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Hazardous Area Desk Telephone Model DP700

Installation and Operation

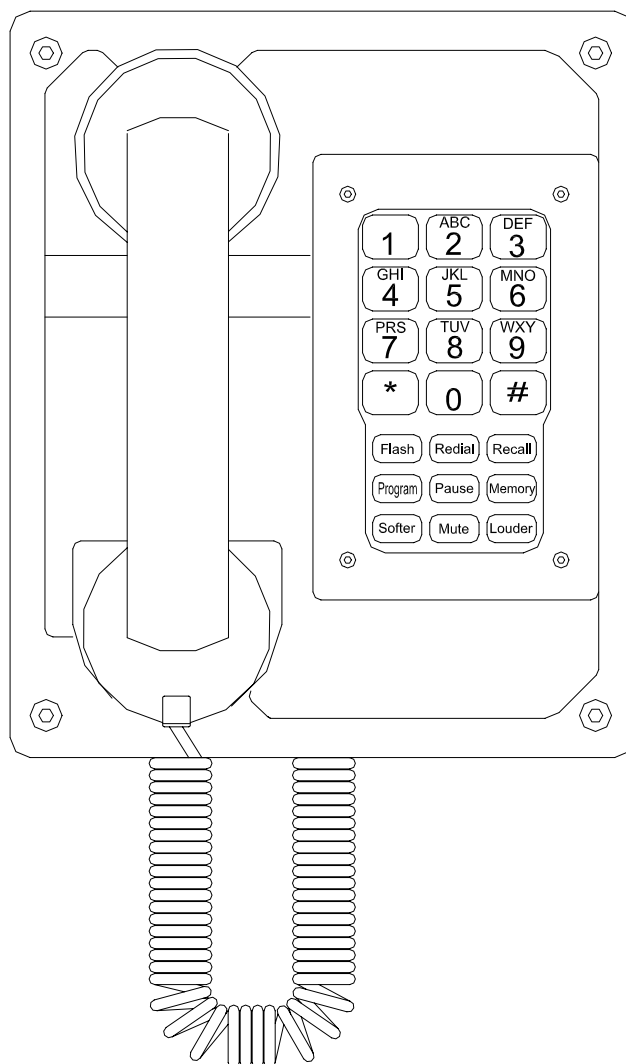


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Overview

The DP700 Telephone is designed to provide safe, reliable communication in Class I, Division 2 hazardous locations. The unit is housed in a rugged enclosure which makes it ideal for use in harsh industrial applications.

The DP700 can be wall mounted if desired.

Equipment List

- (1) DP700 Industrial Telephone
- (1) Installation & Operation Manual

Features

<i>Feature</i>	<i>Description</i>
Enclosure	<ul style="list-style-type: none">• 16 AWG Cold rolled steel Zinc Dichromate plated and powder coated
Tone (DTMF)/ Pulse Operation	<ul style="list-style-type: none">• Configured to operate on tone exchanges (DTMF). Pulse dialing may be enabled.
Hook Switch	<ul style="list-style-type: none">• Magnetic, no mechanical parts.
Hearing-aid Compatible	<ul style="list-style-type: none">• Compatible with inductively coupled hearing-aid devices
Superior audio clarity	<ul style="list-style-type: none">• Internal circuitry optimizes the side tone level for areas with high background noise levels
Noise Reducing Microphone	<ul style="list-style-type: none">• Noise reducing microphone aids in clarity of transmission in noisy areas
Key Pad	<ul style="list-style-type: none">• Durable standard 3x4 keypad with additional feature buttons.
Surge Arrestor	<ul style="list-style-type: none">• Protects circuitry from damage from power surges.

