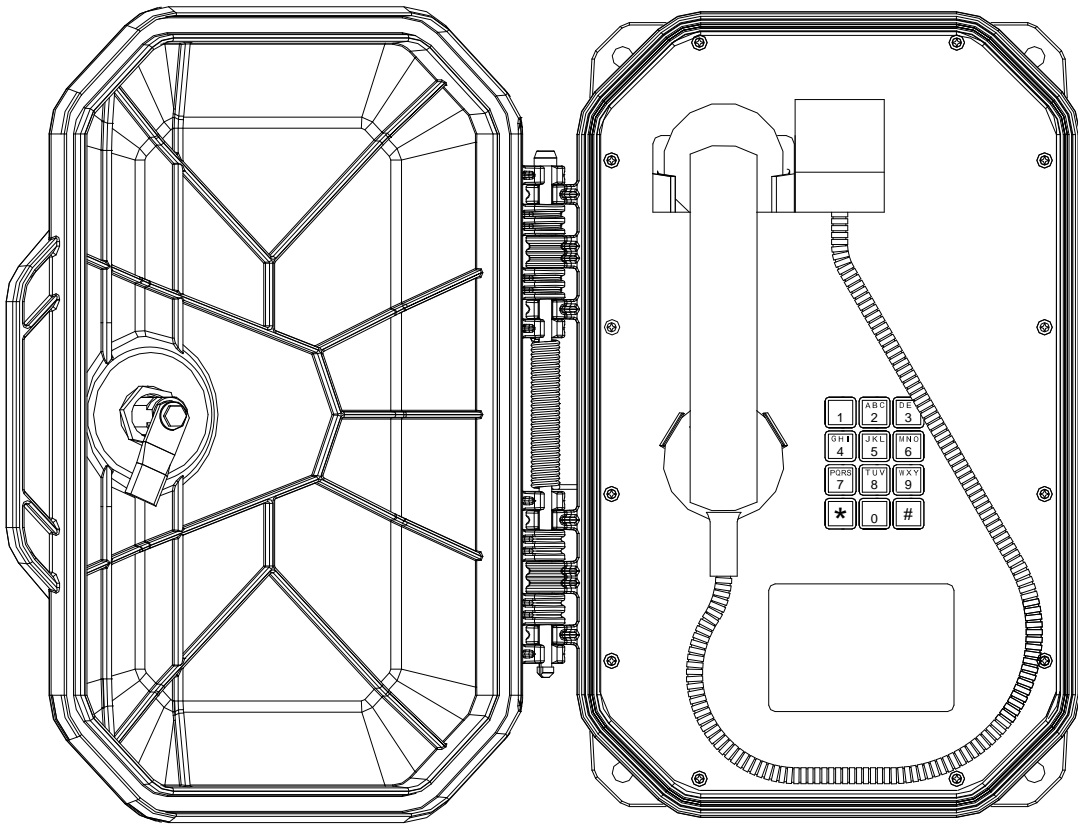


Water Tight Hazardous Area Telephone

WTT-H Series Telephones

Installation and Operation



WTT-40-H

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Package Contents

- (1) WTT-H Telephone
- (2) Door Latch Keys (if locking door option ordered)
- (12) Faceplate Screws (standard or vandal resistant)
- (1) Driver bit for Vandal Resistant screws (if this option was ordered)
- (1) Installation and Operation Manual

Models and Options

- P5304 WTT-30-H telephone with curly cord.
- P5305 WTT-40-H telephone with armored handset cord.
- LCK-WTE Locking Door
- VR-WTE Vandal Resistant Faceplate Screws With Driver Bit
- NC Noise Canceling Microphone

Accessories

- P7226 Explosion Proof ring detect relay, (external to telephone)
- P7231 24 Volt Explosion Proof off-hook detect relay, (external to telephone)
- P7233 48 Volt Explosion Proof off-hook detect relay, (external to telephone)
- Loud Ringers and Strobe Lights

Overview

WTT-H Series Water Tight Hazardous Area Telephone

Guardian's WTT-H Series Telephones offer maximum efficiency under extreme environmental and hazardous area conditions. The sturdy thermoplastic resin enclosure protects the internal circuitry against wind blown dust and rain; corrosion, splashing and high pressure water. They have a CSA Type 4X rating; and are approved for use in Class I, Division 2 Groups A, B, C & D and Class I, Zone 2, Group IIC Hazardous Locations. These compliances make these the ideal telephones for use in wet or corrosive atmospheres such as chemical plants or offshore platforms.

