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For further technical information on the operation of the Central Unit, its connections and on other **med** products, please contact our Technical Assistance Division at the following numbers:

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OPERATING INSTRUCTION MANUAL

med 2000



**FULLY PROGRAMMABLE REMOTE CONTROLLED
CENTRAL UNIT WITH INTERNAL DIGITAL
VOLUMETRIC RADAR, UNIVERSAL CENTRAL
LOCK AND PROGRAMMABLE WINDOW WINDING
COMMAND.**

CAN BE INSTALLED WITH ALL **med** VEHICLE
LINE IMMOBILIZERS

List of parts in the pack:

- 1 **med 2000** Central Unit
- 2 Coded **TRS 227** remote control
- 1 Sealed PIN - CARD with personal code
- 1 Pair of **MTR 2000** radar sensors
- 1 **LED/ANTENNA** harness
- 1 **CAV 1000** customised 18 wire harness
- 1 **CAV 1001** LED / ANTENNA wire
- 1 **SAC 2000** packet containing instructions and assembly accessories

MAIN SPECIFICATIONS

CONTINUED ▶

1. Alarm Central Unit with remote controls with customised code, ROLLING-CODE (the code varies on each transmission) and ANTI-SCANNER protection.
2. Equipped with PIN-CARD in a sealed packet with personal code for emergency disarming.

ATTENTION: MUST BE CONSIGNED TO THE USER IN ITS SEALED PACKET.

3. With visual alarm functions through direction indicators and acoustic with the new self-powered **SIR 027** siren, the universal **SIR 020** siren (optional) and the horn of the vehicle following intrusion via the door, bonnet and luggage compartment radar sensor or corresponding buttons (available with instantaneous input and delayed towards GND) and for attempts to start the engine.
4. Can be programmed by the USER for numerous function including to cut out the window winding function and radar sensor.
5. Ultrasound radio with Anti-blinding and Antimasking, automatic "ALARM THRESHOLD" connection based on vehicle specifications. Equipped with special bi-directional **MTR 2000** sensors installed on the risers.
6. Can be programmed for a specific interface with the vehicle's original plant it is installed on, among which: radar sensor sensitivity and functioning mode, timer controlled COMFORT activation and automatic immobilizer arming mode.
7. System can easily be armed with temporary inhibition of window winding and ultrasound radar sensor.
8. Acoustic indication through the digital control **SIR 027** siren (optional).
9. Pre-engineered to pilot all **med 12 V** vehicle line immobilizer devices.

TECHNICAL FEATURES OF THE med 2000 CENTRAL UNIT

CENTRAL UNIT

Power source voltage rating	: 12 V
Power draw	: inoperative : 7 mA
(average values)	: Central Unit armed : 15 mA for the first 3 days : 10 mA for the following days
Temperature range	: from - 40° C to + 85° C
Positioning	: in the passenger compartment
Protection	: IP 40 (IEC 529 1989) - DIN 40050 - EN 60529

TRANSMITTERS

Temperature range	: from - 20° C to + 85° C
Battery life	: approx. 5 years
Protection	: IP 67 (IEC 529 1989) - DIN 40050 - EN 60529

MAINTENANCE

THE **med 2000** CENTRAL UNIT NEED NO MAINTENANCE.

WARRANTY

CENTRAL UNIT

The TECHNICAL WARRANTY lasts 12 months running from the installation date, ex works, and covers parts recognised as being defective, the judgement of **med** being final in such cases. External labour costs and all other charges are EXCLUDED from this form of coverage.

The WARRANTY, which only covers appliances for which the relative regularly filled out INSTALLATION CARD has been received, automatically becomes void if the appliance has been damaged through incorrect installation, handling, improper use of the system or part of it, combination with unauthorised devices or infiltration of liquids.

ONLY QUALIFIED PERSONS MAY BE ALLOWED TO INSTALL THE DEVICE.

REMOTE CONTROLS

The TECHNICAL WARRANTY lasts 36 months from the date of manufacture, ex works, and covers parts recognised as being defective, the judgement of **med** being final in such cases.

The WARRANTY becomes void if the outer casing is broken or attempts have been made to open it.

10. Multi-function indicator LEDs.
11. Basic harness with customised connector in the installation kit.
12. Extremely limited power draw to safeguard the battery on the vehicle to the utmost.

RECOMMENDATIONS!!!

