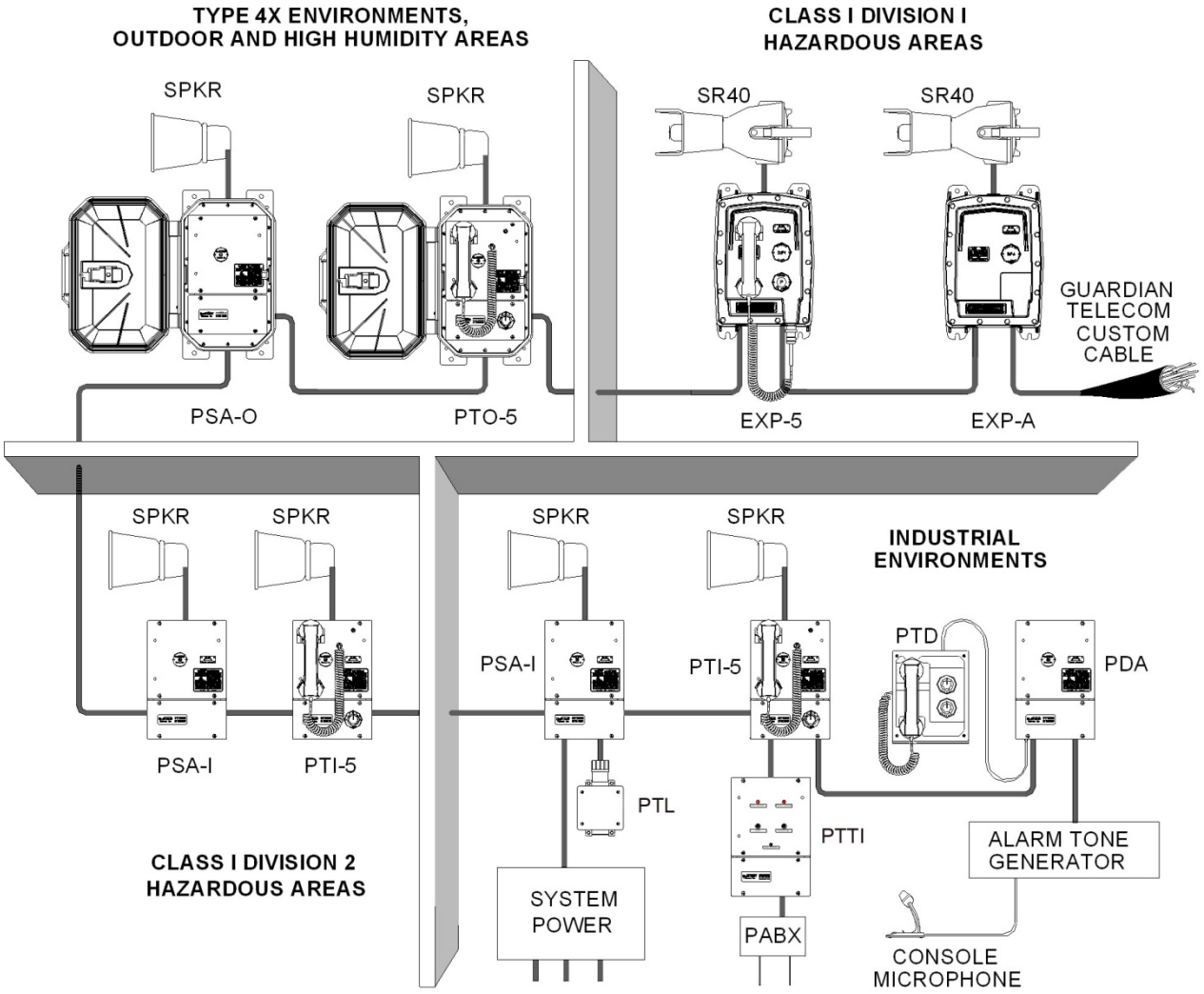
- The most common source of difficulties with a new product is improper installation in one of two ways: incorrect wiring connections or connection to an incorrect power source.
- Product wiring needs to be properly connected to the on-site wiring. Correct wiring instructions are shown in the user manual included with the product.

Step II - Return Materials Authorization (RMA)

- When a product has been installed following user manual instructions, and the unit fails to operate, the user must contact Guardian Telecom to obtain authorization to return the product. This can be done by completing a RMA form online at www.guardiantelecom.com, or by calling the service telephone number given in this manual.
- After providing information on the product, the owner and the nature of the problem, Guardian will issue a RMA number, to be shown on documentation returned with the product.
- In addition to the RMA number, shipping documents should include name, address and telephone number of the owner along with contact information for the person responsible for the repair and/or the user who identified the malfunction.
- (Where a product is being returned for repair from outside of Canada, customs documentation must show the product's serial number, date of export [date of purchase], and a notation that the equipment is: "Canadian goods returning.")

Step III - Factory Authorized Service

- Once received, each product is carefully inspected and tested. If the product is under warranty, repairs are completed and the product returned to the owner, generally within five working days of receipt by the factory.
- A product that has been subjected to misuse, neglect or accident or is beyond the warranty period will be evaluated. The service department will provide the owner's representative with a repair cost estimate. Once approved, repairs are completed and the product returned, generally within five working days.



Typical Installation

Cleaning Tips for Guardian Communication Products

Guardian Products may occasionally need to be cleaned to maintain appearance. Generally, wiping the surface with a clean, water dampened cloth will remove most films or residues. If the soiling is too stubborn for plain water, a mild detergent solution may be used. Be sure to wipe away any detergent residue with a plain water dampened cloth. The Product may be cleaned with any general-purpose household glass and surface type cleaner. Do not spray the Product directly! Spray the cleaner on a soft cloth then wipe the surface. Pre-treated cloths, like those used for eyeglasses or cameras, may be used to clean the Product. Remoistened novelettes may also be used, however, avoid those containing lanolin or aloe as they will leave a slippery residue. The handset and surface of the Product may be cleaned with disinfectants used for general cleaning in a medical environment. Isopropyl alcohol may be used applied with a cloth. Avoid using alcohol on silicon based keypads, since doing so may significantly degrade legibility.

- Do not use furniture polishes, waxes or plasticizer-based cleaner (Armor all etc.)
- Do not use lanolin, aloe, glycerin or other skin care type products.
- Do not apply any solvent such as acetone, mineral spirits etc.

Notes:

Model No.
Part No.
Serial No.
Date of Purchase

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Guardian Telecom
Toll-free 1-800-363-8010
Phone (403) 258-3100
Fax. (403) 253-4967
www.guardiantelecom.com
E-mail: mailto:sales@guardiantelecom.com
(Click to open message box)

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