

CAS-GPS PPU

Personnel Protection Unit

Operation Manual

P/N: PROD1006-x



'X' = Region Specific Radio Configuration

WARNING

- **Both active components contain rechargeable lithium- ion batteries that are not user replaceable.**
- **Do NOT incinerate, puncture, heat or damage your battery operated device.**
- **Charge only on approved docking stations sold with the product. Listed under 'Charging' within this document**
- **Any changes or modifications not expressly approved by GE could void the user's authority to operate this equipment and will void all product warranties.**

POTENTIALLY EXPLOSIVE ATMOSPHERES

Turn off your electronic device before entering an area with potentially explosive atmosphere. It is rare, but your electronic device could generate sparks. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

Areas with a potentially explosive atmosphere are often, but not always, clearly marked. They include fuelling areas, such as petrol station, below deck on boats, fuel or chemical transfer or storage facilities, and areas where the air contains chemicals or particles, such as grain, dust, or metal powders.

CLASS B DEVICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encourage to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna

Increase the separation between the equipment and receiver

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected

Consult the dealer or an experienced radio/TV technician for help

This device complies with Part 15 of the FCC Rules and Industry Canada's licence exempt RSS-247. Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

DÉCLARATION DE CONFORMITÉ À LA FCC/IC

Ce dispositif est conforme à la partie 15 des règles de la Federal Communications Commission (FCC) des États-Unis et d'Industrie Canada (IC) exempts de licence RSS normés). Son fonctionnement est assujéti aux deux conditions suivantes:

- (1) Ce dispositif ne doit pas provoquer de brouillage préjudiciable, et
- (2) il doit accepter tout brouillage reçu, y compris le brouillage pouvant entraîner un mauvais fonctionnement.

RESOLUÇÃO No 506,

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

LIFE SUPPORT POLICY

These products are not designed for use in life support appliances, devices, or systems where malfunction of these products can reasonably be expected to result in personal injury. GE Mining Australia customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify GE Mining Australia from any damages resulting from such improper use or sale.

ELECTROMAGNETIC INTERFERENCE/COMPATIBILITY

Nearly every electronic device is susceptible to electromagnetic interference (EMI) if inadequately shielded, designed, or otherwise configured for electromagnetic compatibility.

To avoid electromagnetic interference and/or compatibility conflicts, do not use this device in any facility where posted notices instruct you to do so. In aircraft, use of any radio frequency devices must be in accordance with applicable regulations. Hospitals or health care facilities may be using equipment that is sensitive to external RF energy.

With medical devices, maintain a minimum separation of 15 cm (6 inches) between pacemakers and wireless devices and some wireless radios may interfere with some hearing aids. If other personal medical devices are being used in the vicinity of wireless devices, ensure that the device has been adequately shielded from RF energy. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Overview

PROD1006-x - The **Personnel Protection Unit (PPU)** is comprised of three parts:

1. **PROD1061 - PPU Remote Alarm**

This unit is fitted to the operator's helmet visor during normal operation. The Remote Alarm is a visual indicator extension of the paired host Tag. The Remote Alarm is fitted to the PPU tag for pairing, charging and testing the device.

2. **PROD1060-x - The PPU Tag**

The Tag communicates with CAS-GPS enabled fleet for situational awareness. The Tag is worn on the user's belt. The Tag contains GPS functionality for Geo-location and should be worn outside of clothing for maximum performance.



3. **PROD1064 - Remote Alarm Helmet Adaptor**

This adaptor is used for fixing the remote alarm to a helmet visor.



Fitting the Remote Alarm Helmet Adaptor

1. Clean the top surface of the helmet visor as per the helmet manufacturer's Instructions.
2. Fit the Remote Alarm to the Helmet Adaptor.
3. Peel the self-adhesive backing from the rear of the helmet adaptor.
4. Apply the Remote Alarm and Adaptor to the helmet visor so that the ledge of the Remote Alarm will be visible to the helmet user. Press firmly.
5. The Remote Alarm is removed from the Helmet Adaptor for charging, pairing and testing by depressing the spring levers located on the side of the Remote Alarm.



