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INSTALLATION HANDBOOK

Gemini Domus

DOMUS 2100

CE

GEMINI
ALARM SYSTEMS

UK

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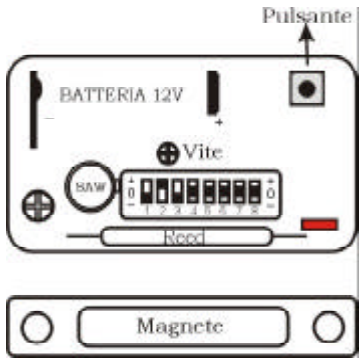


Working test

Fix correctly the 2100CM to the window/door frame. While opening the window/door verify that the Led lights stays on for two seconds. The lightning of the Led shows the transmission of the alarm signal and the correct working of the Led; otherwise, it will be necessary to check the distance between the reed and the magnet.
To verify the RF test signal without opening the window/door, push on the magnetic contact button.
The Led lightning signals the correct working.

Check and replacing of the battery.

The lighting power of the Led shows the battery charging level. When the battery is charged the Led lights with strong power, when it lights with a faint or intermittent light it means that the battery is discharged. To replace the battery proceed as follows:

- Remove the cover.
- Replace the battery.
- Fix the cover with its screw.

TECHNICAL DATA

Power supply1 Alkaline battery	12V
Absorption 2100CM ON	2µA
Charged battery autonomy	About 1 Year
Transmitter's range	20 meters
Transmission's frequency	433.92Mhz

Programming

To carry out the programming operation of the magnetic contact it is necessary to take away the covering and to select the internal switches as shown in the following table.

Dip switch No.	*Function*
	Transmission code Do not set the dip-switches 1,2,3,4.
	Transmission channel Select the transmission channel similar to the channel of the DOMUS2100 as shown in the following table. Dip-switch 5,7,8.
	Selection Day Zone 6 = -
	Selection timed Day Zone 6 = +
	Selection Night Zone 6 = 0

Channel N°	Switch 5	Switch 7	Switch 8
1	-	-	-
2	-	+	-
3	+	-	-
4	+	+	-
5	-	-	+
6	-	+	+
7	+	-	+
8	+	+	+
9	0	0	0
10	0	-	0
11	-	0	0
12	-	-	0
13	0	0	-
14	0	-	-

Channel N°	Switch 5	Switch 7	Switch 8
1	-	-	-
2	-	+	-
3	+	-	-
4	+	+	-
5	-	-	+
6	-	+	+
7	+	-	+
8	+	+	+
9	0	0	0
10	0	-	0
11	-	0	0
12	-	-	0
13	0	0	-
14	0	-	-

Description

DOMUS2100 is a wireless alarm system, which protects against burglaries, emergency alarm and distress situations.
The DOMUS2100 consists of; an alarm unit, 2 transmitters, one external infrared sensor and one external magnetic contact.
DOMUS2100 is a security system, which together with wireless peripheral devices can offer a complete professional security system. The technical data and the working of the peripheral devices are shown in the following pages.

Data

DOMUS2100 offers the following functions:
- Microprocessor control;
- SMD technology.
- High power piezoelectric siren (100dB at three meters).
- Mechanical key for ON/OFF.
- Anti-tamper and anti-tearing function.
- Internal self-powered battery 1,2 A/h
- Three theft zones (day zone, night zone and timed zone)
- Alarm memory on all zones through acoustic and visual signalling.
- Partial or total arming through the transmitter.
- Twenty-seven different channels for reception and transmission.
- Memorisation of a maximum of 10 codes (transmitters and remote keyboards)
- Anti-burglary or emergency alarm, which can be activated through the transmitter's button.
- Acoustic signalling system arming/disarming (programmable).
- Alarm cycles time (programmable).
- Number of programmable alarm cycles
- Optic and acoustic RF Test.

Available accessories

DOMUS 2100 can be expanded with the addition of the following accessories:

Gemini Code	Product type
2100CM	Magnetic contact
2100COM	Telephonic dialler
2100CT	Roller-shutter contact
2100IR	Infrared sensor
2100SE	External siren
2100TX	Transmitter
2100TA	Remote keyboard

Picture of the closed alarm

Picture n°1:DOMUS 2100 clsoed

All the installation instructions and the directions of this handbook are referred to this picture.