The WTT-30-H is a standard model with a curly cord and the WTT-40-H has an armored handset cord.

Features

Enclosure

- thermoplastic resin body construction
- weatherproof and corrosion resistant
- spring loaded hinged door (locking optional)
- integrated mounting feet

Keypad

- standard 3x4 matrix

Encapsulated Circuitry

- encapsulated circuit boards are resistant to corrosive agents (e.g. H₂S, SO₂ and NH₃) and environments with high humidity

Magnetic Reed Hook Switch

- no moving parts

Surge Arrestor and Field Replaceable Fuse

- protects the user and prevents damage to the electronic circuitry in the event of a high voltage spike on the telephone line

Wall Mount

- easily mounted on any sturdy vertical structure

Noise Reducing Microphone

- allows a high level of intelligibility in locations with high background noise

Receiver Volume Control

- Switch in handset provides 13.5dB of range

Tone (DTMF) Operation

- factory set to tone (DTMF) dialing
- can be ordered set for pulse dialing or configured in the field

Armored Handset Cord (WTT-40-H only)

- withstands severe use

Hearing-Aid Compatible

- compatible with inductively coupled hearing-aid devices

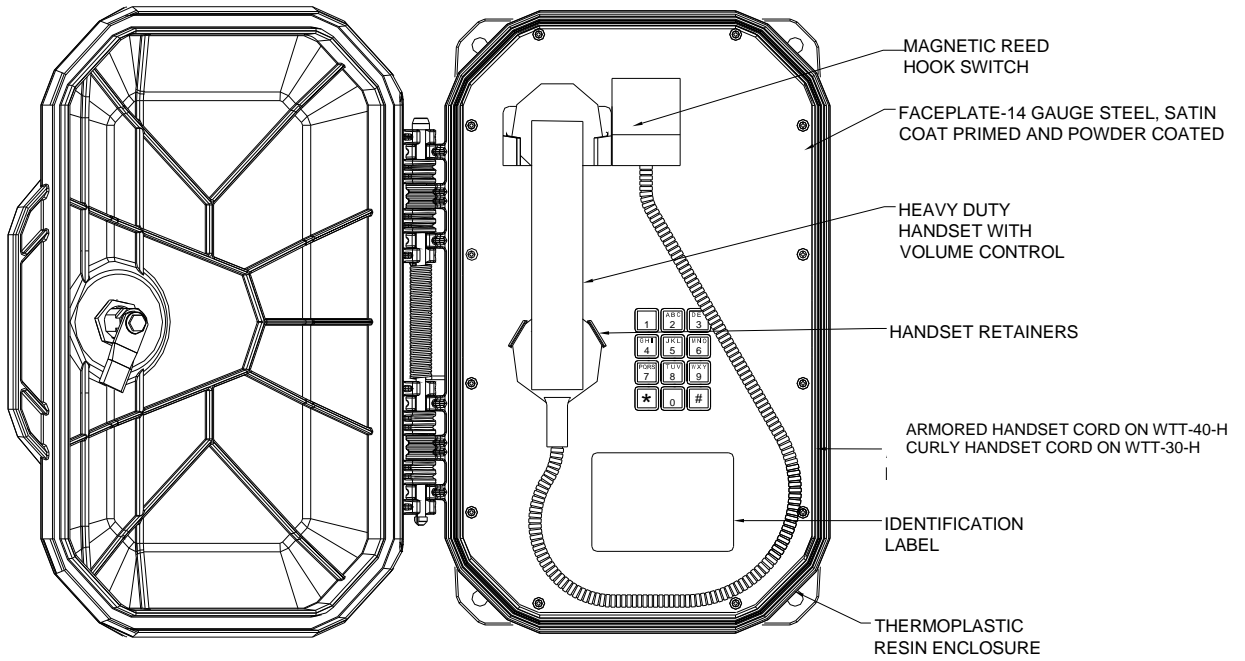


Figure 1 - Features

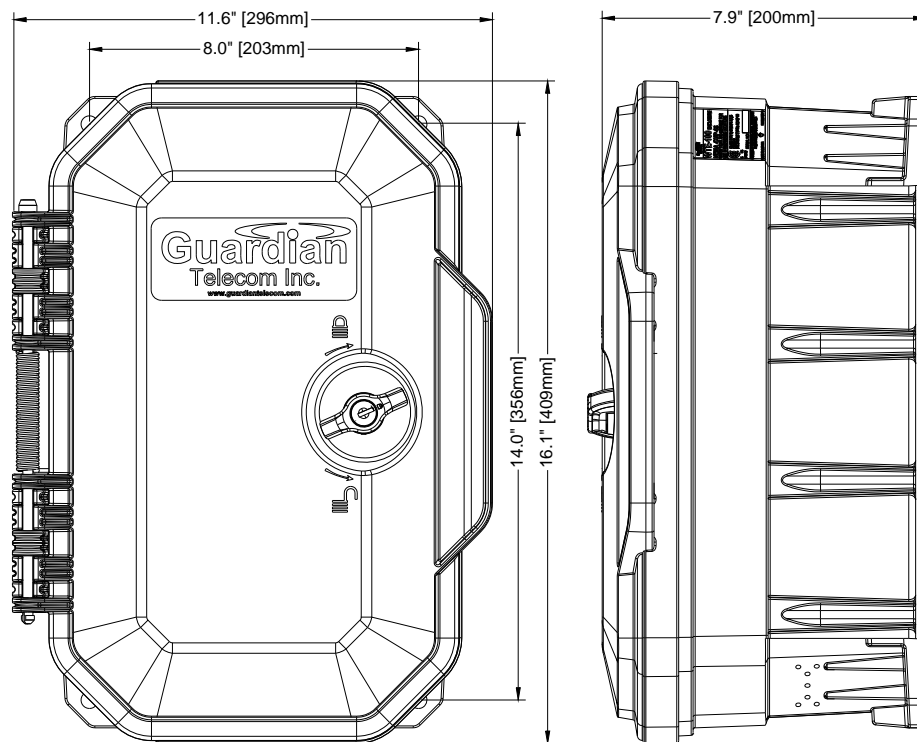


Figure 2 - Overall Dimensions

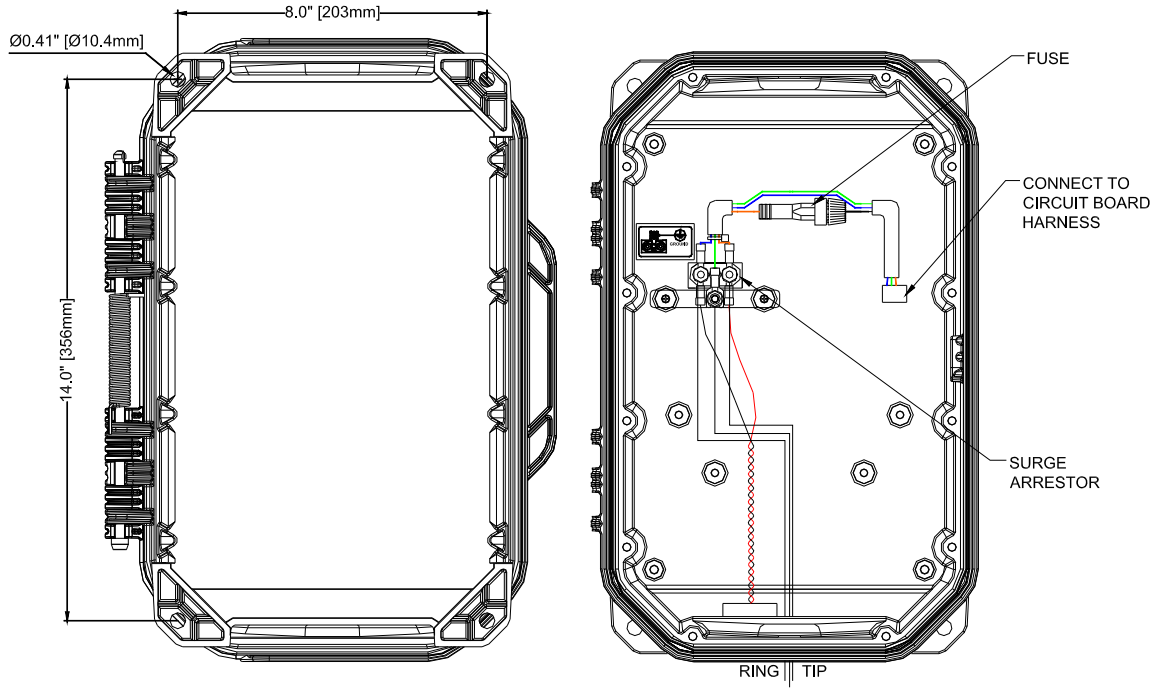


Figure 3 - Installation

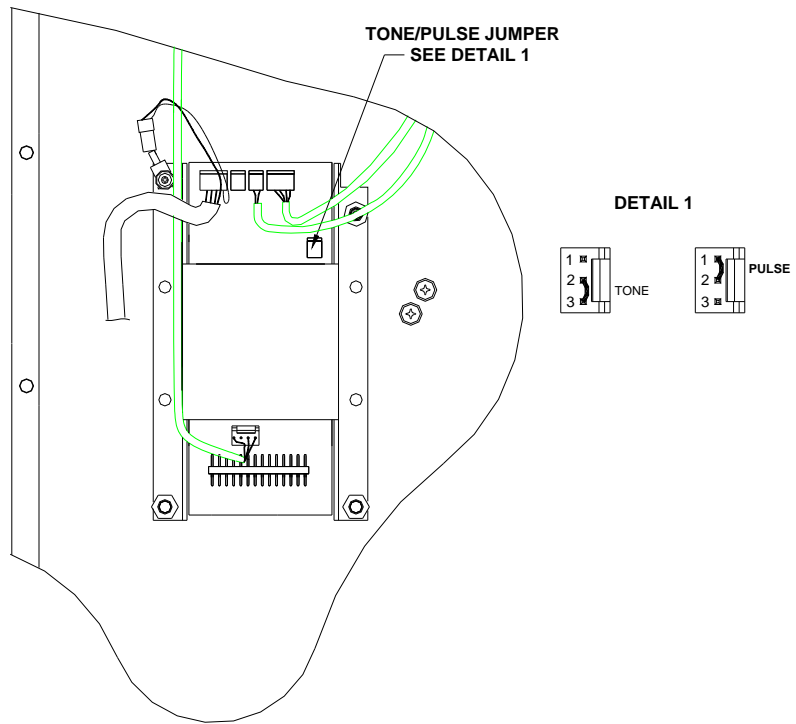