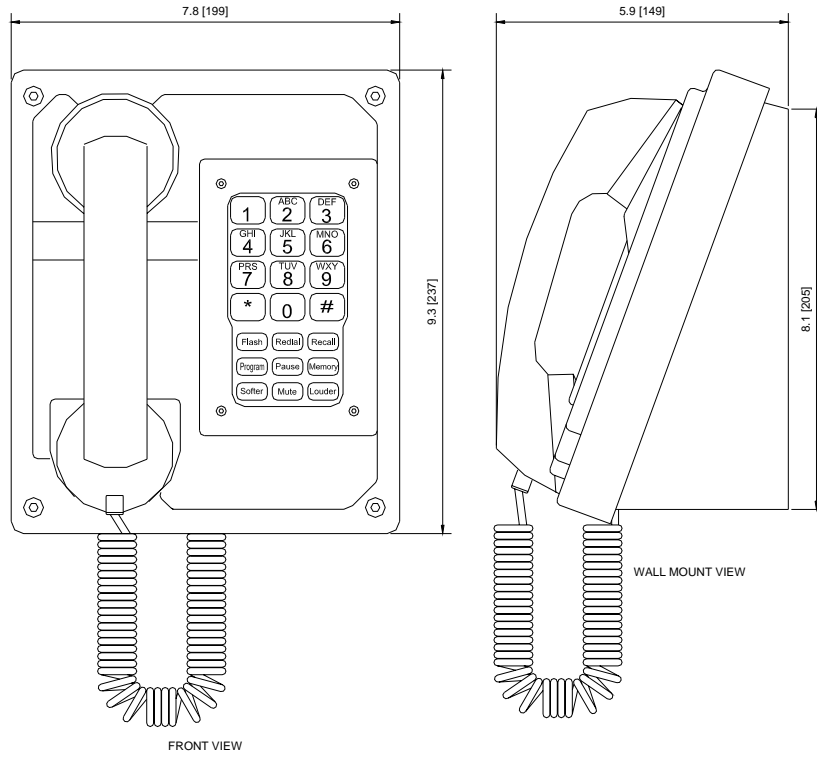


Figure 1 - Dimensions

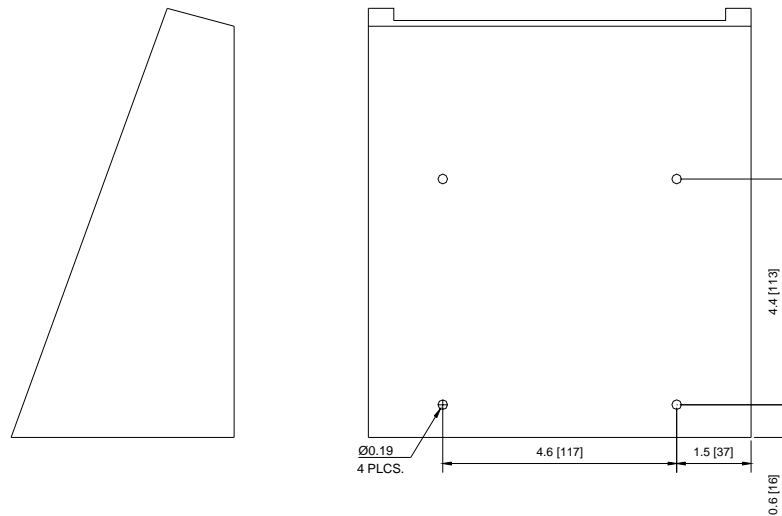


Figure 2 - Mounting

For Wall mounting, use the holes indicated.