1. Led “DAY ZONE”.
2. Led “DISCHARGED BATTERY”.
3. Led “FEEDING”.
4. Led “NIGHT ZONE”.
5. Feeding wire.
6. Reset Key.

Diagrams test infrared sensor.
The working test are carried out positioning the jumper on the contacts located right on the lower side

Walk test	Set the jumper to Walk Test modality; the Led lights at each movement detected from the sensor and the RF transmission is inhibited.
Test	Set the jumper to Test modality in order to have the RF transmission test. This configuration allows the sensor to transmit continuously the alarm signal.
Normale funzionamento	Set the jumper in the normal working modality. The sensor detects the movement, sends the signal for two seconds and then inhibits for three minutes. After this period it returns to its original condition.

Low battery signalling.
When the battery voltage reduces below 6V, each time the sensor detects an alarm, the internal buzzer of the sensor signals the battery discharging with one-second beep.
This signalisation is obtained with alarm disarmed and after the detection of a mouvement.

TECHNICAL DATA	
Power supply	1 Alkaline battery 9V 500mA
Absorption sensor OFF	25µA
Absorption sensor ON	6mA
Charged battery autonomy	About 2 year
Detection alarm with	Fresnel lens and double pyroelectric sensor
Detection area	15 meters
Horizontal opening	110 degrees
Vertical opening	75 degrees on three protection levels
Protection beam	12
Transmitter’s range	80 meters
Transmission frequency	433.92Mhz

MAGNETIC CONTACT Art. 2100CM)

2100CM is a wireless magnetic contact that detects the opening of doors, windows and overhead garage doors.

Installation
Position the 2100CM as follows:

- On windows or doors with one shutter, the magnetic contact should be installed on the opposite side of the hinge.
- On windows or doors with two shutters, position the magnetic contact on the shutter with the pool on the opposite side of the hinge.

The dip switches have the following functions:

Dip switch No.	*Function*
	Transmission code. Do not set the dip-switches 1,2,3,4.
	Transmission channel. Select the transmission channel similar to the channel of the DOMUS2100 as shown in the following table. Dip-switch 5,7,8.
	Selection Day Zone 6 = -
	Selection timed Day Zone 6 = +
	Selection night Zone 6 = 0

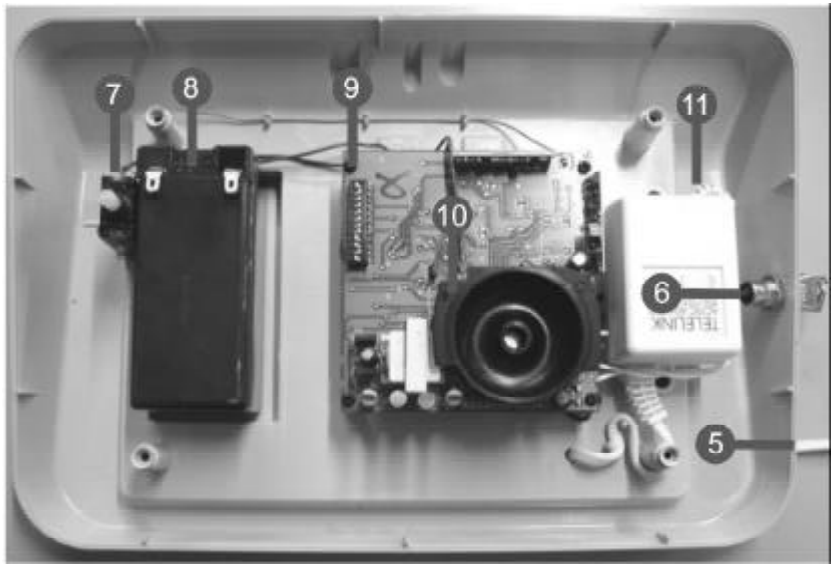
Selection of the transmitter's channel

Channel N°	Switch 5	Switch 7	Switch 8
1	-	-	-
2	-	+	-
3	+	-	-
4	+	+	-
5	-	-	+
6	-	+	+
7	+	-	+
8	+	+	+
9	0	0	0
10	0	-	0
11	-	0	0
12	-	-	0
13	0	0	-
14	0	-	-

Channel N°	Switch 5	Switch 7	Switch 8
15	-	0	-
16	0	+	0
17	+	0	0
18	+	+	0
19	0	0	+
20	0	+	+
21	+	0	+
22	-	+	0
23	+	+	0
24	+	+	-
25	-	-	+
26	0	0	-
27	0	0	+

Picture of the alarm opened

Picture n°2:DOMUS 2100 opened



All the installation instructions and the directions of this handbook are referred to this picture.

