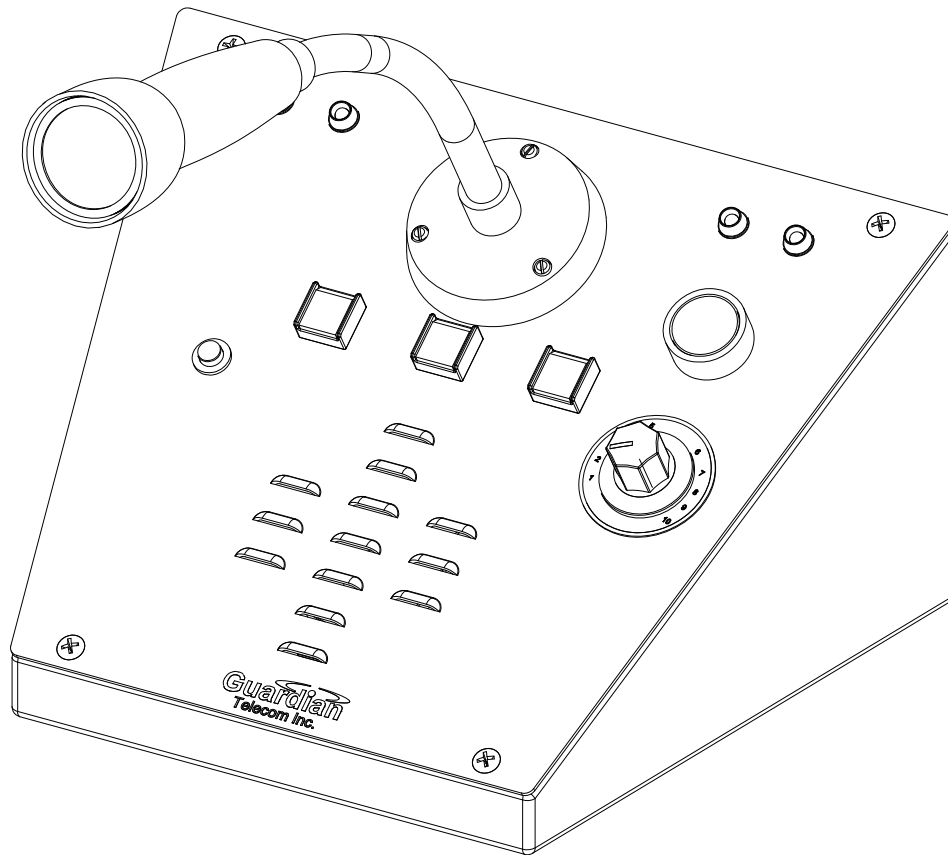


Paging System Control Unit

Model PSCU

Installation & Operation



P006773 Rev. C 151109 11/9/2015 12:45 PM

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Package Contents

- (1) P9005 PSCU Paging System Control Unit
- (1) Cable with DB25 connector
- (1) Installation & Operation Manual

Overview

PSCU Paging System Control Unit

The custom made Guardian Paging System Control Unit (PSCU) is the main control console that includes Gooseneck Microphone (785L) with push-to-talk switch, alarm activation and reset buttons (with indicator lights), indicator lights for Digital Recorder (if system equipped), Pilot Tone Generator, Backup Amplifier status and RF Failure indication. It also contains a built-in page system monitor speaker with respective volume control. The PSCU is remote powered and connected to the main system rack via a 25 conductor cable.

Features

- 16 gauge steel enclosure - zinc dichromate plated and powder coated
- 10 gauge steel faceplate - zinc dichromate plated and powder coated
- Heavy duty gooseneck microphone
- Ergonomic angled top deck
- Three alarm channel activation buttons plus one reset button
- PA system monitoring capability
- Monitor speaker volume control
- Remote device indication: RF Detector/Voice Recorder
- Quick disconnect wiring harness
- Large Push-to-Page (PTT) button
- Internal telephone (RJ11) jacks for optional telephone termination