- The INSTALLER must consign the USER MANUAL to the owner of the vehicle.
- This manual also describes Central Unit operation included in the user manual.
- References to vehicles and wire colours in the OEM equipment shown are purely indicative.
- **med spa** reserves the right to make technical changes and modifications to the product at any time WITHOUT prior notice.
- **med spa** declines any and all liability beyond that detailed in the WARRANTY (page 48) if the product or any part of it is used improperly, it is tampered with or combined with devices not specified by manufacturer.
- The connection layouts are detailed in other instruction manuals annexed to this.

med 2000 CENTRAL UNIT CONFIGURATION

STANDARD SPECIFICATIONS:

- RADAR SENSOR SENSITIVITY: **MEDIUM**;
- DOOR CLOSING TIME: **1,25 SECONDS**;
- COMFORT OPENING CLOSING TIME: **10 SECONDS**;
- SYNCHRONISATION OF DELAYED COMFORT OPENING COMPARE WITH DOOR CLOSING;
- AUTOMATIC IMMOBILIZER ARMING INHIBITED;
- AUXILIARY RELAY OUTPUT WITH "GREEN WIRE" FUNCTIONS: **ARMED**;
- RADAR SENSOR ARMED WITH ANTIBLINDING/ANTIMASKING FUNCTIONS: **ARMED**;
- SIREN ARMED WITH SOUND PROGRAMMING RESET (with **SIR 027** siren);
- ARM/DISARM ACOUSTIC INDICATION ON (with **SIR 027** siren);
- ACCIDENTAL DISARM FUNCTION: **OFF**;
- CENTRAL UNIT IN SERVICE.

POWER DRAW REDUCTION

To keep the power draw as low as possible and safeguard the battery of the vehicle, the CENTRAL UNIT is programmed to cut-out the radar sensor 3 days after arming without alarms.

The radar sensors will re-activate again if an alarm is detected via the buttons or the ignition key.

BATTERY LOW

In combination with siren **SIR 027**, the Central Unit has a special sensor to check the charge of the vehicle battery.

If the battery slowly discharges because lights or other devices have remained on, the immobilizer will remain activated (so long as it has been previously armed) while siren **SIR 027** is automatically disabled.

To start the engine, first recharge the battery or connect another one, as indicated by the car manufacturer. Now disarm the system by means of the remote control or using the emergency procedure and then start the engine.

NOTE: If the power harness of the Central Unit or connections to **SIR 027** were cut whilst the system was armed, the siren will regularly proceed with the alarm cycles established by DIRECTIVE 95/56 EEC.

REMOTE CONTROLS

The **med 2000** Central Unit can handle up to 8 remote controls at the same time. 2 are supplied in the pack.

The other 6 can be purchased through the installer, in compliance with specific formalities which **GUARANTEE** the utmost security.

Each transmitter has its own specific code (ROLLING-CODE -the transmitted code varies on each transmission) and antiscanner function to prevent all attempts to deactivate the system by sending code sequences or by copying already transmitted codes.



RADAR SENSOR

The **med 2000** Central Unit has new generation radar handled by a specific microprocessor to guarantee a high level of sensitivity, immunity from false alarms and vehicle protection with a low power draw.

During the first seconds after it has been armed, the system fully checks its operation, the sensors and all parameters corresponding to the compartment in which it is installed to make sure that everything is correct.

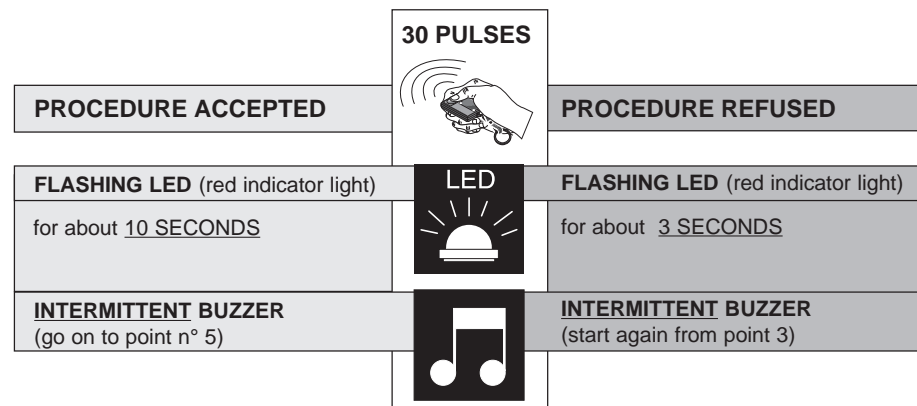
During operation, all these parameters are constantly updated to identify any alarms caused by false signals.

page

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5. Enter the 6-figure personal code from the old Central Unit using the square ignition key **[+ 15]** (page 8).
6. Once the 6 numbers have been entered, wait a couple of seconds and the LED will come on and stay on.
7. At this point, switch the engine on and leave it running:
 - If the engine does not switch off within a minute, the New Central Unit has been accepted and you can make the match up. Now disconnect the power supply to the **med 2000** Central Unit for at least a minute to transmit the new code to the **med 30.1** when the power is switch back on. The **med 30.1** has been reset.

