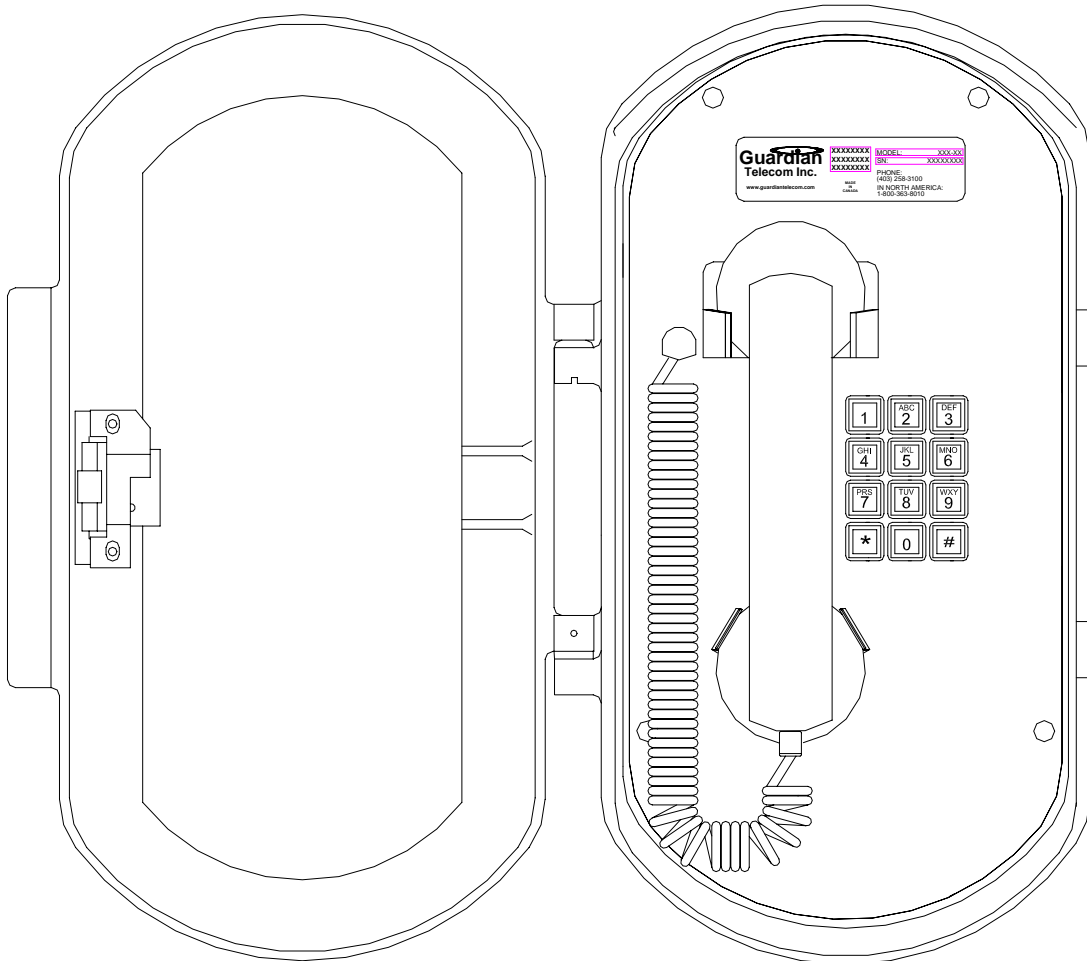


# Heavy Duty Weather Proof Telephone

## Model SP70A

### Installation & Operation



## Table of Contents

Package Contents .....	2
Models .....	2
Options .....	2
Accessories .....	2
Overview .....	3
Features.....	3
Installing the SP70A Telephone.....	6
Field Repairs.....	7
Engineering Specifications.....	8
Replacement Parts .....	9
Warranty .....	10
Disclaimer .....	10
Warning .....	10
Service Telephone Number .....	10
Feedback .....	10
Guardian Product Return.....	11