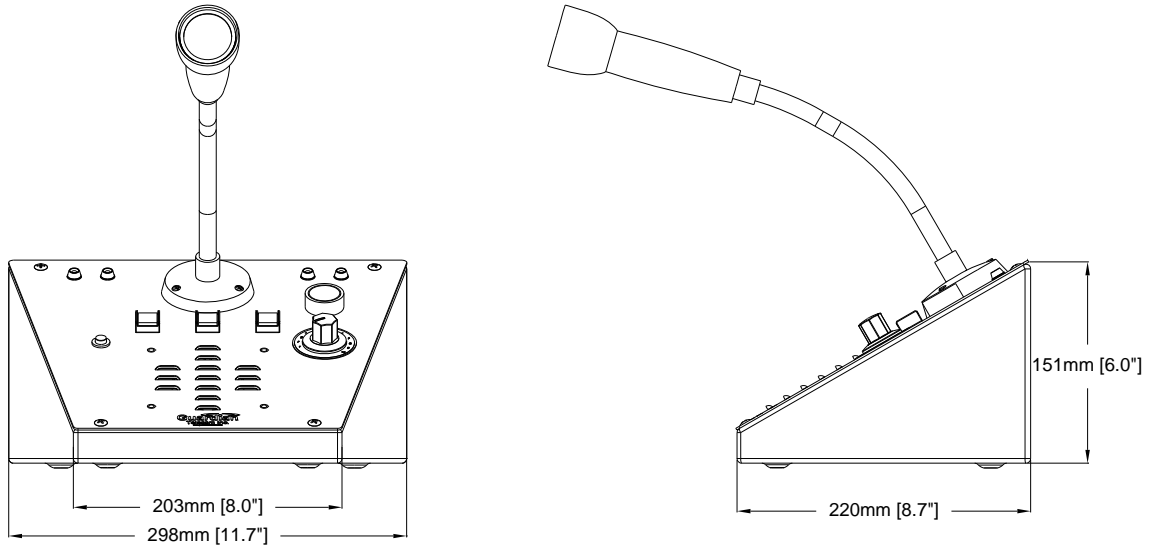


Figure 1 - Dimensions

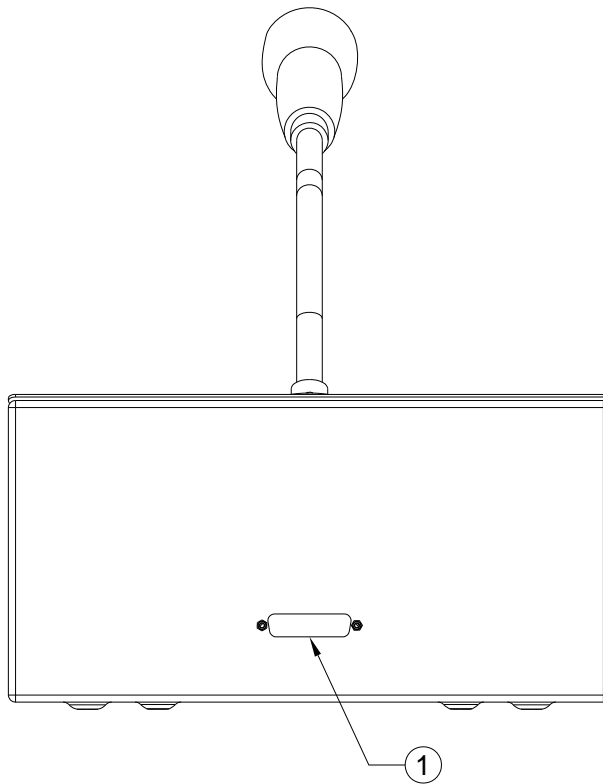


Figure 2 - Back View

① DB25 Connector

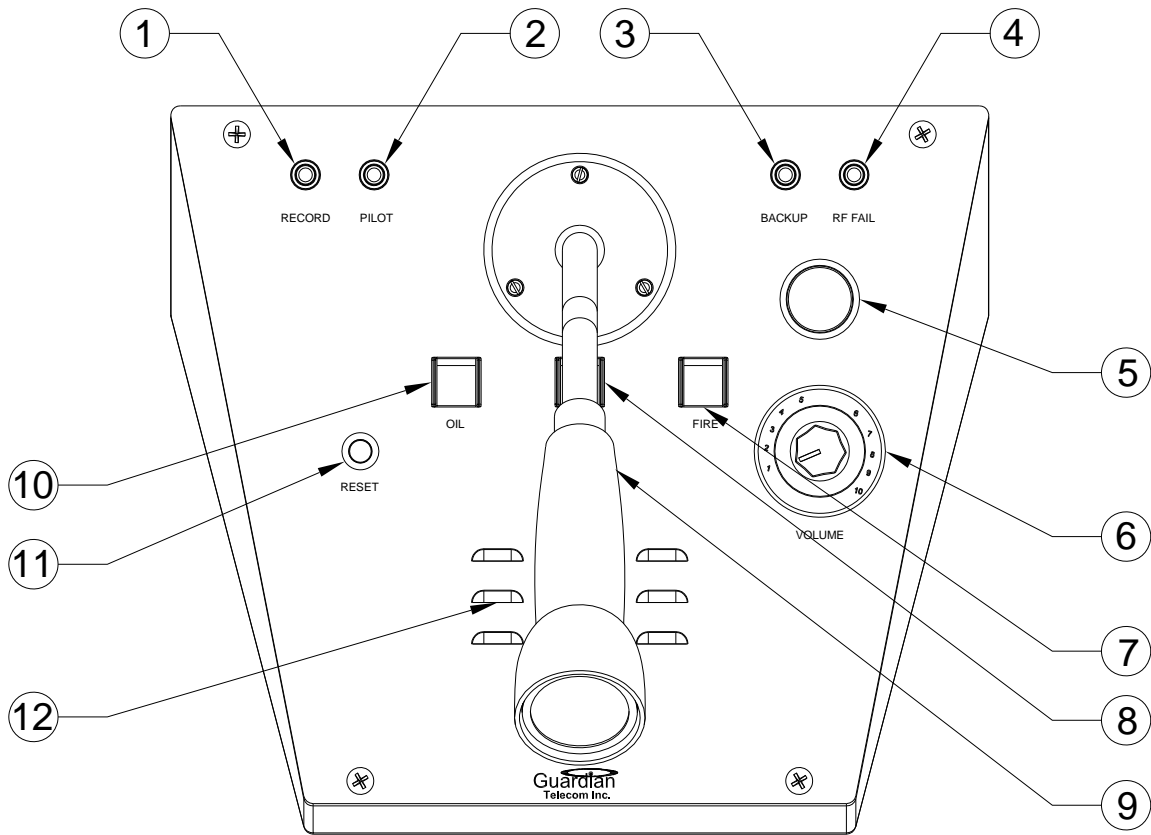


Figure 3 - Features

- ① Record Activation Indicator Light
(Console Power Indicator if not equipped with Recorder option)
- ② Pilot Tone Generator Status Indicator Light
- ③ Backup Power Amplifier Activated Indicator Light
- ④ RF Detector Failure Indicator Light
- ⑤ PTT (Push-to-Talk) Button for PA Override + Recorder Control (if equipped)
- ⑥ Console Monitor Speaker Volume Control
- ⑦ Alarm Trigger #3
- ⑧ Alarm Trigger #2
- ⑨ Gooseneck Microphone
- ⑩ Alarm Trigger #1
- ⑪ Alarm Reset Button
- ⑫ Console Monitor Speaker

Component	Function
J15	(Dynamic) Microphone Input
R31	Potentiometer for high frequency cutoff adjustment
R22	Potentiometer for low frequency cutoff adjustment
J21	Microphone output signal
J20	Receiver indicator output (LED can be mounted)
J3	Page/Talk output indicator (when the Page/Talk button is pressed these contacts J3-1; J3-2 are shorted)
J1	24V AC or DC input (pins 1 & 2)
F1	0.5 Amp fuse (fast blow)
S1	#3 alarm switch (contacts 1 - 5 of J5)
S2	#2 alarm switch (contacts 2 - 5 of J5)
S3	#1 alarm switch (contacts 3 - 5 of J5)
S4	Reset alarm switch (contacts 4 - 5 of J5)
J14	(Amplified) Page input signal
R28	Potentiometer for speaker volume adjust (on the PCB)
J19	Header for panel mount volume adjust speaker (R28 has to be removed)
J13	Speaker output
J4	Mute speaker (1 - 2 mute on, 2 - 3 mute off)
J2	Phone line 1 in (header) [optional usage]
J18	Phone line 1 out (RJ11) [optional usage]
J16	Phone line 2 in (header) [optional usage]
J17	Phone line 2 out (RJ11) [optional usage]