Charging

Charge the unit before use.

The PPU is charged using either of the following accessories:

P/N: **PROD1007-X20** – 20 Way PPU Gang Docking Station

P/N: **PROD1007-X16** – 16 Way PPU Gang Docking Station

P/N: **PROD1007-X1** - PPU Desktop Docking Station (shown below)

The tag and remote alarm should be paired together as a single unit, then clipped into the docking station.

During the charge cycle, the PPU tag will indicate one of the following states:



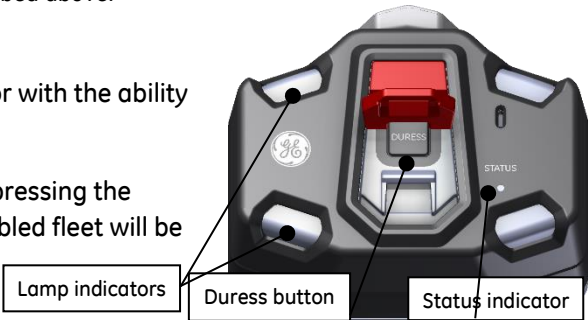
	Charging commenced, (2 red flashes)	Leave the tag set on charge until status lamp turns green.
	Charging continuing, (Constant red)	Leave the tag set on charge until status lamp turns green.
	Charging error, (Continued flashing red)	Faulty Unit. DO NOT USE
	Fully charged, (Constant green)	Remove unit from charge receptacle
	Disconnected from charger & functioning normally. (Slow blue flash)	Attach tags to belt & helmet. Commence operations.
	Transit mode, (as packed) *, flat battery or faulty unit. (No illumination)	Check charge. DO NOT USE in this state

*Note that the first time the tag set is put on charge, the unit will come out of transit mode and display in charge mode as described above.

Duress call, (Emergency)

The PPU tag provides the operator with the ability to call for urgent assistance.

By lifting the soft red flap and depressing the DURESS button, the CAS-GPS enabled fleet will be advised of your urgent need for help.



Alerting

The PPU Tag and the Remote Alarm unit will both advise the operator of a number of conditions with visual, audible and vibratory indications in the following ways:

Event	Indication	Detail
CAS-GPS alert	 	One pulse, repeated
CAS-GPS Electromagnetic Zone 2 alert	 	Three pulses, repeated
CAS-GPS Electromagnetic Zone 1 alert	 	Continuous
Entry into safe zone		Three pulses (short gap)
Vehicle pairing clear	  (PPU ONLY)	Two pulses, repeated
PPU set not paired		One pulse, repeated
Low Battery		Two pulses, repeated
Self-test fail		One pulse, repeated
Self-test pass	  	Three pulses (long gap)
Man Down alarm	  	Two pulses, repeated
Communications Jammed	 	Five pulses, repeated

Instructions

1. Test the PPU before use with PPU Test Station (PROD1006/PROD1082).
2. Geofences, Alarm Logic and Information exchange between the PPU and the CAS-Web occur whilst charging within the PPU Gang Docking Station.
3. To unclip the Remote Alarm from your helmet, depress the remote alarm spring levers located on either side of the alarm.
4. Re-fit Remote Alarm to the PPU Tag & place tag set on charge as per the charging instructions above, (confirm charge cycle commences).
5. Do not use damaged or malfunctioning PPU equipment.

Disposal

The PPU Tag and Remote Alarm units both contain Li-Ion batteries and must be disposed of in accordance with local regulations and statutes.

GE Mining
Industrea Mining Technology
PO Box 5107
Chittaway Bay, New South Wales
Australia, 2261

Tel: +61 2 4336 1800
Fax: +61 2 4336 1888

www.gemining.com