## Table of Figures

Figure 1 - Features .....	4
Figure 2 - Overall Dimensions .....	4
Figure 3 - Mounting.....	5
Figure 4 - Electrical Connections.....	5

## Package Contents

- One (1) SP70A Telephone
- One (1) Installation and Operation manual

## Models

- **P5404** Standard model with non-locking door
- **P5406** Standard model with non-locking door and armored handset cord
- **P5408** Standard model with locking door
- **P5410** Standard model with locking door and armored handset cord

## Options

- Noise Canceling Microphone (NC)

## Accessories

- **P7225** Weatherproof ring detect relay
- **P7229** Weatherproof off-hook detect relay

## Overview

### ***SP70A Heavy Duty Telephone***

The SP70A Heavy Duty Telephone meets the special requirements of sites prone to abuse and inclement weather. The apparatus is housed in an aluminum enclosure with a locking or non-locking door. The unit resists moisture, dust and corrosive chemicals and is specifically designed to provide reliable service in outdoor environments.

<b>Features</b>
<b><i>Enclosure</i></b>
<ul style="list-style-type: none"> <li>• cast aluminum housing</li> </ul>
<ul style="list-style-type: none"> <li>• weather and dust resistant</li> </ul>
<ul style="list-style-type: none"> <li>• durable Hammertone Grey powder coat paint</li> </ul>
<ul style="list-style-type: none"> <li>• locking or non-locking door</li> </ul>
<ul style="list-style-type: none"> <li>• nylon bushings provide smooth door operation</li> </ul>
<b><i>Keypad</i></b>
<ul style="list-style-type: none"> <li>• durable metal keypad</li> </ul>
<ul style="list-style-type: none"> <li>• standard 3 x 4 matrix</li> </ul>
<b><i>Encapsulated Circuitry</i></b>
<ul style="list-style-type: none"> <li>• circuit boards are resistant to corrosive agents (e.g. H<sub>2</sub>S, SO<sub>2</sub> and NH<sub>3</sub>), and environments with high humidity</li> </ul>
<b><i>Magnetic Reed Hook Switch</i></b>
<ul style="list-style-type: none"> <li>• no moving parts</li> </ul>
<b><i>Surge Arrestor</i></b>
<ul style="list-style-type: none"> <li>• prevents damage to the electronic circuits in the event of a high voltage spike on the telephone line</li> </ul>
<b><i>Noise Reducing Microphone</i></b>
<ul style="list-style-type: none"> <li>• allows a high level of intelligibility in locations with high background noise</li> </ul>
<b><i>Tone/Pulse Selectable</i></b>
<ul style="list-style-type: none"> <li>• may be set to operate with either tone or pulse dial system</li> </ul>
<b><i>Heavy Duty Handset Cord</i></b>
<ul style="list-style-type: none"> <li>• withstands excessive use (armored cord available)</li> </ul>
<b><i>Handset</i></b>
<ul style="list-style-type: none"> <li>• compatible with inductively coupled hearing-aid devices</li> </ul>

