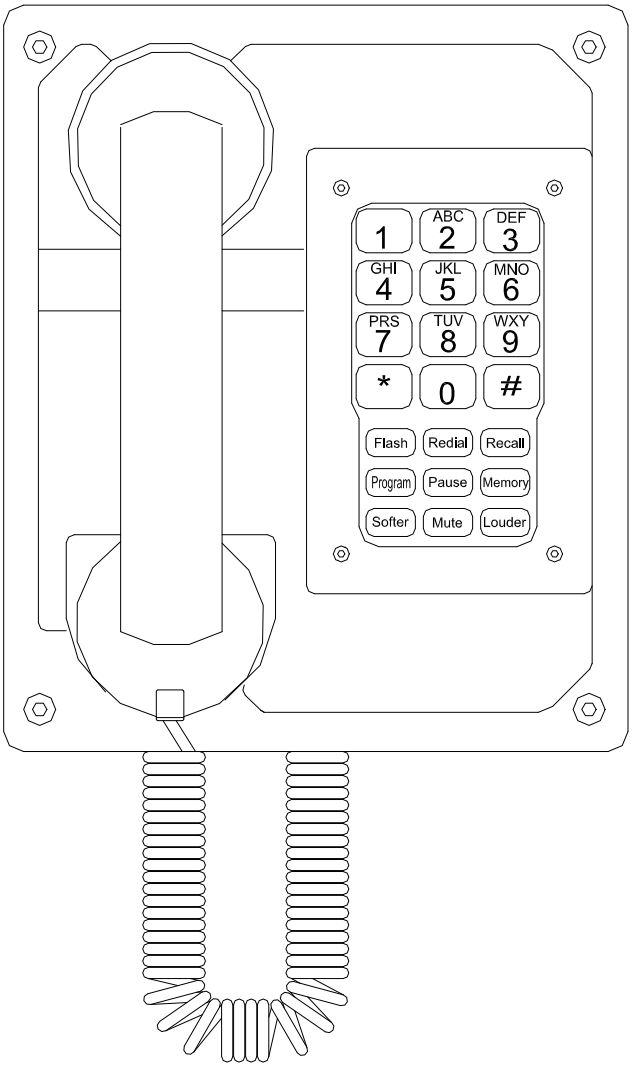
Guardian Telecom Inc. Industrial Communications Worldwide

Industrial Desk Telephone

Model DTT

Installation and Operation



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7552 - 10th Street N.E. Calgary, Alberta, Canada T2E 8W1
Ph: 403.258.3100 \ email:info@guardiantelecom.com \ www.guardiantelecom.com

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Models

- P6580 Standard model with 6’ heavy duty curly cord, membrane keypad with receiver volume control

Options

- Noise Canceling Microphone (NC)

Accessories

- P7225 Weatherproof ring detect relay
- P7232 Weatherproof off-hook detect relay
- PXXXX External Loud Ringers and Strobe Lights

Overview

The DTT Desk Telephone is designed to provide safe, reliable communication in Industrial locations. The unit is housed in a rugged enclosure which makes it ideal for use in harsh environments.

The DTT can be wall mounted if desired.

Features

Enclosure

- housing - 16 Gauge steel - Zinc Dichromate plated and powder coated
- faceplate – Kydex or ABS-94-V0 fire rated, durable and easy to clean

Membrane Keypad

- weather tight
- 10 number memory
- Redial - last number (up to 31 digits)
- Recall – obtains dial tone without hanging up handset
- Flash - 600ms timed loop break
- Pause - 3 second pause in programming
- Mute - disables handset microphone
- Softer/Louder – 2.7 dB step per press (+8.1dB/-5.4db in 5 steps)

Epoxy Resin Circuitry Coating

- encapsulates circuit boards and all of its electronics making it resistant to corrosive agents (e.g. H_2S, SO_2, and NH_3), and environments with high humidity

Magnetic Reed Hook Switch

- no moving parts

Surge Arrestor and Fuse

- safeguards the electronic circuits and the user in the event of a high voltage spike on the telephone line