Figure 4 - Setting Dialing Mode

Installation

- Follow all appropriate electrical codes and use only approved electrical fittings for the installation.
- For waterproofing purposes ensure all glands and conduits are properly gasketed.
- Choose a wall location that is free of obstructions and permits space for ½" NPT conduit runs.
- Ensure mounting can support 18 lbs (8.2 kg) and any additional foreseeable load.
- **Ensure that none of the electrical connection circuits are live.**
- Separate the faceplate from the housing by removing the two temporary, factory installed screws and unplugging the wiring harness from the faceplate.
- To change the Tone/Pulse setting to pulse, if required:
 - Move the jumper from pins 2 & 3 of the Tone/Pulse connector to pins 1 & 2.
 - To change the setting back to tone move the jumper back to pins 2 & 3.
- Drill or punch cable entrances as required at the three drill dimples.
- Use the template provided to locate and drill holes for mounting screws.
- Secure the unit to the wall.
- Bring the telephone cable into the enclosure through the conduit entrance and attach individual wires from the exchange (Tip/Ring/Ground) to the surge arrestor, (Tip & Ring are not polarity sensitive.). If a conduit hub is used, ensure it is grounded to the ground stud.
- Plug the wiring harness back into the faceplate and secure the faceplate using the screws provided.
- Close up unused cable entrances with approved plugs.