The **med 30.1** has reset to its initial condition (20 provisional engine start attempts after which, with the 21 st. start, it will be definitively matched up with the Central Unit).

 - If the engine stops independently within one minute, wait a couple of minutes and repeat the sequence from the beginning.

PROGRAMMING access procedure: page 21

INSTALLER PROGRAMMING FOR:

REPLACING CENTRAL UNIT WITH DIGITAL IMMOBILIZER

CONTINUED ▶









COMPLETE PROCEDURE

At the first installation, the code assigned to the **med 30.1** by the Central Unit is provisional for the first 20 engine start attempts made with the same Central Unit.

- If the Central Unit is replaced before the 20th engine start attempt, the **med 30.1** does an automatic reset to initial operational conditions. Therefore, NO special action is required when the Central Unit is changed.
- Once the 21st. engine start attempt has been made, the Central Unit and the **med 30.1** are definitively matched.

If the Central Unit has to be changed after the 21 st. engine start attempt, follow these steps exactly:


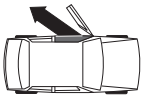


1. Take the PIN - CARD for the Central Unit installed in the vehicle (the one that has to be changed) with the personal 6 number code;
2. Install the new **med 2000** alarm Central Unit;
3. Access INSTALLER PROGRAMMING (page 21);
4. Send 30 pulses with the remote control.

 <p>1 PULSE</p>	<p>ARMING THE SYSTEM IN STANDARD CONFIGURATION</p> <p>WITH RADAR SENSOR AND WINDOW WINDER ACTIVATED. To arm the system: press the button on the remote control with the doors, bonnet and luggage compartment closed and with the ignition key in the OFF position (dashboard off).</p>	
<p>ARMING IS CONFIRMED BY 2 SHORT SIGNALS FROM:</p>		
	 <p>LED</p>	
<p>- DIRECTION INDICATORS - LED (red indicator light) - TWO TONE ACOUSTIC SIGNAL (with siren SIR 027)</p>		
	<p>DOORS LOCKED</p>	
	<p>WINDOWS CLOSED</p>	
 <p>IMMOBILIZER</p>	<p>ACTIVATION</p>	
<p>ATTENTION</p> <ol style="list-style-type: none"> 1. The remote control will be ignored when the ignition key is in the ON position (dashboard on). 2. REFUSAL to arm (page 4/5) for: <ul style="list-style-type: none"> - OPEN DOORS, BONNET and LUGGAGE COMPARTMENT; - SYSTEM in OUT of SERVICE STATUS. 		
		 <p>LED</p>
<p>PERMANENT LIGHT (for the first few seconds) BLINKING (afterwards)</p>		

ARMING THE SYSTEM WITH TEMPORARY INHIBITION OF THE WINDOW WINDER AND RADAR SENSOR

CONTINUED ▶

Use when you wish to leave the windows of the vehicle OPEN:

	WIND THE WINDOWS TO THE DESIRED POSITION
	LEAVE THE VEHICLE
	CLOSE THE DOORS
	ARM THE SYSTEM

ATTENTION

- The remote control will be ignored when the ignition key is in the ON position (dashboard on).
- Refusal to arm (page 4 / 5) for:
 - OPEN DOORS, BONNET and LUGGAGE COMPARTMENT
 - SYSTEM IN OUT OF SERVICE STATUS

NOTE. The 2nd pulse of the remote control must be transmitted within the end of the 2nd blink of the direction indicators (within 2 seconds from the 1st pulse).

2 The window winding function remains inhibited until the system is armed again.

INSTALLER PROGRAMMING FOR:

26 PULSES

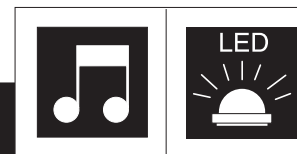


RESET FACTORY DEFAULT SETTINGS

STANDARD SETTINGS:

- RADAR SENSOR SENSITIVITY: **MEDIUM;**
- DOOR CLOSING TIME: **1,25 SECONDS;**
- COMFORT WINDOW CLOSING TIME: **10 SECONDS;**
- COMFORT WINDOW CLOSING SYNCHRONISATION DELAYED COMPARED WITH DOOR CLOSING TIME;
- AUTOMATIC IMMOBILIZER ARMING: **INHIBITED;**
- AUXILIARY RELAY OUTPUT WITH "GREEN WIRE" FUNCTION: **ARMED;**
- RADAR SENSOR ARMED WITH ANTI-BLIND AND ANTI-MASKING FUNCTIONS;
- SIREN ARMED WITH SOUND PROGRAMMING RESET (with **SIR 027** siren);
- ACOUSTIC ARMING DISARMING SIGNAL ACTIVE (with **SIR 027** siren);
- ACCIDENTAL DISARMING FUNCTION **OFF;**
- SYSTEM IN SERVICE.