Table 1 - Circuit Board Connections

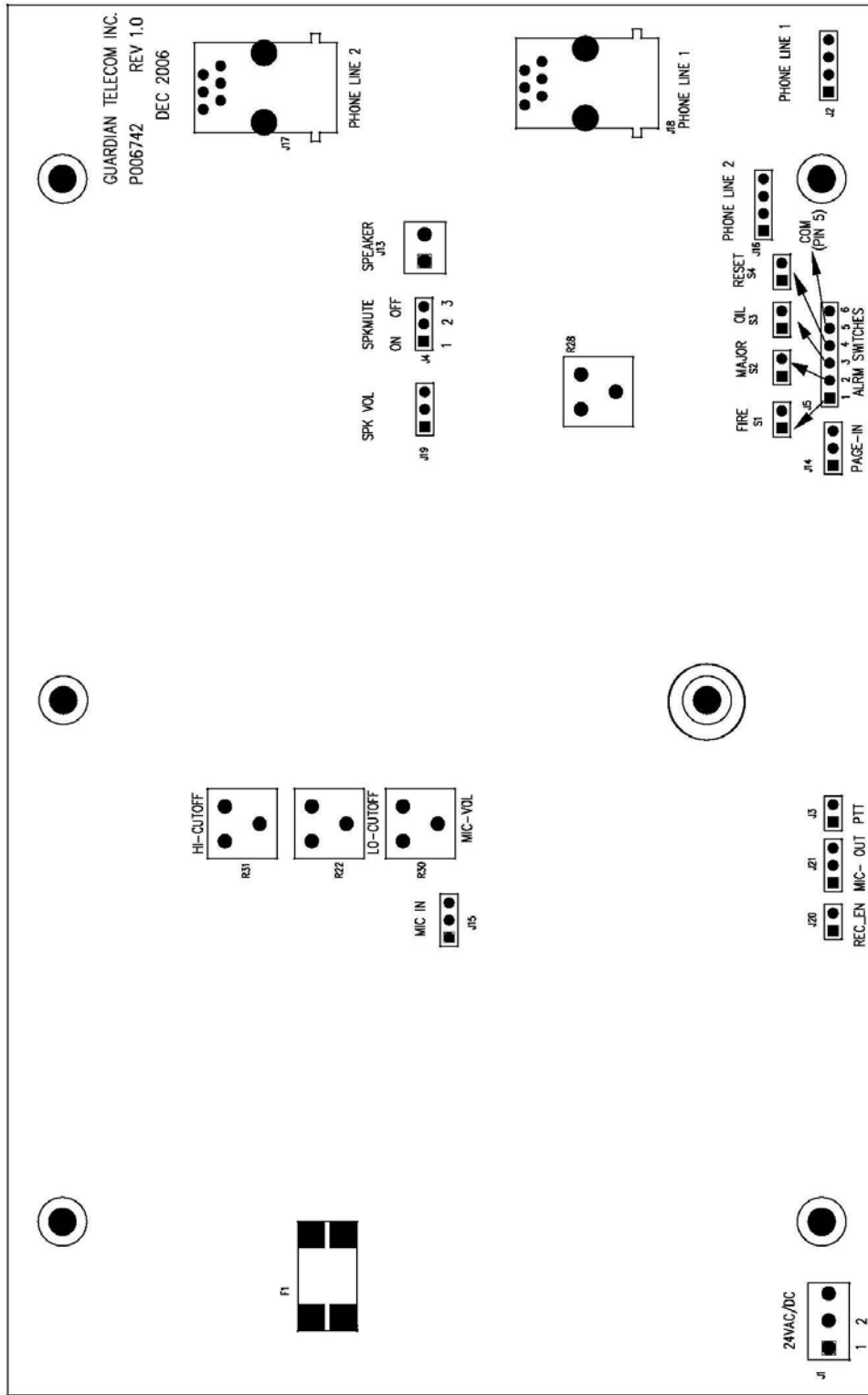


Figure 4 - Circuit Board Features

Installing the PSCU

- Inspect the product for shipping damage.
- Follow all appropriate electrical codes and use only approved electrical fittings for the installation.
- Place the PSCU in the desired location.
- Ensure that none of the electrical circuits are live.
- Wire up to the Guardian System Rack.
- Adjust the control console speaker volume potentiometer (R28) to the desired volume level.
- Adjust high and low frequency cut off filter potentiometers to desired levels. The high frequency filter (potentiometer R31) can reduce any possible noise on the PSCU monitor speaker. The low frequency filter (potentiometer R22) can help reduce any possible distortion to the PSCU monitor speaker.
- Test all input/outputs and audio according to system option configuration.

Tip: If the product is damaged, notify the carrier immediately.

See: Figure 5 - Wiring Table

See: Figure 4 - Circuit Board Features

Field Repairs & Adjustments

This device has no user serviceable internal components; the only maintenance possible is replacement of the fuse.

See: Figure 4 - Circuit Board Features

Fuse Replacement

- Remove the top deck of the control console to access the fuse, which is mounted on the PCB. Replace the blown fuse with new 0.5 amp 250V 2AG fast blow fuse. Re-assemble the top deck to the base and re-test.

WARNING!

