FENCE GATEWAY GW10

DEVICE FOR
REMOTE CENTRAL CONTROL AND MANAGEMENT OF ELECTRIC FENCE

fencee **power DUO RF PDX** Series

G 1
PDX 50

10.5 kV

0m:2s 12.8V ALARM 3 kV

⌃

⌄

ENTER

i ALARM

MENU

EXIT

fencee
ENERGIZERS FOR ELECTRIC FENCE

fencee
ENERGIZERS FOR ELECTRIC FENCE SYSTEM

NO SIM CARD NEEDED

UP TO
6 **ENERGIZERS**

Thank you for purchasing this product
fence⬤ FENCE **GATEWAY GW10** of the company VNT electronics s.r.o.

This device complies with the security regulations by the valid law same as for the appropriate EU (CE) regulation

The device complies with the EU directive **2014/53/EC**,
Meets all requirements of General licence of the Czech telecommunications office by the general authorization
n. VO-R/10/05.2014-3, as well it complies with the requirements of norms which are listed below and to the
relevant regulations for that kind of device:

ETSI EN 301 489-1 V1.9.2 I ETSI EN 301 489-3 V1.6.1 I ETSI EN 300 220-2 V.2.4.1

ETSI EN 60950-1 ed.2:2006 /A1:2010 /A11:2009 /A12:2011 /A2:2014/Opr.1:2012 EN 62479:2010

2014/35/EU I 2014/30/EU

R&TTE EN300-220 a EN 61000-6-3:2007 + A1:2011

ČSN EN 60335-2-76 ed. 2
(Electrical appliances for home and similar purposes - security - Part 2-76: special requirements for source
of the energy for electrical fence.)

⚠ **WE STRICTLY RECOMMEND STUDYING THESE INSTRUCTIONS BEFORE USING THIS DEVICE OR KEEPING THIS DEVICE FOR THE FUTURE PERIOD**

CONTENT

1. INTRODUCTION

· The device allows remote central control and managing of electric fence energizers. It means that up to 6 independent energizers can be controlled in the range of the antenna. The device collects information about the activity of all connected devices.

· User has got the access to all main information about the fence and can set an alarm to be informed about all limit overruns in front of every single fence

· **The energizer is possible by remote control. TURN ON / TURN OFF, adjust the power (50%/100%) and set alarm.**

2. THE LIST OF MAIN BENEFITS

· **Control and using up to 6 devices**
· Clear, intuitive, touch control
· **Wireless radio-frequency connection with energizers**
· No need the SIM
· **All needed information together in one device**
· Big, full graphic LCD screen
· **The main information screen about all energizers**
· **Detailed parameters display of particular energizer**
· **Adjustable alarm level for every connected device**
· Network charging + battery backup
· Possibility of connecting to the external alarm system (siren, light)

3. TECHNICAL PARAMETERS

· Range with basic antenna up to 10 km (included)
· Possibility to connect an external antenna
  (2 or 10 m extension cable) - increase range up to 30 km
· Power adapter 230 V / 50 Hz, 14 V DC
· Consumption: maximum consumption 300 mA
· Backup battery 9.6 V 800mAh - automatic charging
· Transmission frequency RF - 869.525 MHz / 22 dBm
· Relay make contact for external alarm system switching - max 60 VDC / 1 A
· Dimensions 165 x 116 x 35 mm
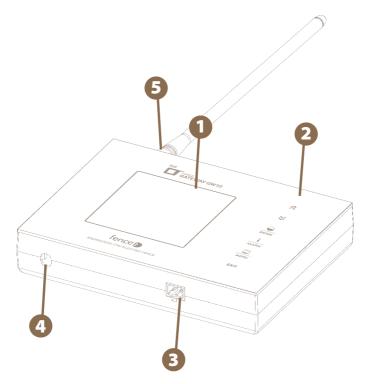· Weight 420 g

4. DESCRIPTION OF THE DEVICE

Fig. 1:
Basic elements of the device - front side

1 **Graphic display with backlight**

2 **Touch control panel**

3 **Connector for external signaling**

4 **Power adapter connector**

5 **SMA connector for antenna connection**

Inserting the backup battery

The backup battery 9,6 V, which works as a spare power supply in case of failure of net charging, is able to supply the equipment voltage for up to one day. This time depends on the device settings (backlight, volume).