- Connect the telephone lines at the local exchange or demarcation block.
- Test the unit by making calls to and from another station.

See: Figure 2 - Overall Dimensions.

Tip: The WTT-H Telephone is factory preset for DTMF tone.

See: Figure 4 - Setting Dialing Mode

Tip: Use ¼" or M8 screws to secure the unit to the wall.

See: Figure 3 - Installation

Operation

- Once your Model WTT-H Telephone has been properly installed and energized, operation is identical to most other single line telephones.

Field Repairs

Field repairs may only be carried out by qualified technicians using OEM parts. Substitution of parts voids warranty and may pose a hazard to users of the equipment.

- Disconnect the telephone from Tip and Ring power supplied by the PABX or central office.
- Carefully remove the front cover assembly and separate from the housing by disconnecting the harness plugs. NOTE that the handset and all electronics are attached to the front plate.
- Perform the necessary repairs or adjustments.
- Carefully replace the front plate and install all fourteen screws. Do not over tighten the cover screws; there is a flexible gasket between the cover and the body. Excessive tightening of the screws deforms the gasket and reduces the weather resistance of the set.

Fuse Replacement

- Remove the old fuse by pulling on the ends of the fuse holder to open. Insert a new 0.25 amp, 250Volt, 3AG fast blow fuse and close the fuse holder.

