CP2022®

Avalanche Transceiver Checkpoint

User Manual
Technical Data

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Contents

Abbreviations

LVS	Lawinenverschütteten - Suchgerät
CP	Checkpoint

Document Versions

00.00	Sept. 24, 2022	first draft
00.01	Sept. 28, 2022	rework
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01.01		
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01.03		

Read the general warnings before setting up the product:

- Read and follow all instructions and information from this user manual
- Only use this device for the intended purpose
- Only use batteries of the given technology
- Do not modify the device. Any modification will void all guarantees
- If the device is damaged, return it to the manufacturer for repair
- A full functional check can only be done by the manufacturer

Hints for recycling

These devices must not disposed with regular household thrash. It is your responsibility to dispose of these devices at an appropriate waste disposal site.

1. Introduction

This document describes the checkpoint CP2022 of Girsberger Elektronik AG.

2. Product Description

The checkpoint CP2022 is intended to inform a passing backcountry skier or freerider about the operation in transmit mode of his/her transceiver. It will also register and signal the number of persons passing by without a transceiver or with a transceiver that has not been switched on in transmit mode.

3. Setup

The CP2022 shall be set up on or in combination with an information panel that may be mounted on a pole, on a wall or on some other existing structure. The CP2022 is attached to the front side of the panel by means of four M4 size screws.

Hint:
To insure proper operation, make sure that the panel location is not in the vicinity of possible sources of interference such as electrical lines, technical equipment etc.

3.1 Information Panel

An information panel is required to provide the necessary information about the proper use of the CP2022, e. g. when passing by. It also provides some space for logos of operators or sponsors.

Required information:

Check the transmission of your transceiver at this checkpoint

Keep a distance of 5 meters (20 feet) between persons

This checkpoint checks the transmit mode of your transceiver at this place and at this moment only

Only a functional transceiver, a shovel and a probe may save your life and the life of your companion

3.2 Housing

The housing of the CP2022 is provided with an innovative screwless hinge: open by means of a screwdriver, close by hand. The hinge is on the left side, it connects the cover to the housing and allows for opening the cover without losing it.

Hint:
To avoid damage due to humidity, do not open the device in bad weather conditions.

3.2.1 Opening / Closing

The housing is opened by means of a size 2 screwdriver. Insert the screwdriver in the provided opening on the left side of the cover and pivot it to the right until the hinge opens.

The housing is closed by hand. Close the cover and press on the hinge. An audible click will confirm proper closing, and insures a tight housing.

If desired and for additional safety, the cover may be screwed to the housing by means of two screws before pressing the hinge (Philips screwdriver size 1).

3.2.2 Mounting

The housing provides for holes for mounting on an information panel or on a wall. Use four M4 size screws. The horizontal spacing of the mounting holes is 167 mm, the vertical spacing is 108 mm.

Hint:
Do not mount the CP2022 in the rear side of an aluminum or other metallic panel. If mounted on the rear side, the characteristics of the built-in receiver will be impaired.

4. Operation

4.1 Main Switch

The main switch (slider switch ON/OFF) is for turning the device on and off, i.e. for disconnecting it from the batteries. Left -> OFF, Right -> ON.

After being turned on, the device will be awake for a few seconds. Then it will enter the sleep mode and only wake up when the infrared sensor detects some movement in front of the device.

4.2 Power Supply, Batteries

The power is supplied from 6 type IEC LR14 alkaline batteries. Do not use any other battery technology. Use high quality batteries only. Always replace all batteries.
With one set of batteries, the CP2022 will operate autonomously for up to one full year.

Hints:
In order to avoid damage from leaking batteries, remove the batteries while the device is not in use.
The batteries are not part of the delivery package.

4.3 Battery Status

By pressing the "BATT TEST" button, the battery status indication is activated for five seconds. The LED next to the button will show
Green: OK
Orange: two months to go
Red: replace batteries

Hint:
Before the button is pressed, the device must be awake. Wake it up by activating the infrared sensor. The battery test will not work while the device is sleeping.

4.4 USB Connection

The USB socket is for connecting a PC or a notebook. This is for configuration and for firmware updates. As long as the connection persists, the CP2022 will be supplied via the USB cable.