· Open the cover on the back of the device.
· Connect the backup battery connector to the socket.
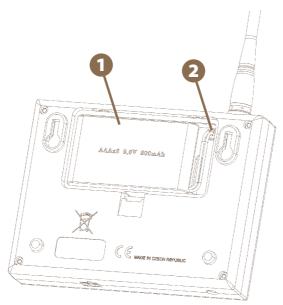· Insert the backup battery into the designated area and replace the cover.

Fig. 2:
Back side of the device

1 **Backup battery**

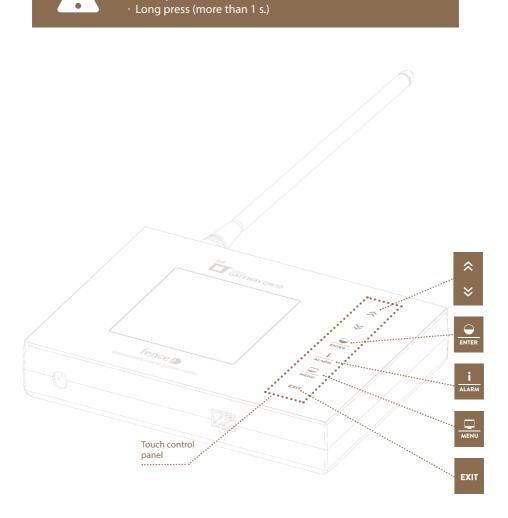**2** **Socket for connecting the backup battery connector.**

> **WARNING:**
> Operating the device without mains power and only on
> an extremely discharged battery may result in malfunction!

5. DESCRIPTION OF OPERATING TOUCH KEYS

The device can be operated using the touchpad shown.

> **THE DEVICE CAN DISTINGUISH TWO TYPES OF PRESS:**
> · Short press
> · Long press (more than 1 s.)

Touch control panel

Fig. 3:
Control description

Keyboard function:

Arrow symbols:

	Functions
	Device selection in detailed and overview screen. Changing values in setup mode, navigating through menus.

ENTER key:

Screen	Functions
Overview and detailed screen	**Short press -** turns ON / turns OFF **Long press -** switching power (50 / 100 %)
Menu and setting	**Short press -** confirm, enter to another screen

INFO key:

Screen	Functions
Overview and detail screen	**Short press -** asking the selected device for up-to-date information. In case of error signaling, confirmation and deleting alerts. **Long press -** setting the pulse voltage limit If it falls below the set limit, the alarm is triggered.

MENU key:

Screen	Functions
Overview and detail screen	**Short press -** switch between detail and overview screen **Long press -** enter the menu

EXIT key:

Screen	Functions
Overview and detailed screen	**Long press -** switch off gateway
Menu	**Short press -** return to previous screen
Switched off screen	**Long press -** switch on gateway

6. OVERVIEW SCREEN

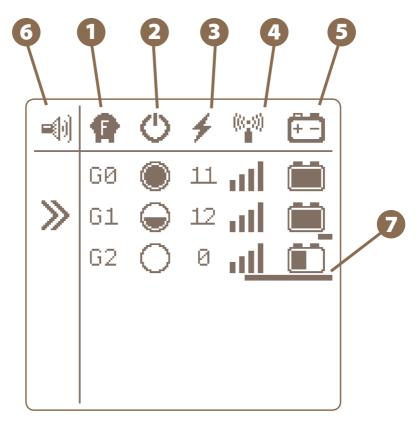The screen provides an immediate overview of all connected devices.

Fig. 4:
Overview screen

1 **Type of device**

GX marking
· **G** indicates a Generator device (energizer)
· **X** indicates optional name to distinguish between generators (1-6)
Generators with identical names cannot be operated on the device.

2 **Energizer state and its power**

• **power 0%**
  energizer is off, the device continues to communicate (in standby mode)

• **power 50%**
  the energizer is switched on and set to half power

• **power 100%**
  the energizer is turned on and set to full power

3 **Last measured voltage at the fence [kV]**

4 **Signal quality of the connected energizer**

5 **Displays the battery status when connected**

6 **Indication of activation of the audible alarm - see page 11**

7 **Indication of last device response**

Under each device is a bargraph, which signals the time since the last sent information about the status of the remote device. If the device does not miss any transmission (is within range of the gateway), the bargraph is hidden. However, if there is a delay of more than 2 minutes, the bargraph will increase under the device. If the entire device is underlined, an alarm is set automatically. If at any time during the transmission with information about the device, the bargraph is zeroed and starts to be timed again.