Noise Reducing Microphone

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

Tone (DTMF)/Pulse Operation

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

Heavy Duty Handset Cord

- withstands severe use

Hearing-Aid Compatible

- compatible with inductively coupled hearing-aid devices

Receiver Volume Control

- Switch on keypad provides 13.5dB of range

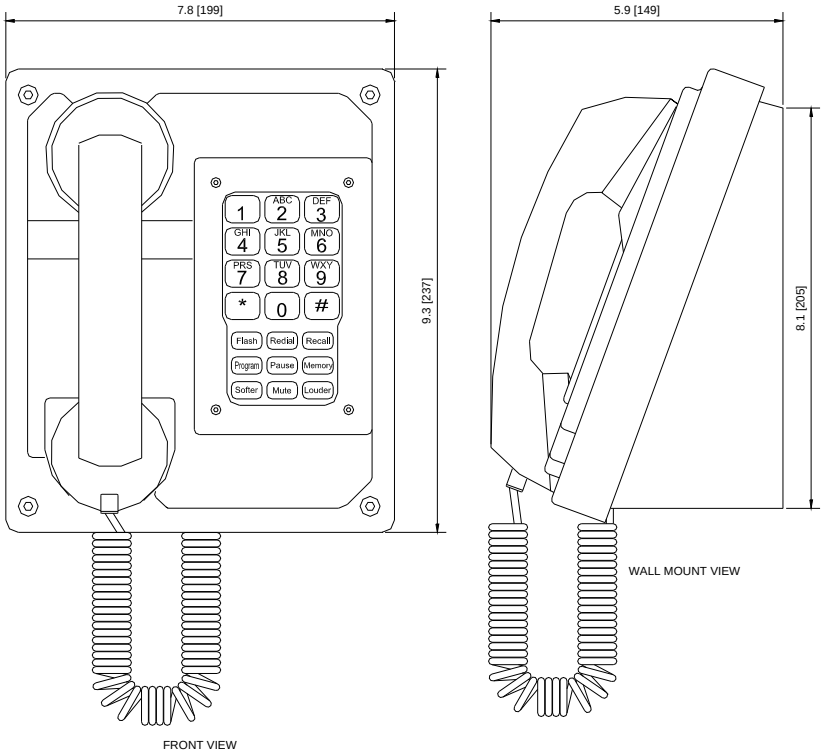

Figure 1 - Dimensions

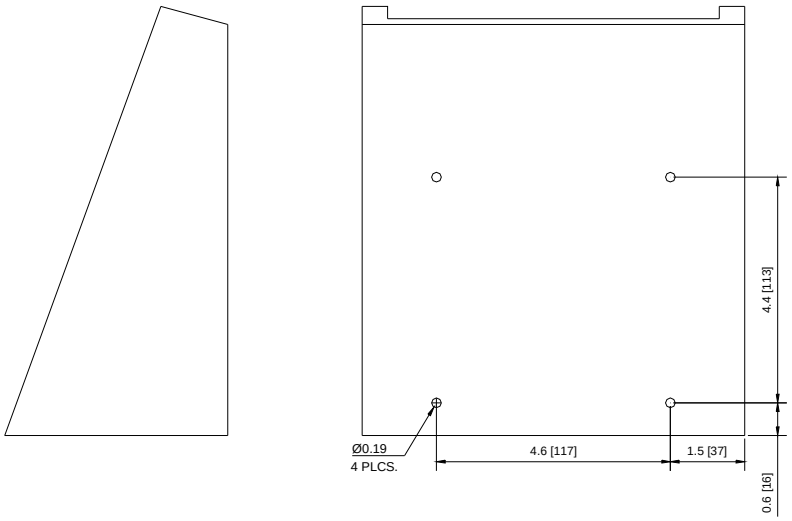

Figure 2 - Wall Mounting

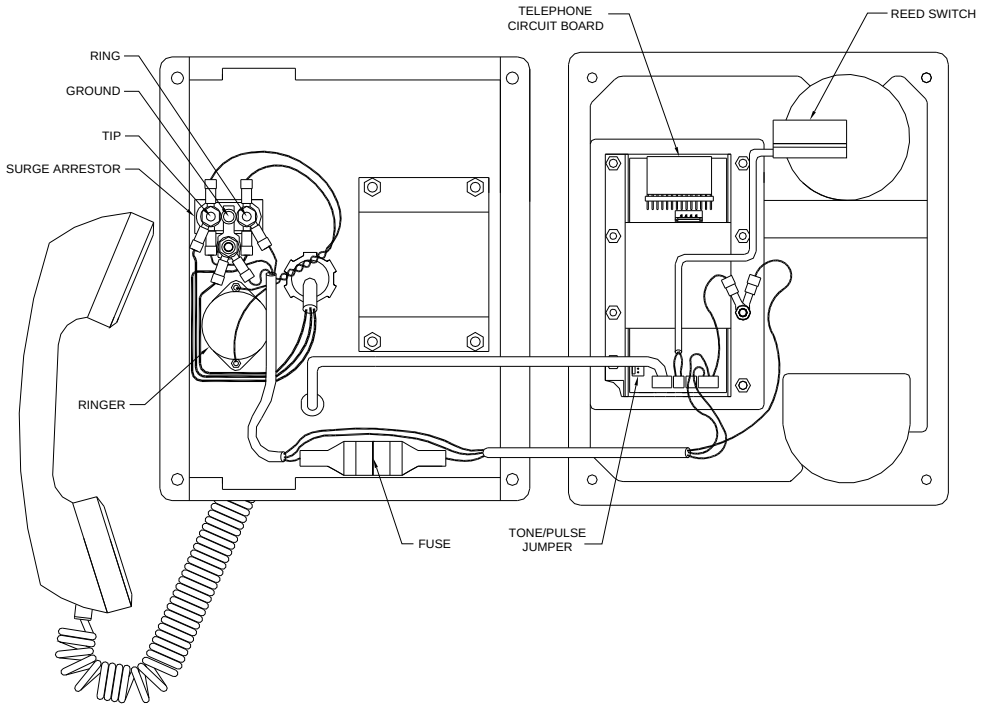

Figure 3 - Internal Wiring

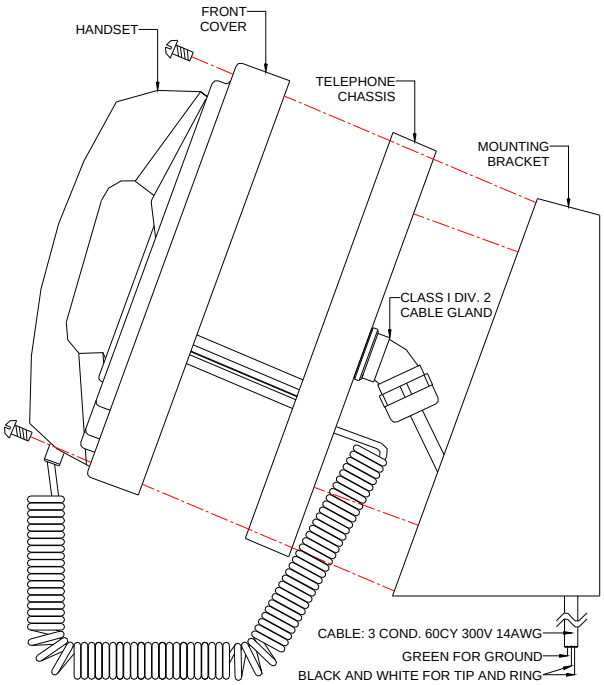

Figure 4 - Mechanical Assembly

Installing the DTT Telephone

- Follow all appropriate electrical codes and use only approved electrical fittings for the installation.

  See: *Government Certification.*

- To change the Tone/Pulse setting to pulse, if required:

  Tip: *The DTT is factory preset for DTMF tone.*

  - Remove the four top screws and carefully remove the cover.
  - Move the jumper from pins 1 & 2 of the Tone/Pulse connector to pins 2 & 3.
  - To change the setting back to tone move the jumper back to pins 1 & 2.
  - Replace the cover and the four screws.

Note: The model DTT can be either desk mounted or wall mounted.

See: *Figure 2 - Wall Mounting*

- If the DTT is to be desk mounted simply place it in the desired location.
- If the DTT is to be wall mounted follow these instructions.

  See: *Figure 3 - Internal Wiring*

  - Remove the four top screws and carefully remove the cover.

    See: *Figure 4 - Mechanical Assembly*

  - Disconnect the harness plugs and set the cover aside.
  - Using a flat screwdriver or similar instrument carefully pry the chassis away from the base at the four corners.
  - Loosen the locknut on the forty-five degree cable gland, rotate the gland 180 degrees and re-fasten the locknut.