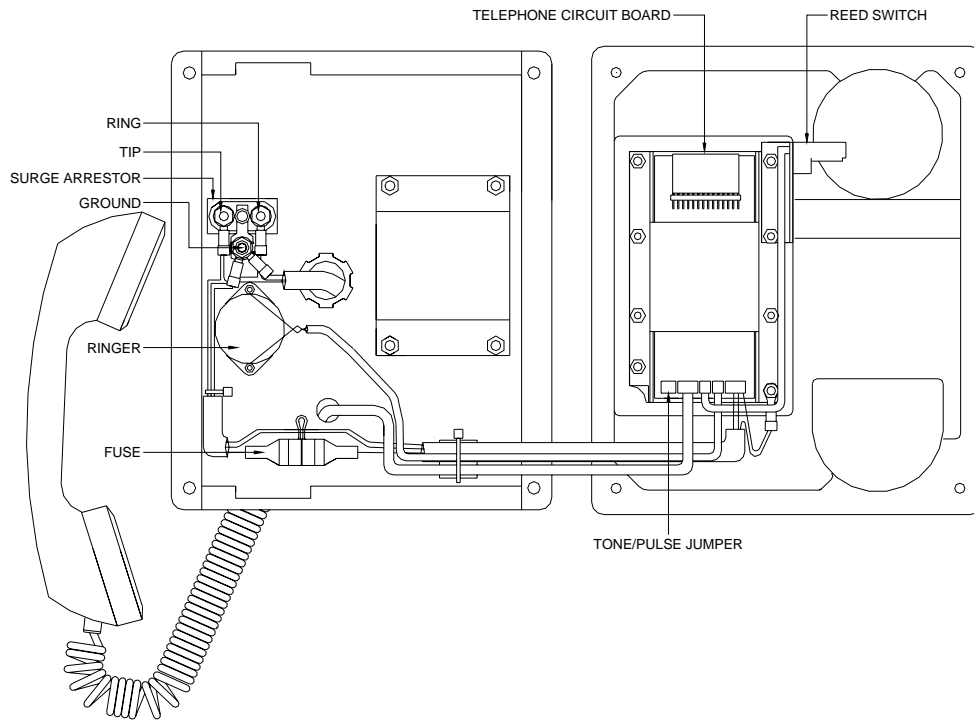


Figure 3 - Internal Wiring

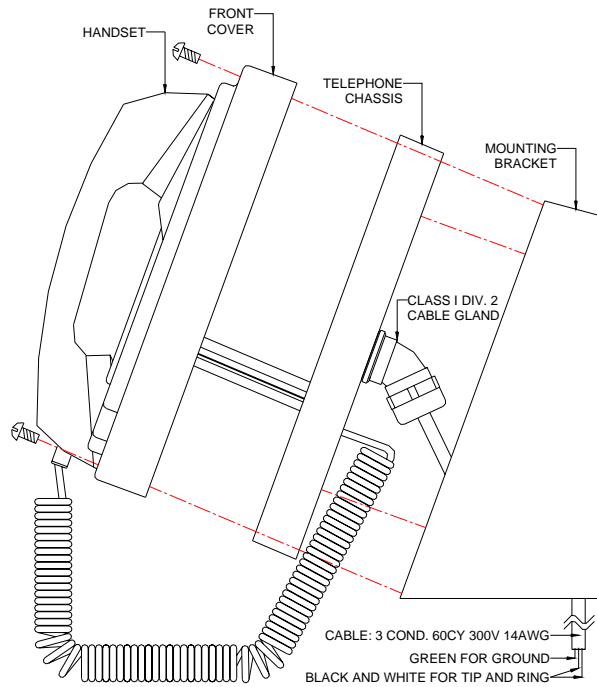


Figure 4 - Mechanical Assembly

Installing the DP700 Telephone

- Follow all appropriate electrical codes and use only approved electrical fittings for the installation.
- To change the Tone/Pulse setting to pulse, if required:
 - 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 DP700 can be either desk mounted or wall mounted.

- If the DP700 is to be desk mounted simply place it in the desired location.
- If the DP700 is to be wall mounted follow these instructions.
 - Remove the four top screws and carefully remove the cover.
 - 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.
- Test the unit by calling to and from another unit on the exchange.

See: Government Certification.

Tip: The DP700 is factory preset for DTMF tone.

See: Figure 2 - Mounting

See: Figure 3 - Internal Wiring

See: Figure 4 - Mechanical Assembly

Note: Tip and Ring are not polarity sensitive.

Description Of Features

Tone (DTMF) operation:

The telephone is configured to operate on tone (DTMF) exchanges (factory set). Pulse dialing may be enabled as explained on page 6.

Magnetic-Reed hook-switch operation:

The reed switch is a magnetic switch internal to the telephone, and will activate on-hook/off-hook when the handset is placed in or removed from the telephone cradle.

Wall mount:

The DP700 Series telephone can be easily mounted on wall structures.

Epoxy resin circuitry coating:

All of the internal circuit boards are encapsulated by an epoxy resin which is resistant to corrosive agents (i.e. H₂S, SO₂, NH₃) and environments of high humidity.

Hearing-aid compatible:

All DP700 Series telephones are compatible with inductively-coupled hearing-aid devices.