WARNING!

- Replace only with a 0.25 amp 250V 3AG fast blow fuse. Failure to do so will void the warranty.
- If, on reconnecting power, the fuse fails, check the telephone system wiring. The fuse protects the Tip and Ring line from the telephone system. It is usually powered at 48 volts DC and must not be connected to 120 volts AC.

Changing the Tone/Pulse Setting

- Set the Tone/Pulse jumper for the desired operation. For pulse, set the jumper between pins 1 & 2, for tone set it between pins 2 & 3.

See: *WTT-H
Replacement Parts*

See: *Figure 3 -
Installation*

See: *Figure 4 - Setting
Dialing Mode*

Product Specifications	
<i>Electrical Performance</i>	
AUDIBLE RANGE FREQUENCY RESPONSE	300 - 3400 Hz
DIALING METHOD	DTMF or 40/60 PULSE AT 10 PPS
TRANSMIT OBJECTIVE LOUDNESS RATING (TOLR)	-38 +/- 3 dB
RECEIVER VOLUME ADJUSTMENT	+8.1 / -5.1 dB IN STEPS OF 2.7 dB
RECEIVE OBJECTIVE LOUDNESS RATING (ROLR)	
-AT NOMINAL VOLUME LEVEL	50 +/- 3 dB
-AT MAXIMUM VOLUME LEVEL	42 +/- 3 dB
-AT MINIMUM VOLUME LEVEL	55.4 +/- 3 dB
SIDE TONE OBJECTIVE LOUDNESS RATING	
-AT NOMINAL VOLUME LEVEL	11 +/- 4 dB
-AT MAXIMUM VOLUME LEVEL	7 +/- 4 dB
-AT MINIMUM VOLUME LEVEL	14 +/- 4 dB
RINGER OUTPUT	85 dB @ 1m
FCC RINGER EQUIVALENCE NUMBER (REN)	0.8B
SET IMPEDANCE	600 OHMS NOMINAL
MAXIMUM LOOP	15,000 FT (4,600 M) of 22 AWG COPPER
<i>Electrical Requirements</i>	
RINGER SENSITIVITY	40 - 100 V, 16 - 25 HZ
LINE VOLTAGE	24 - 56 VDC
LOOP CURRENT	20 - 120 mA
CONNECTION METHOD	SURGE ARRESTOR/TERMINAL BLOCK
FUSE	¼ AMP 3AG FAST BLOW
<i>Environmental</i>	
WEATHER AND CORROSION RESISTANT	Enclosure 4X, IP66
TEMPERATURE	-40° TO +140° F (-40° TO +60° C)
HUMIDITY	0 TO 100% RH
DUST RESISTANT	FULL ENCLOSURE GASKET
<i>Mechanical</i>	
HOOK SWITCH (CRADLE SWITCH) LIFE	>1 000 000 OPERATIONS
BODY CONSTRUCTION	THERMOPLASTIC RESIN
FACEPLATE	STAINLESS STEEL
DIMENSIONS (H X W X D)	16.1 x 11.6 x 7.9 INCHES (409 x 296 x 200 MM)

NET WEIGHT	18 LBS (8.2 KG)
HANDSET MATERIAL	HIGH IMPACT ABS
MICROPHONE	NOISE REDUCING ELECTRET
RECEIVER	HEARING AID COMPATIBLE
STANDARD MOUNTING	VERTICAL WALL
WIRING ACCESS	THREE DIMPLED DRILL GUIDES FOR 1" GLANDS
HARDWARE MATERIAL	STAINLESS STEEL
Compliance	
DOC	1012 6721 A
FCC	HQHCAN-22517-TE-E
CSA	CLASS I, DIVISION 2 GROUPS A, B, C & D; CLASS I, ZONE 2, GROUP IIC,T5
WATER TIGHT ENCLOSURE	CSA TYPE 4X, IP66