  - Secure the base to the wall at the desired location.
  - Rotate the chassis 180 degrees from the original orientation and snap it back into the base.
  - Rotate the cover 180 degrees from the original orientation and reconnect the harness plugs.
  - Replace the cover and the four screws.
- Ensure that none of the electrical connection circuits are live.
- Connect the Tip, Ring and Ground conductors in the cable provided to the telephone line at a junction box.

  Note: *Tip and Ring are not polarity sensitive.*

- Test the unit by calling to and from another unit on the exchange.

Field Repairs & Adjustments

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.

See: *Figure 3 - Internal Wiring and Replacement Parts*

- Disconnect the telephone from Tip and Ring power supplied by the PABX or central office before attempting repairs.
- Remove the four top screws and carefully remove the cover.
- Perform the necessary repairs or adjustments.
- Replace the cover and the four screws.

See: *Figure 4 - Mechanical Assembly*

Note: *Ensure that connections are secure before replacing the cover.*

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 the center pin and the “P”, for tone set it between the center pin and “T”.

See: *Figure 3 - Internal Wiring*

Description Of Features

Flash:

The flash button will invoke a 600 ms timed loop break. In pulse dialing mode the flash option is inoperable.

Recall:

The Recall button is used to disconnect the line without replacing the handset in the cradle.

Softer and Louder:

The Softer and the Louder buttons are used as a volume control for the receiver earpiece. Each press on the Softer or Louder button will decrease or increase the loudness by 2.7 dB (+8.1 dB/-5.4 dB in 5 steps).