Superior audio clarity for noisy areas:

The circuit design optimizes the side tone level for better intelligibility in locations with high background noise.

Noise Reducing Microphone:

All sets are provided with a noise reducing microphone to aid clarity in noisy environments.

Ten Number Repertory Dialer:

Up to ten numbers may be stored in the telephone for fast and easy access.

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.

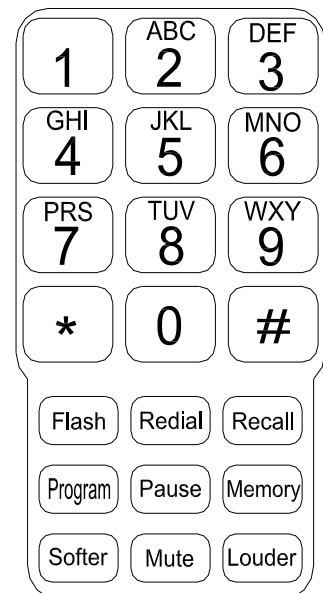
Operating Instructions

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)	-41 +/- 3 dB
RECEIVER VOLUME ADJUSTMENT	13.5 dB IN 2.7 dB STEPS, 3 STEPS UP AND 2 STEPS DOWN
RECEIVE OBJECTIVE LOUDNESS RATING (ROLR)	TYPICAL 50 +/- 3 dB
- RECEIVER VOLUME AT MAXIMUM	42 +/- 3 dB
- RECEIVER VOLUME AT MINIMUM	55.5 +/- 3 dB
SIDE TONE OBJECTIVE LOUDNESS RATING (SOLR)	TYPICAL 11 +/- 4 dB
- RECEIVER VOLUME AT MAXIMUM	7 +/- 4 dB
- RECEIVER VOLUME AT MINIMUM	14 +/- 4 dB
MEMORY DIAL	10 REGISTERS OF 20 DIGITS EACH
FLASH	600 MSEC TIMED DISCONNECT
MUTE	PRESS KEY TO MUTE TRANSMITTER
REDIAL	31 DIGITS MAXIMUM
RINGER OUTPUT	>80 dB
FCC RINGER EQUIVALENC	0.4A
SET IMPEDANCE	600 OHMS NOMINAL
MAXIMUM LOOP	15KFT (4.6 KM)

ELECTRICAL REQUIREMENTS

RINGER SENSITIVITY	40 - 100 V, 16 - 25 HZ
LINE VOLTAGE	25 - 56 VDC
LOOP CURRENT	20 - 120 mA

ENVIRONMENTAL

TEMPERATURE	-40° TO +60° C (-40° TO 140° F)
HUMIDITY	0 - 95% RH
DUSTPROOF	FULLY GASKETTED ENCLOSURE

MECHANICAL SPECIFICATIONS

HOOK SWITCH (CRADLE SWITCH) LIFE	>1 000 000 OPERATIONS
CHASSIS MATERIAL	16 GA STEEL, ZINC DICHROMATE PLATED AND POWDER COATED
FACEPLATE MATERIAL	KYDEX 100
DIMENSIONS	7.9 x 9.3 x 5.3 INCHES (199 x 237 x 135 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	CLASS I DIV 2 1/2" NPT CABLE GLAND
HARDWARE MATERIAL	STAINLESS STEEL

COMPLIANCES

INDUSTRY CANADA	1012 6721 A
FCC	HQHCAN-22517-TE-E
CSA	LR 158194 CLASS I, DIV. 2, GROUPS A,B,C,D CLASS I, ZONE 2, GROUP IIC TEMP CODE T5



Figure 5 - ID and Compliance

Government Certification

Attached to the telephone are labels for *Industry Canada* and the *United States Federal Communications Commission*. These identify equipment certifications indicating the 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.

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.

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.

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.

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

For the purposes of installing the product and replacing fuses ONLY, this device may be opened and reassembled by qualified personnel, following the instructions in the product manual. In the cases of explosion proof and hazardous area devices it is imperative that mating surfaces be clean and undamaged prior to reassembly and that fasteners be made up to the specified torque.

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.

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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.

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.

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