6. Reset switch.
7. Anti-tampering button.
8. Back-up battery.
9. Dip switches.
10. Piezoelectric diffuser.
11. 220 A.C. adapter ÷ 14 Vdc.

INSTALLATION OF THE SYSTEM

Preliminary phase

It is advisable to determine the number and the positioning of the peripherals to install on the basis of the characteristics of the rooms to protect (i.e.: number of windows and doors, height of the flat and balconies). To install the system refer to the following standard:

- If the system should protect a building with various floors, position the DOMUS2100 at one third of the total height of the building (i.e. for a building of three floors, install the system at the first floor).

- Install the unit two meters height from the floor and keep power cables 1,5 meters away from the unit.

- Avoid installing the unit next to interference sources (electric motors and electric devices), on metallic or reinforced concrete walls, on the wall adjacent an elevator shaft or next to metallic masses.

At the end of the preliminary phase it is possible to install the peripheral devices in the fixed places. It is advisable not to close them definitively till the end of the programming phase. To prepare the unit to the programming phase, it is necessary to take away the front panel.

Connection to the network

Now it is necessary to connect the unit to the domestic network.
The DOMUS2100 is supplied through a 230Vac to 14Vdc Þ adapter, found in the alarm system box, which supplies the power both to the unit and to the internal floating battery.
The powering of the system is signalled through the Green Led (no. 3 fig. Page 3) lightning.
The system is supplied with the cable but not with the plug.

Programming

The working of the DOMUS 2100 is subordinate to a programming procedure articulated in three phases:
1. Self-learning of the transmitters or the remote keyboards (optional).
2. Peripherals coding.
3. Configuration of the working modalities of the system.

ATTENTION: keep pressed during the whole programming phase the anti-tampering button marked with the No. 7 (picture on page 4).

Positioning
Position the sensor in the area to be protected, in order to avoid false alarming, do not install in;
- Areas of intense heat.
- Strong air current is directed on the sensor.
- Where there may be vibrations of the wall
- Unsteady objects.
- Animals.

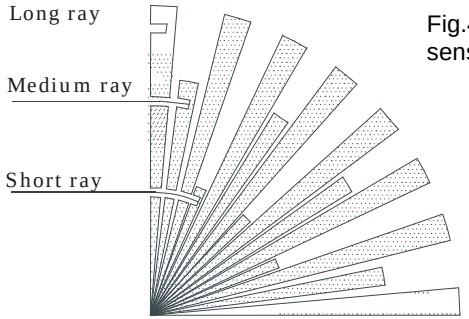
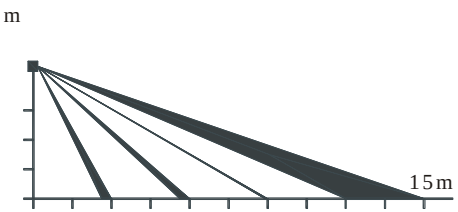


Fig.4: sending modality of the passive infrared sensors.



Installation
For a correct installation it is advisable to refer to the following directions and the fig. 5.
- Fix the sensor at about 2,1-meter height from the floor.
- Fix the moulding box (A) to the wall.
- Fit the detail (B) to the 4 holes on the sensor bottom until completely inserted.
- Insert the spherical side of the detail (B) in the appropriate seat on the moulding box. Now the sensor can rotate in all directions.

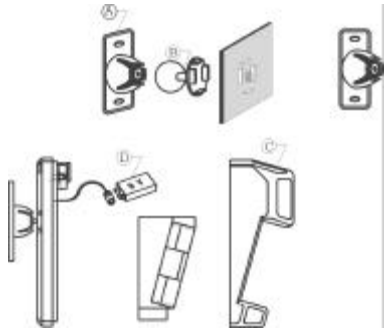


Fig. 5

Programming
To couple the sensor to the unit it is necessary to take away the covering and press on its upper and lower sides, connect the battery and position it in the appropriate seat and select the dip switches located left on the lower side.