WTT-H Replacement Parts	
Part No.	Description
P006513	Faceplate
P006499	Faceplate gasket
P004050	Faceplate Screws – standard – (12 required)
P007004	Faceplate Screws – Vandal Resistant – (12 required)
P004260	Driver Bit for Vandal Resistant Screws
P005479	Handset Shell Only C/W 4' Curly Cord
P005699	Handset assembly C/W 22" armored cord
P005391	Handset assembly C/W 6' curly cord
P002786	Handset cradle
P005917	Reed switch
P004371	Handset retainer
P000028	Noise reducing microphone
P002080	Receiver cartridge
P004538	Noise canceling microphone
P005582	Telephone circuit board
P006265	Metal keypad
P006295	Metal keypad C/W circuit board and ribbon cable
P006646	Ringer – Floyd Bell
P002992	Surge arrestor
P002991	Fuse- glass 0.25 Amp 250V
P006442	Housing
P006441	Door
P006439	Hinge Spring
P006440	Hinge pin
P006460	Door Latch – (non-locking)
P006461	Door Latch – (locking)

Government Certification

Attached to the telephone are labels for *Industry Canada* and the *United States Federal Communications Commission*. These identify equipment certifications indicating the 60 and 70 series telephones meet certain telecommunications network protective, operational and safety requirements. These agencies do not guarantee the equipment will operate to the user's satisfaction.

Before installing this telephone equipment, users should ensure it is permissible to connect the equipment to facilities of the local telecommunications company.

Equipment must be installed using acceptable connection methods. In some cases, the telephone users inside wiring, associated with a single line service, may be extended by a certified connector assembly (telephone extension cord). The customer should be aware that in some situations compliance with the above conditions may not prevent degradation of service.

Repairs to certified equipment should be made by a supplier designated authorized maintenance facility.

For their own protection users should ensure the electrical ground connections of the power utility, telephone lines and internal metallic water pipe systems, if present, are connected. This precaution may be particularly important in rural areas.

CAUTION: Users should not attempt to make ground connections, but should contact the appropriate electrical inspection authority or electrician.

Load Number (LN)

The Load Number (LN) assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop used by the device. Termination on a loop may consist of any combination of devices subject only to the requirement that the total of the Load Numbers of all the devices does not exceed 100.

Notification to Telephone Company

Upon request, the customer must notify the telephone company of the particular line to which the connection will be made and provide the Industry Canada or FCC registration number. The local telephone company may request disconnection of the telephone where alterations or malfunctions affect the telephone's performance.

United States Federal Communications Commission

This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for Class A computing device pursuant to Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference.

Interference

There is no guarantee that interference will not occur in a particular installation. If interference to radio or television reception from this equipment is suspected, proceed as follows:

1. Unplug the set, check for the interference.
2. Re-orient the receiving antenna.
3. Relocate the set with respect to the receiver.
4. Move the set away from the receiver.

If necessary, consult the supplier or an experienced radio/television technician for additional suggestions.

FCC Rules and Ringer Equivalence Number

This equipment complies with Part 68 of the FCC Rules. On the side of this equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of the RENs should not exceed five. To be certain of the number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to determine the maximum REN for the calling area.

Service changes and Limitations

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications in order to maintain uninterrupted service.

This equipment can not be used on public coin telephone service as provided by your telephone company. Connection to party line service is subject to state tariffs (contact the state public utility commission, public service commission or corporate commission for information.)

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.

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

This device may be opened and reassembled by qualified personnel only, for the purposes of installing the product, making adjustments and replacing components, following the instructions in the product manual.

High voltages may be present in this product when connected to telephone wiring.

Service Telephone Number

1-800-363-8010

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 (8:00AM-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 Inc.
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
<p>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.</p>
<p><i>Step I - On-Site Correction</i></p>
<ul style="list-style-type: none"> • 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.
<ul style="list-style-type: none"> • 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.
<ul style="list-style-type: none"> • Connecting a telephone to a standard power source, rather than tip & ring, will blow the telephone's internal, user-replaceable fuse. In the event of fuse burn-out, disconnect the telephone from the power source, replace the fuse, and reconnect following the wiring diagrams provided with the product.
<p><i>Step II - Return Materials Authorization (RMA)</i></p>
<ul style="list-style-type: none"> • 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.
<ul style="list-style-type: none"> • 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.
<ul style="list-style-type: none"> • 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.
<ul style="list-style-type: none"> • (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.")
<p><i>Step III - Factory Authorized Service</i></p>
<ul style="list-style-type: none"> • 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.
<ul style="list-style-type: none"> • 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.

Cleaning Tips for Guardian Telephones

Guardian Telephones 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 Telephone may be cleaned with any general-purpose household glass and surface type cleaner. Do not spray the telephone 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 Telephone. Premoistened towelettes may also be used, however, avoid those containing lanolin or aloe as they will leave a slippery residue. The handset and surface of the telephone 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.
- Do not directly spray or immerse the handset.

Notes:

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

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