20 min.   **5 min.**   **2 min.**
blackout on G2   blackout on G1

The examples in Fig. 4

7. DETAILED SCREEN

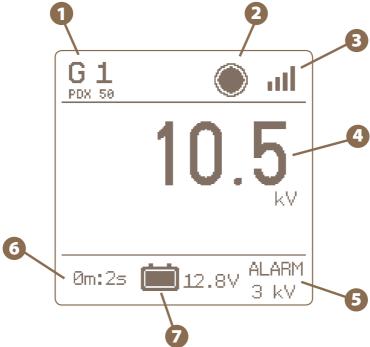Detailed screen is used to show all the possible information about concrete device.

Fig. 5:
Detailed screen

1 **The name of device** (possibility to change by user)
The type of the connected energizer is displayed below the name
(cannot be changed by the user)

2 **Energizer state and its power**
Same as the overview screen (page 8-9)

3 **Signal level between energizer and gateway**

4 **The set point of voltage on the fence [kV]**

5 **Current alarm setpoint [kV]**

6 **The time since the last information received from the energizer**

7 **Battery voltage status when connected [V]**

8. MENU - SETTING OF THE DEVICE

To enter the menu, press and hold the key [MENU] from an overview or detailed screen.

Fig. 6:
Device setup screen

The menu contains 4 basic items to navigate between ⌃ ⌄ and you can get in to each of them by short press of key [ENTER] . To exit the menu, press shortly the key [EXIT] .

» Pairing devices - Pairing

Manages all devices. (see para. 9)
• pairing of new devices
• renaming and deleting already paired devices

» Sound settings - Sounds

Sound setting Gateway

Buttons Clicks The volume of the buttons is adjustable in four levels (off, level 1, 2 and 3).
Alarm Sounds Enable audible alarms on the Gateway (ON / OFF).

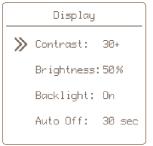By arrow keys ⌃ ⌄ we can move between options, by [ENTER] key we change the value of parametr.

Fig. 7:
Sound settings for key press and alert

» **Display settings -** `Display` ⬚

The settings of display gateway.
- contrast (-50 to +50 - negative values invert the display colors by night mode)
- brightness (backlight intensity 0-100% is only applied if backlight is enabled)
- enable / disable the backlight (on / off)
- automatic backlight off time since last key press
 (from 5 to 55 seconds, or "Never" for the backlight always on)

```
        Display
》 Contrast:   30+

  Brightness:50%

  Backlight: On

  Auto Off:  30 sec
```

Display settings Gateway:

By arrows ⌃ ⌄ you choose parameter, by press key
⊖ ENTER you enter and by arrows you change the value.

Then you confirm with press key ⊖ ENTER

Fig. 8:
Display settings screen

» **Device Information -** `About` 🔧

This displays system information (manufacturer, firmware version, voltage of backup battery and DC adapter)

9. DEVICE MANAGER - PAIRING DEVICE

Pairing is the process of linking communication between two devices.
The Gateway GW10 can pair up to six different devices.
The device can be renamed individually.
If all positions are occupied, it is not possible to start a new pairing!

» **Pairing new device**

To select pairing, press and hold 🖥 MENU .

1. By arrows ⌃ ⌄ you drive on pairing and by press the ⊖ ENTER key you will get to the device manager where you work with the device.

2. Switch the paired device to pairing mode (see device manual) and place the device very close to the gateway.

3. Move the cursor to an empty item `----- empty -----`

```
   Device Manager
》  ----- empty -----
   ----- empty -----
   ----- empty -----
   ----- empty -----
   ----- empty -----
   ----- empty -----
```

Fig. 9:
Device manager screen without device

4. Short press of ⊟ ENTER key we confirm the chosen item.

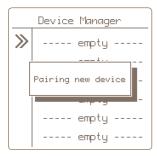5. The correct selection of the action is confirmed by the **Pairing new device** information screen.

```
┌──────────────────────┐
│    Device Manager     │
│ ≫ │ ----- empty -----  │
│   ┌─────────────────┐ │
│   │Pairing new device│ │
│   └─────────────────┘ │
│     ----- empty -----  │
│     ----- empty -----  │
└──────────────────────┘
```
Fig. 10:
The screen signalizing pairing of devices