- Replace only with a 0.5 amp 250V 2AG fast blow fuse. Failure to do so will void the warranty.
- If the fuse fails again on reconnecting power, check the system wiring.

LED displays:

- * Record LED: Digital Recorder ready display
- * Pilot LED: Pilot Tone Generator in use display
- * Backup LED: Backup Amplifier fail display
- * RF fail LED: RF transceiver fail warning display

The following LED displays are integral to the Alarm switches.

- * Oil LED (Alarm #1)
- * Major LED (Alarm #2)
- * Fire LED (Alarm #3)

Switches:**A. Alarm switches**

There are three optional Alarm activating switches and one Alarm Reset switch. The Oil (#1), Major (#2), and Fire (#3) Alarm switches are illuminated switches.

B. Push to Page switch

The Push to Page (PTP) switch is a heavy duty shrouded switch. Pressing the PTP switch will activate the Microphone and the MIC Pre-amplifier.

Microphone:

The goose neck Microphone is the Paging Microphone that is designed to override telephone accessed paging. Pressing the PTP switch will enable the Microphone and the Microphone Pre-amplifier. A control signal from the PTP switch will activate a Digital Recorder (if equipped).

Speaker and Volume Control:

The built-in speaker monitors the paging system output (from any activated zone). Its output is controlled by the Volume Control Potentiometer.

Cable and Connector:

The PSCU is linked to the PA system through a DB25 connector. Its pin designation is defined in the table below.

Control Console DB25 Connector			
DB25 Pin #	PCBA connectors Base/strip/strip	DB25 wire colors	Functions
1	J1-1	RED	24VDC (POS)
2	J1-2	BLK	24VDC (NEG)
3	J5-1	RED/BLK	FIRE SWITCH
4	J5-2	RED/BLK/ WH	MAJOR SWITCH
5	J5-3	RED/GRN	OIL SWITCH
6	J5-4	RED/WH	RESET SWITCH
7	J5-5	BLK/RED	GROUND
8	J6-1	ORG/RED	FIRE LED
9	J7-1	ORG	MAJOR LED
10	J8-1	ORG/GRN	OIL LED
11	J8-2	ORG/BLK	GROUND
12	J20-1	GRN/WH	REC-EN
13	J20-2	GRN/BLK	GROUND
14	J3-1	GRN	PTT CONTACT A
15	J3-2	GRN/BLK/WH	PTT CONTACT B
16	J19-1	BLU/WH	RF FAIL LED
17	J10-1	BLU	RECORD READY LED
18	J11-1	BLU/BLK	PILOT TONE LED
19	J28-1	WH/BLK	AUDIO AMP FAIL LED
20	J28-2	BLK/WH	GROUND
21	J14-1	BLU/RED	PAGE LINE TO CONSOLE A
22	J14-2	WH/RED/BLK	PAGE LINE TO CONSOLE B
23	J21-1	WH	MIC PRE-AMP O/P A
24	J21-2	WH/RED	MIC PRE-AMP O/P B
25	J21-3	BLK/WH/RED	GROUND

- 1) CONNECTOR ON THE BACK OF THE CONSOLE IS MALE.
- 2) CONNECTOR ON THE CABLE IS FEMALE. APPLY ON ONE END OF CABLE.

Figure 5 - Wiring Table

Engineering Specifications	
<i>POWER SUPPLY</i>	
VOLTAGE	24 VDC
FUSE	0.5 AMP; TYPE 2AG FAST BLOW
<i>70 V PAGE LINE INPUTS</i>	
FREQUENCY RANGE	250 HZ TO 8 KHZ
<i>MICROPHONE PRE-AMP OUTPUT</i>	
FREQUENCY RANGE	250 HZ TO 8 KHZ
<i>SPEAKER OUTPUT</i>	
FREQUENCY RANGE	250 HZ TO 8 KHZ
OUTPUT VOLUME	85 dB MAXIMUM
<i>MIC LOGIC OUTPUT</i>	
OPEN DRAIN OUTPUT	60 VDC @ 400 mA MAXIMUM

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 has no user serviceable internal components; the only maintenance possible is the replacement of the fuse – which is available inside on the PCB.

Service Number

1-800-363-8010

Guardian Telecom provides a customer service number which is toll-free within North America. If you need assistance when installing or operating this product, please call the toll-free 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 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.
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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.
<i>Step I - On-Site Correction</i>
<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.• 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.
<i>Step II - Return Materials Authorization (RMA)</i>
<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 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 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.")
<i>Step III - Factory Authorized Service</i>
<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.• 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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