Mute:

The function of this key is enabled in speech mode only. Pressing the Mute key will disable the microphone amplifier, and pressing the Mute key again will revive the microphone amplifier.

Redial:

The Redial button will recall the last manually dialed number. The maximum storage capacity of the Redial Memory is 31 digits.

Pause:

Pause is used during programming to insert a 3 second pause within the first 5 digits.

Memory key programming:

There are 10 direct memory access registers which can be assigned to the 10 numeric keys. Each register can contain up to 20 digits including Pauses.

To program the direct memory access keys proceed as follows.

- Take the phone OFF HOOK.
- Press the Program key. The phone is now in programming mode.
- Press the Memory key and one of the numerical keys (0-9). The number selected will be assigned to this memory location.
- Enter the phone number to be stored (for example 1-800-363-8010). Valid entries are 0-9, *, #, or Pause. If you are located in a business where you must dial 9 or some other digit(s) to access an outside line, the example above would be 9 Pause (press the Pause key) 1-800-363-8010.
- Press Enter to exit the programming mode.

Automatic memory Dialing:

Ten (10) preprogrammed direct memory access registers can be used for quick dialing as follows:

- Take the phone OFF HOOK.
- Press the Memory key.
- Select one of the numerical keys (0-9) (the memory locations).
- The number stored in the register will be accessed and dialed.

Engineering Specifications	
Electrical Performance	
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	3 Steps Up / 2 Steps Down (8.1 dB / 5.1 dB)
Receive Objective Loudness Rating (ROLR)	
-At Nominal Volume Level	50 +/- 3 dB
-At Maximum Volume Level	42 +/- 3 dB
-At Minimum Volume Level	55.5 +/- 3 dB
Side Tone Objective Loudness Rating (SOLR)	
-At Nominal Volume Level	11 +/- 4 dB
-At Maximum Volume Level	7 +/- 4 dB
-At Minimum Volume Level	14 +/- 4 dB
Memory Dial	10 Registers of 20 Digits Each
Flash	600 mS Timed Disconnect
Mute	Press Key to Mute Transmitter
Redial	31 Digits Maximum
Ringer Output	Max 75 dB
FCC Ringer Equivalence	0.9B
Set Impedance	600 Ohms Nominal
Maximum Loop	15,000 ft (4,600 m) of 22 AWG Copper
Electrical Requirements	
Ringer Sensitivity	40 – 100 V, 16 – 25 Hz
Line Voltage	24 – 56 VDC
Loop Current	20 - 120 mA
Connection Method	8’ (2.4 m) Cable to Surge Arrestor in Phone
Fuse	¼ Amp 250 Volt 3AG Fast Blow
Environmental	
Temperature	-40° to +60° C (-40° to +140° F)
Humidity	0 to 95% RH
Dustproof	Fully Gasketted Enclosure

Mechanical	
HOOK SWITCH (CRADLE SWITCH) LIFE	>1 000 000 OPERATIONS
HOUSING	16 GAUGE STEEL, ZINC DICHROMATE PLATED AND POWDER COATED
FACEPLATE	KYDEX OR ABS-94-V0 FIRE RATED
DIMENSIONS (H X W X D)	9.3 x 7.9 X 5.9 inches (237 x 199 X 149 mm)
NET WEIGHT	5.5 LBS (2.5 KG)
HANDSET MATERIAL	HIGH IMPACT ABS
MICROPHONE	NOISE REDUCING ELECTRET
RECEIVER	HEARING AID COMPATIBLE
STANDARD MOUNTING	DESK OR WALL
CONNECTION FITTINGS	Cable Gland
HARDWARE MATERIAL	STAINLESS STEEL
Compliance	
INDUSTRY CANADA	1012 6721 A
FCC	HQHCAN-22517-TE-E

Replacement Parts

Part No.	Description
P004354	Faceplate DTT
P002294	Handset Shell Only
P000028	Microphone Cartridge – Noise Reducing
P002080	Receiver Cartridge
P004323	Handset Assembly – C/W 10’ curly cord
P005582	Telephone Circuit Board
P005224	Keypad – membrane
P002782	Ringer – Floyd Bell BR-3-39
P002254	Reed Switch
P002992	Surge Arrestor – TII 126L1
P002991	Fuse – Glass 0.25 Amp 250V
P004353	Housing DTT

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 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

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.
7552 - 10th Street N.E.
Calgary, Alberta, Canada T2E 8W1
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.
• 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.
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.

Notes:

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

Guardian Telecom Inc.
7552 - 10th Street N.E.
Calgary, Alberta, Canada T2E 8W1
Toll-free 1-800-363-8010
Ph. (403) 258-3100
Fax. (403) 253-4967
www.guardiantelecom.com
E-mail: mailto:sales@guardiantelecom.com
(Click to open message box)

Industrial Communications Worldwide