6. If pairing is successful, a menu is displayed for editing the displayed device.

```
┌──────────────────────┐
│    Device Manager     │
│ ≫ │ ----- empty -----  │
│   ┌─────────────────┐ │
│   │G E N E R A T O R│ │
│   │Device name  :  0│ │
│   └─────────────────┘ │
│     ----- empty -----  │
│     ----- empty -----  │
└──────────────────────┘
```
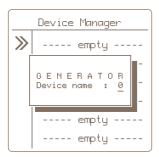Fig. 11:
Menu for editing of marking the device

7. Editing - press ⊟ ENTER we enter, ⌃ ⌄ we choose marking and by ⊟ ENTER key we confirm.

8. Press the button EXIT to return to the main settings .

```
┌──────────────────────┐
│    Device Manager     │
│ ≫ │ G1  ⬆  PDX 50     │
│     ----- empty -----  │
│     ----- empty -----  │
│     ----- empty -----  │
│     ----- empty -----  │
│     ----- empty -----  │
└──────────────────────┘
```
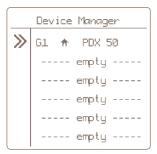Fig.12:
Screen with paired device

» Editing device labels

Paired devices can be assigned a distinguishing sign.
Each device can only be assigned a name that is not yet in use.

1. Move the cursor to the desired item using the buttons [⌃] [⌄] .

2. By short press [ENTER] key we confirm choice of the item.
3. After confirmation, an information window appears showing the current settings.
4. The setting of the displayed marking is displayed by the **Device name item**.

5. By short press [ENTER] key we confirm our choice.
6. Editing is now signaled by blinking of the entered value, which can be set

by arrows [⌃] [⌄] .
Note: the values that we cannot choose are skipped automatically.

7. The change can be confirmed by short press of [ENTER] key or by [EXIT] key.

» Remove device

To remove a device from the list of paired devices, follow the procedure below.

To remove the selection, press and hold the [MENU] key.

1. Use the arrow keys to move to pairing and press [ENTER] key to manage the device.
2. Select the desired item with the cursor.

3. Long press the [ENTER] key to enter the delete menu.
4. Correct selection of the action is confirmed by DELETE + information screen with the name of the selected one device.
5. Use the cursor to select the option **Yes** to select delete, **Cancel** to deleting.

Note: You can also cancel by pressing the [EXIT] key.

6. By short press of the [ENTER] key we confirm selected action .

10. ERROR REPORTING, SIGNALING, DELETING

Each connected device reports its alarms directly to the Gateway. These errors may be with the following signaling:

- **Low battery -** the battery symbol flashes when the voltage drops below 12V. If the voltage drops below 11.6 V, the siren will sound (if sound is enabled, see page 11).

- **The generator output voltage drops below the set limit -** the kV symbol flashes and the siren sounds (if sound is enabled, see page 11).

- **Signal Loss -** Dashes are displayed instead of all generator values and the signal level symbol flashes and the siren sounds (if sound is enabled, see page 11).

» Signaling

If any of these errors occur, the Gateway signals the fault as follows:

1. The information that indicates the error flashes on the Gateway display.
2. The output relay closes.
3. If audible alarms are enabled, the siren will sound (see page 11 for sound settings).

» Confirming and resetting errors

The alert will be activated until acknowledged by the user.
- Deactivating the audible alarm and opening the output relay can be done by pressing any key.

- To completely clear Gateway errors (error segments blinking), press the ALARM key.
- Subsequently, the Gateway will update the information and if a device fault is still detected, the alarm is reactivated.
- If the fault is remedied, the error symbol stops flashing, an audible alarm, and an output relay are deactivated.

11. RESET TO FACTORY SETTINGS

Resetting includes:

- deleting all paired devices
- formating empty positions
- Resetting the display contrast and backlight settings.
- Resetting the sound settings

If necessary, reset the Gateway to the factory settings by going to the About menu item and

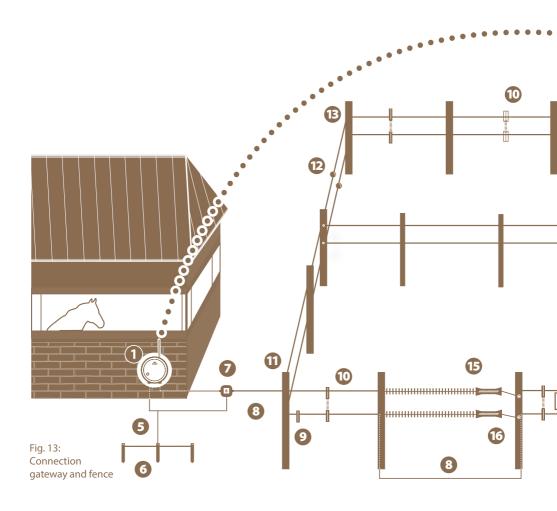holding down the ENTER key. Then you will see a warning that must be confirmed by pressing

the ENTER key.