4.5 Stop & Go LED Display

The red and green smileys indicate the detection of a passer-by. If the person is carrying a transmitting transceiver, the green smiley will blink with the rhythm of the transceiver's transmitter. If a person without a transmitting transceiver passes by, the red smiley will blink three times.

4.6 Transceiver Signal Receiver

The receiver uses three orthogonal antennas in order to make it independent of the orientation of the transceiver. The sensitivity is set to about 2 meters, so it will only capture transmitters in the immediate vicinity. The receiver is compatible with all transceivers that comply with the standard EN 300718.
If there are multiple persons withing the range of the receiver at the same time, these persons cannot be registered individually. Also see the recommendations for use in chapter 3.1 (information panel).

4.7 Infrared Motion Sensor

The infrared motion sensor is for detecting persons who are passing by the device. Infrared sensors are sensitive to changes in the thermal image within their range. Non-moving objects will not be detected. If there are multiple persons within range, they cannot be registered individually.

Hint:
Infrared sensors are best at detecting tangential movements (at a right angle to the axis of the sensor). They are sensitive to wind, dust and fast temperature changes, e.g. by passing clouds. In the case of strong background thermal radiation, e.g. direct sunshine or sunshine reflected by a snow surface, their performance may be degraded.
There should be no moving objects such as bushes, trees, grass or flags within the range of the sensor. It is not possible to define an exact range limit, since range is affected by various parameters such as temperature difference, size of the heat source or speed and direction of a movement.

5. Technical Data

5.1 Electrical Data

Receiver frequency:	457.000 kHz (compatible to EN 300718)
Range for transceivers:	about 2 meters
Range of infrared sensor:	about 5 meters
Power supply:	6 Alkaline batteries, Type LR14 / C
Battery lifetime:	about 1 year
USB socket:	Type B

5.2 Mechanical Data

Housing material:	Polycarbonate UL 94 V0
Protection class:	IP66 (splash water proof)
Dimensions:	191 x 125 x 60 mm
Dimensions front design:	151 x 112 mm
Sticker-Material front design:	Vinyl, strongly adhesive by laminate
Weight including batteries:	950 gr.
Temperature range:	- 20 ºC to + 50 ºC

6. Warranty

Limited two year warranty

Girsberger Elektronik AG is providing a warranty for two years from the date of purchase as per the purchase documentation.

Warranty conditions

The setup and operation of the CP2022 are done as outlined in this user manual.
In case of an event covered by the warranty, all parts that exhibit materials or production defects will be replace free of cost.
Damage due to improper handling or regular use is not covered.
The warranty is void if a device has been manipulated by the buyer or by a non-authorized third party, or if a device has been fitted with replacement parts that have not been recommended by the manufacturer.

7. Liability

Girsberger Elektronik AG is not liable for any direct or indirect damage or damage caused by an accident resulting from the use of the CP2022. Damage caused by improper use of the CP2022 is also excluded.

Liability is excluded for damage caused by

Use for purposes other than detecting passers-by and their transceiver's status
Disregarding recommendations given in this user manual
Unauthorized modifications to the CP2022
Continuing use of the CP2022 despite recognizable wear or malfunction
Unauthorized repair
Catastrophes, impact of foreign matter, supreme power

The information in this user manual describes the properties of this product without final confirmation.

8. Safety

The CP2022 is not a measuring instrument but just a means for increasing safety and for assisting single persons who are going out on their own.
The CP2022 does not perform a full functional test for an avalanche transceiver. The only item that is assured is that the transmitting section of a transceiver is actually most probably operating properly and that the transmitting mode is currently activated.

9. Storage

If the device is not in use for an extended period of time, e.g. during the summer months, we recommend that you remove the batteries. Damage caused by leaking batteries is not covered by the warranty.

10. Information

The technical data may change at any time without notice.

www.girsberger-elektronik.ch
www.avalanche-training-center.ch

11. Manufacturer's Address & Support

Girsberger Elektronik AG, Oberdorfstrasse 7, CH - 8416 Flaach, Switzerland

In case of technical problems, please contact our support:

info@girsberger-elektronik.ch