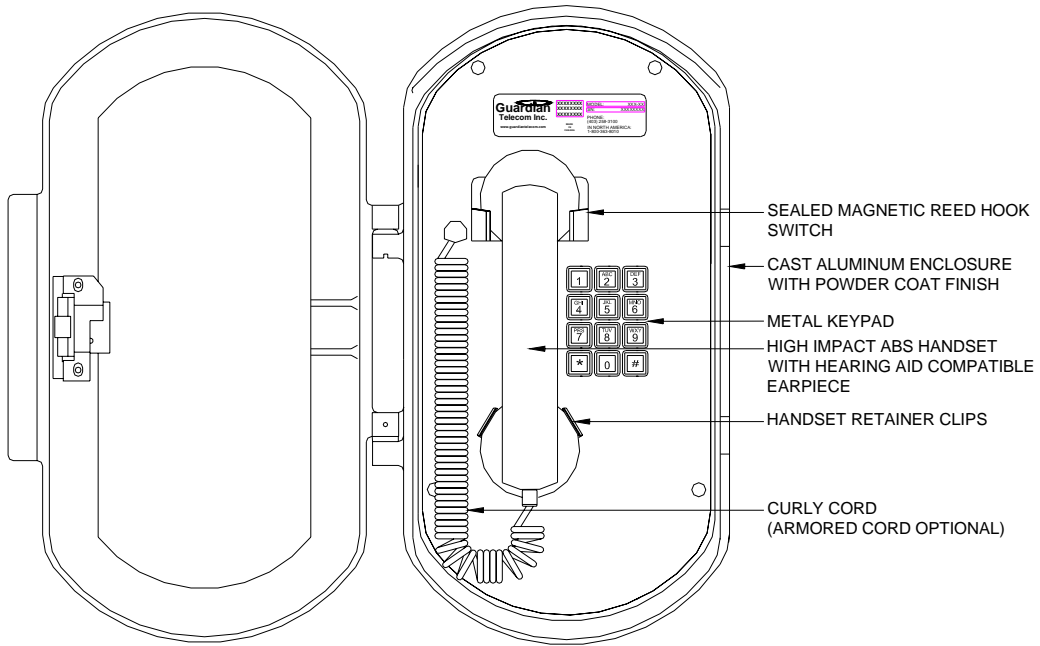


Figure 1 - Features

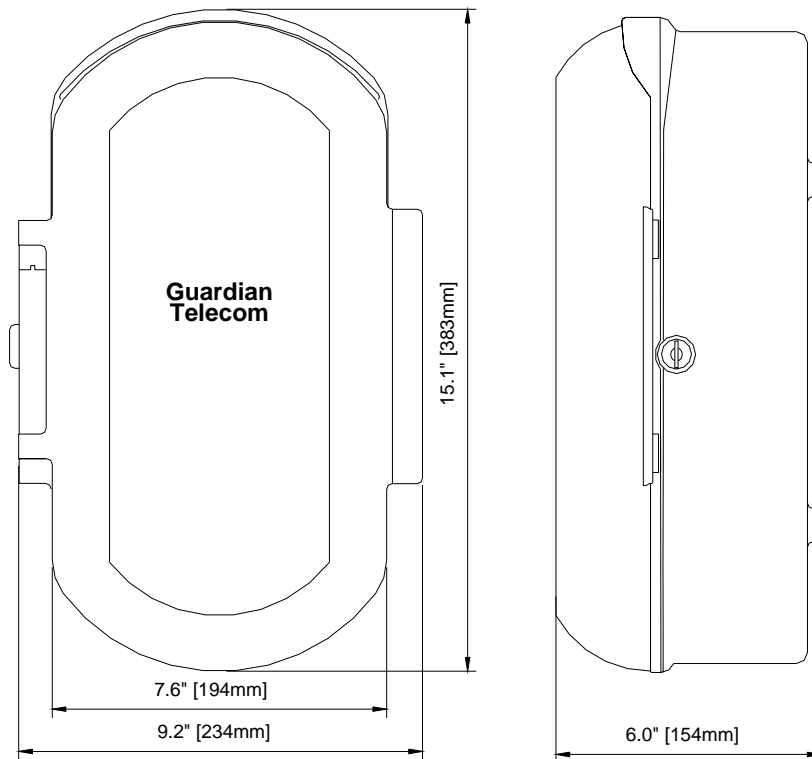


Figure 2 - Overall Dimensions

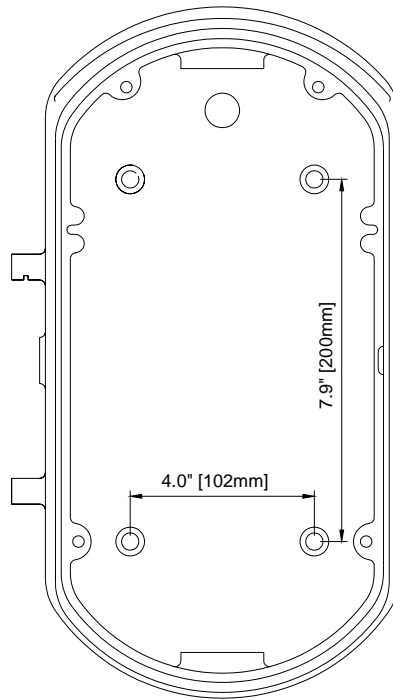


Figure 3 - Mounting

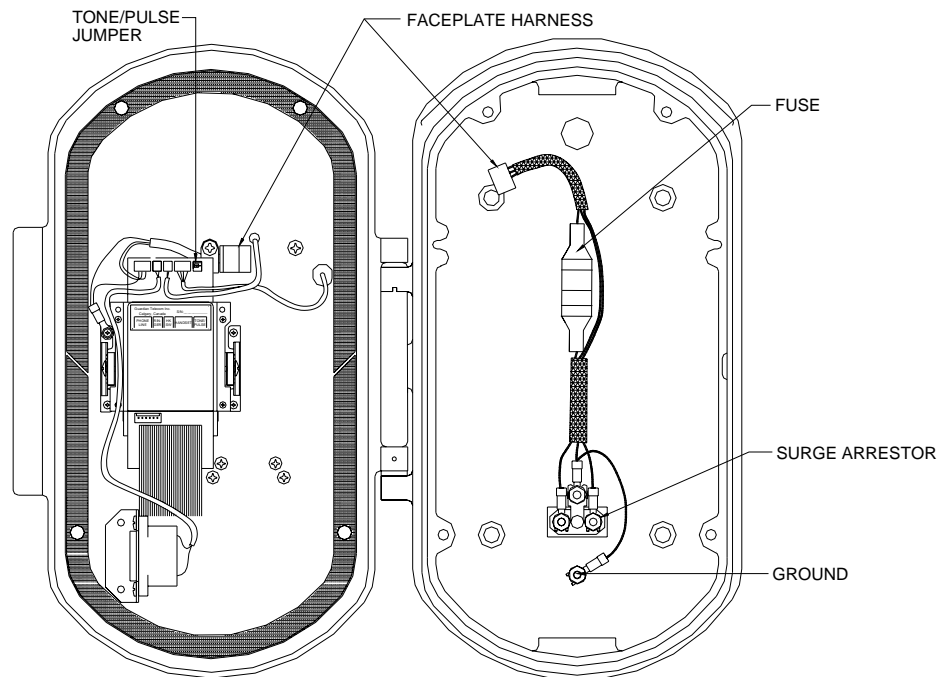


Figure 4 - Electrical Connections

### Installing the SP70A Telephone

- Follow all appropriate electrical codes and use only approved electrical fittings for the installation.
- Choose a wall location that is free of obstructions and permits space for conduit or wire.
- Ensure mounting can support 12 lbs. (5.5 kg) and any additional foreseeable load.
- Ensure that none of the electrical connection circuits are live.
- Use the template provided to locate and drill holes for mounting screws.
- Open the door, remove the screws on the faceplate and remove the faceplate.
- Disconnect the faceplate harness.
- To change the Tone/Pulse setting to pulse, if required:
  - 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.
- Secure the unit to the wall.
- Bring cable into the enclosure through the conduit entrance and attach individual wires from the exchange (Tip/Ring/Ground) and connect to the surge arrestor. If a conduit hub is used, ensure it is grounded to the ground stud.
- Reconnect the faceplate harness.
- Ensure all connections are secure.
- Replace the faceplate.
- Test the unit by calling to and from another unit on the exchange.