12. GATEWAY INSTALLATION AND FENCE CONNECTION

Before installing the gateway, please read all the security instructions in this manual carefully. For wall mounting, use the enclosed screws to easily hang the Gateway.

Choose the best place for installing !
Observe these precautions when choosing a gateway installation location.

Fig. 13:
Connection
gateway and fence

1	Energizer fence	**5**	Grounding cable	**9**	Conductor
2	Gateway GW10	**6**	Anticorrosive grounding rod	**10**	Line connector
3	External RF antenna	**7**	Lightning diverter	**11**	Fixed post
4	External alarm with siren	**8**	High voltage connection cable	**12**	Tensioner

13	IInsulators
14	Warning sign
15	Gate
16	Insulator of gate

Table 1.
Description of individual parts of the fence

13. POSSIBLE SOURCES OF PROBLEMS

| Cause	Troubleshooting
Pairing failed to complete.	The surroundings are heavily disturbed, or the signal between the Gateway and the paired device is too weak. Pair the device with antennas closer to each other or in a less disturbed environment.
Nothing is visible on the display.	Check the power supply. In the event of a battery failure, check the battery condition.
Unreadable display.	The device has been exposed to the temperature extreme, change the contrast in the settings.
The device displays non-existent energizers.	The device operated on low voltage only from the battery. Replace the battery and reset to factory settings, see manual.
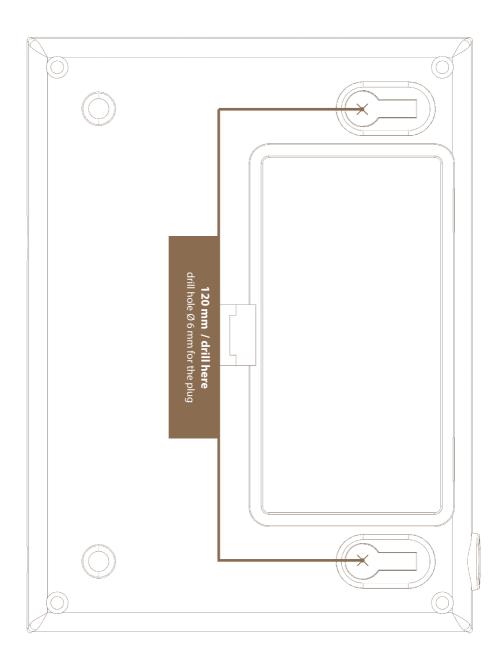
10. GUARANTEE

In addition to a guarantee requested by law, we provide you with a guarantee in accordance with below listed conditions:

• Guarantee period begins on the day of its purchase. Guarantee claims are acknowledged explicitly pursuant to submission of bill or cash voucher. Guarantee repair is free of charge, or we reserve the right to deliver a device of the same value.

• Guarantee is valid in case of correct use in accordance with the instructions for use. It expires in case of interferences by unauthorized persons and in case of using spare parts of foreign origin.

• All deficiencies resulting from material defects or manufacturing defects shall be removed in manufacturer´s discretion by repairing or free-of-charge replacement of the device.

• In case of delivering spare parts or repairing, original guarantee period is not prolonged.

• Guarantee period and address of guarantee provider can be found in attached instructions for use of given type of device.

• Accumulators or batteries of any type, damages due to overvoltage (caused by lightning among others) and damages due to spill-over of accumulator acid are not included in the guarantee.

This device is provided with guarantee period of 3 years according to our conditions for guarantee! Safety instructions, putting into operation, care of batteries and accumulator, conditions for guarantee and possible fault sources can be found in attached instructions for use!

15. HOLE DRILLING TEMPLATE

120 mm / drill here
drill hole Ø 6 mm for the plug

fence**e**

ENERGIZERS
FOR ELECTRIC FENCE SYSTEM

Stamp and signature of seller:

VNT electronics s.r.o.
Dvorská 605, 563 01 Lanškroun
Czech Republic
info@fencee.cz

ECO TISK

f fencee.cz 🅞 fenceeczech

www.fencee.eu
📞 **+420 730 893 828**
Servis: +420 730 893 827