PANIC FUNCTION

The panic function will activate by pressing on the red button of the transmitter.
This function is used in case of burglaries or emergency alarm and should be:

- SILENT PANIC: obtained positioning the dip-switch N°6 to OFF. Press on the transmitter's red button to activate only the telephonic dialler (when installed).
- AUDIBLE PANIC: obtained positioning the dip-switch N° 6 to ON. Pushing on the Transmitter's red button will activate the DOMUS2100 internal siren, the telephonic dialler and the external siren when installed.

Dip switches Functions

Dip-switch No.	***Function***
1-2-3-4-5	***Reception/transmission channel selection (27 available channels)***
6 ON	***Audible panic***
6 OFF	***Silent panic***
7	***Do not use***
8 ON	***Acoustic arming/disarming ON***
8 OFF	***Acoustic arming/disarming OFF***
9 ON	***Cycles counter alarm ON (max. 4 cycles)***
9 OFF	***Cycles counter alarm OFF (only 1 alarm cycle)***
10-11 OFF	***RF sensors test***
10 OFF-11 ON	***Alarm cycle period 45 seconds***
10 ON-11 OFF	***Alarm cycle period 2 minutes***
10 ON-11 ON	***Alarm cycle period 4 minutes***
12 ON	***Transmitter coding ON***
12 OFF	***Transmitter coding OFF (normal use)***

Mounting operations

At the end of the programming phase it is necessary to turn the key to OFF, as the unit is supplied with anti-tearing button. The system DOMUS 2100 is supplied with the small parts to mount the unit to the wall. Drill the wall with the appropriate template found in the kit. Insert the dowels and fix the two screws to the wall using the spacer supplied in the kit.
Put the screws in the holes found on the rear of the unit DOMUS2100, fix them in the drilled wall and press downwards.

INFRARED RECEIVER (art.2100IR).

The sensor 2100IR is a detector with passive infrareds and with Fresnel lens with 15 meters volumetric covering capacity and horizontal opening of 110 degrees. When positioned in a part it protects a 15x15 meters room.

The whole programming is based on the setting of the 12 dip switches positioned on the printed circuit. Before beginning the programming operations, it is necessary to position all switches to "ON" with the exception of the dip switch No. 11, which should be left to "OFF".

Self-learning of the transmitters:

The system is supplied with a mechanic key switch marked with the no. 6 (picture on page 3), which can be used during the programming phase and as emergency device. Turning the key to off (anti-clockwise), all functions are de-activated but the internal back-up battery continues to re-charge.
When disconnecting the adapter from the domestic power, always turn the key to OFF in order to avoid discharging of the back-up battery.

With the DOMUS2100, it is possible to codify a maximum number of 10 transmitters. Use the dip-switch No. 12 (usually positioned to OFF).

The procedure for coding a new transmitter is as follows:

1. Turn the key anti-clockwise (OFF).
2. Set the dip-switch N°12 to ON and the dip-switches 10 and 11 to OFF.
3. Turn the key clockwise (ON).
4. Wait until the beep (after few seconds).
5. Push one of the three buttons of the transmitter to codify for three seconds. One flashing of the Red Led DAY ZONE (marked no. 1 picture on page 3) and one beep will confirm the learning of the code from the DOMUS2100.
6. To codify other transmitters, repeat the operation from point 5.
7. At the end of the coding operation of the tenth transmitters the Red Led DAY ZONE flashes and one intermittent beep will signal that it is not possible to memorise further devices.
8. At the end of the coding operation it is necessary to position the dip-switch N°12 to OFF (normal use). One long beep and the three-DAY ZONE Led flashes, signal that the system has disengaged the coding function.

Important: remember to codify also the transmitters supplied with the system.

Reception and transmission channel selection.

The unit and the peripherals communicate through a codified signal tuned on the same channel. Dip-switches 1,2,3,4,5, are for reception and transmission channel with the peripherals.
The default channel is the number 1; therefore, it is advisable to replace it with another one.

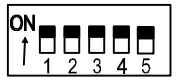


Fig. 3: dip switches used for the transmission channel selection.

In the following table the 27 reception channels of the unit.