*See: Figure 3 - Mounting*

*See: Figure 3 - Mounting.*

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

**Tip:** The SP70A is factory preset for DTMF tone.

*See: Figure 4 - Electrical Connections.*

*See: Figure 4 - Electrical Connections.*

### 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.

**See:** *Replacement Parts*

- 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.

**See:** *Figure 4 - Electrical Connections*

### 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 4 - Electrical Connections*

<b>Engineering Specifications</b>	
<b><i>ELECTRICAL PERFORMANCE</i></b>	
AUDIBLE FREQUENCY RANGE	300 – 3400 Hz
DIALING METHOD	DTMF OR 40/60 PULSE AT 10 PPS
TRANSMIT OBJECTIVE LOUDNESS (TOLR)	-38 +/- 3 dB
RECEIVE OBJECTIVE LOUDNESS RATING (ROLR)	50 +/- 3 dB
SIDE TONE OBJECTIVE RATING (SOLR)	11 +/- 4 dB
RINGER OUTPUT	>65 dB
FCC RINGER EQUIVALENCE (REN)	0.8 A
SET IMPEDANCE	600 OHMS NOMINAL
MAXIMUM LOOP	15,000 FEET (4,600M) OF 22 AWG COPPER
<b><i>ELECTRICAL REQUIREMENTS</i></b>	
RINGER SENSITIVITY	40 – 100 V, 16 – 25 Hz
LINE VOLTAGE	24 – 56 VDC
LOOP CURRENT	20 – 120 mA
CONNECTION METHOD	SURGE ARRESTOR TERMINAL BLOCK
MICROPHONE	NOISE REDUCING ELECTRET
<b><i>ENVIRONMENTAL</i></b>	
ENCLOSURE	WEATHERPROOF AND CORROSION RESISTANT
DUST TIGHT	ENCLOSURE GASKET
TEMPERATURE	-40° TO +60° C (-40° TO +140° F)
HUMIDITY	0 – 95% RH NON CONDENSING
<b><i>MECHANICAL</i></b>	
HOOK SWITCH (CRADLE SWITCH) LIFE	>1,000,000 OPERATIONS
BODY CONSTRUCTION	CAST ALUMINUM POWDER COATED
FACEPLATE	STEEL, ZINC DICHROMATE PLATED AND POWDER COATED
DIMENSIONS	234 X 383 X 160 MM (9.2 X 15.1 X 6.3")
NET WEIGHT	12 LBS./5.5 Kg
HANDSET CORD	POLYPROPYLENE
STANDARD MOUNTING	VERTICAL WALL
HANDSET MATERIAL	HIGH IMPACT ABS
HARDWARE MATERIAL	STAINLESS STEEL



<b>Replacement Parts</b>	
<b>Part No.</b>	<b>Description</b>
P004381	Faceplate Assembly C/W Curly Cord and Handset
P005027	Faceplate Assembly C/W Armored Cord and Handset
P002786	Handset Cradle
P004371	Handset Retainer
P002657	Handset Assembly C/W 6' Curly Cord and Handset
P004259	Handset Assembly C/W 22" Armored Cord and Handset
P005785	Metal Keypad Assembly Complete With Telephone Circuit Board
P005383	Keypad - Metal
P005582	Telephone Circuit Board Assembly
P002782	Ringer - Floyd Bell BR-3-39
P005917	Reed Switch
P002992	Surge Arrestor – TII 126L1
P002991	Fuse - Glass 0.25 Amp 250V

### **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  
E-mail: sales@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.

<b>Guardian Product Return</b>
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.
<b><i>Step I - On-Site Correction</i></b>
<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> </ul>
<b><i>Step II - Return Materials Authorization (RMA)</i></b>
<ul style="list-style-type: none"> <li>• 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 <a href="http://www.guardiantelecom.com">www.guardiantelecom.com</a>, or by calling the service telephone number given in this manual.</li> <li>• 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.</li> <li>• 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.</li> <li>• (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.")</li> </ul>
<b><i>Step III - Factory Authorized Service</i></b>
<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> </ul>



**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***