Channel N°	*Dip switch 1*	*Dip switch 2*	*Dip switch 3*	*Dip switch 4*	*Dip switch 5*
CHANNEL 1	ON	ON	ON	ON	ON
CHANNEL 2	OFF	ON	ON	ON	ON
CHANNEL 3	ON	OFF	ON	ON	ON
CHANNEL 4	OFF	OFF	ON	ON	ON
CHANNEL 5	ON	ON	OFF	ON	ON
CHANNEL 6	OFF	ON	OFF	ON	ON
CHANNEL 7	ON	OFF	OFF	ON	ON
CHANNEL 8	OFF	OFF	OFF	ON	ON
CHANNEL 9	ON	ON	ON	OFF	ON
CHANNEL 10	OFF	ON	ON	OFF	ON
CHANNEL 11	ON	OFF	ON	OFF	ON
CHANNEL 12	OFF	OFF	ON	OFF	ON
CHANNEL 13	ON	ON	OFF	OFF	ON
CHANNEL 14	OFF	ON	OFF	OFF	ON
CHANNEL 15	ON	OFF	OFF	OFF	ON
CHANNEL 16	OFF	OFF	OFF	OFF	ON
CHANNEL 17	ON	ON	ON	ON	OFF
CHANNEL 18	OFF	ON	ON	ON	OFF
CHANNEL 19	ON	OFF	ON	ON	OFF
CHANNEL 20	OFF	OFF	ON	ON	OFF
CHANNEL 21	ON	ON	OFF	ON	OFF
CHANNEL 22	OFF	ON	OFF	ON	OFF
CHANNEL 23	ON	OFF	OFF	ON	OFF
CHANNEL 24	OFF	OFF	OFF	ON	OFF
CHANNEL 25	ON	ON	ON	OFF	OFF
CHANNEL 26	OFF	ON	ON	OFF	OFF
CHANNEL 27	ON	OFF	ON	OFF	OFF

When the reception channel has been selected on the unit, it is necessary to adjust the transmission channel on the peripherals. For the infrared sensor and the magnetic contact refer to the selection modality on page 11 and page 13 of this handbook.
The peripherals coding operation allows establishing to which zone the peripherals should belong.
The DOMUS2100 has three different thefts zones, day zone, night zone and timed zone.
The arming of the system in the day zone modality allows using all the sensors supplied.
The night zone (NIGHT ZONE) is used for the partial arming of the system (only perimetric protection with magnetic contacts and roller shutter contacts).
With the programming of the sensors in the timed day zone modality, a 20 seconds delay time is given for the siren activation or the telephonic dialler).
If an alarm occurs during this 20 sec. delay, it will be signalled by one beep each second.
The timed zone will activate automatically both with the day zone and the night zone.

TEST RF:
At the end of the coding procedure of the peripherals it is possible to carry out the sensor RF test. The RF test consists of simulating an alarm that wont cause the siren sound but only a double beep. To carry out the test it is necessary to position the dip switches 10 and 11 to "OFF". To carry out the test on the infrared sensor and on the magnetic contact refer to the instructions on page 12 and 14 of this handbook.
According to the position of the sensor the system will show the following signals:

ZONE		*SIGNALS*
Day zone immediate	é	*2 beep + 2 Red Led flashes*
Night zone immediate	é	*3 beep + 3 Red Led flashes*
Day zone timed	é	*4 beep + 4 Red Led flashes*

Configuration of the modalities of the system working

PROGRAMMING OF THE ALARM TIME: at the end of the RF test it is necessary to select the alarm time with the dip switches n°10 and 11 as follow:

Alarm time	*Dip switch 10*	*Dip switch 11*
45"	OFF	ON
2'	ON	OFF
4'	ON	ON

ATTENTION:
It is necessary to carry out the alarm time setting otherwise it will not be possible to arm the system. Besides, if the anti-tearing button is released the system is not active; otherwise, if the anti-tearing button is pressed two beeps signal that the system is ready to be used.

ACOUSTIC ARMING/DISARMING
This function is obtained by positioning the dip-switch N°8 to ON. A one-second audible tone is given by pressing on the Transmitter's grey button (Day function); a long audible tone is given by pressing the transmitter's black button and two audible tones while disarming the system.
Set the dip-switch N°8 to OFF to isolate this function.

ALARM CYCLES COUNTER
With this function it is possible to select the number of alarm cycles, which can be 1 or 4.
Set the dip-switch N°9 to OFF; the system will make only one alarm cycle and then inhibits.
Set the dip-switch N°9 to ON; the system will make 4 alarm cycles (if it is not disarmed).
The system can receive a new signalisation 45 seconds after the previous cycle.