- **CONTINUOUS BUZZER**
- **FLASHING LED** (red indicator light)



PROGRAMMING access procedure: page 21

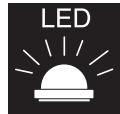
INSTALLER PROGRAMMING FOR:

24 PULSES



ANTI-BLIND AND ANTI-MASKING FUNCTION INHIBITION

Programming allows you to inhibit just the Anti-blind and Anti-masking functions of the radar sensor permanently leaving the sensor armed for normal vehicle surveillance.



- 2-TONE HIGH/LOW BEEP
- FLASHING LED (red indicator light)

SYSTEM ARMED, LED ON CONTINUOUSLY AND THEN FLASHING

24 PULSES



ANTI-BLIND AND ANTI-MASKING FUNCTION RADAR SENSOR REACTIVATE

Programming allows you to reactivate the Anti-blind and Anti-masking functions completely.







STANDARD setting



- 2-TONE LOW/HIGH BEEP
- FLASHING LED (red indicator light)

SYSTEM ARMED, LED ON CONTINUOUSLY AND THEN FLASHING

ARMING IS CONFIRMED WITH 4 SHORT SIGNALS FROM:

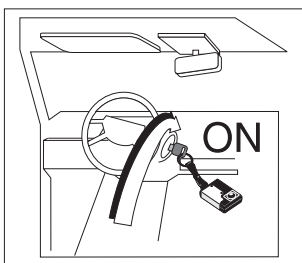
			<ul style="list-style-type: none"> - DIRECTION INDICATORS - LED (red indicator light) - TWO TONE ACOUSTIC SIGNAL (with siren SIR 027) 	
				DOORS LOCKED
				ACTIVATION
			BLINKING	

CAUSES OF REFUSAL TO ARM THE SYSTEM

CONTINUED ▶

The Central Unit fully checks the system during the arming phase.

- If everything is regular, the Central Unit self regulates and begins to supervise the vehicle.
- If faults are encountered, these are indicated in the following way:

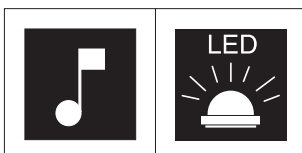


- **REMOTE CONTROL IGNORED BECAUSE IGNITION KEY IS IN ON POSITION (DASHBOARD ON).**

NO SPECIFIC SIGNAL

- **DOOR, BONNET AND LUGGAGE BUTTONS OPEN**
IF CONNECTED TO THE INSTANTANEOUS CENTRAL UNIT INPUT:

3 SHORT SIGNALS FROM THE BUZZER AND LED



- **MONOTONE ACOUSTIC SIGNALS** (with siren 027)
- **LED** (red indicator light)

INSTALLER PROGRAMMING FOR:

23 PULSES



RADAR SENSOR PERMANENT INHIBITION

Programming allows you to inhibit just the radar sensor permanently.
WARNING! when the system is armed, 3 beeps, 3 direction indicator and LED flashes will remind you that the system has been armed without the sensor (page 6).



- **2-TONE HIGH/LOW BEEP**
- **FLASHING LED** (red indicator light)

SYSTEM ARMED, FLASHING LED

23 PULSES



RADAR SENSOR REACTIVATE

Programming allows you to reactivate the radar sensors.

STANDARD setting








- **2-TONE LOW/HIGH BEEP**
- **FLASHING LED** (red indicator light)

SYSTEM ARMED, LED ON CONTINUOUSLY AND THEN FLASHING






To exit button test function, turn the ignition key ON (dashboard on) and then OFF (dashboard lights off).

NOTE: YOU WILL ALSO EXIT PROGRAMMING MODE.



CONFIRMATION WITH 1 LONG SIGNAL FROM:

			- DIRECTION INDICATORS - LED (red indicator light) - 2-TONE BUZZER (with SIR 027 siren)
	DOOR UNLOCK		
	LED OFF (red indicator light)		


REGULAR ARMING of the system followed by the alarm after a few seconds if the buttons are connected to the DELAYED INPUT of the Central Unit.

			SUPPLEMENTARY SIREN - SIR 020 SELF-POWERED SIREN - SIR 027
			- MOTOR HORN OF THE VEHICLE
	- DIRECTION INDICATORS		
	- LED (red indicator light)		

- **SYSTEM OUT OF SERVICE:**
5 SHORT SIGNALS FROM THE BUZZER AND LED

		- MONOTONE ACOUSTIC SIGNALS (with siren SIR 027) - LED (red indicator light)
for further information about the OUT OF SERVICE status of the system: page 19.		








1 PULSE



ARMING THE SYSTEM IN SPECIAL CONFIGURATION

WITH RADAR SENSOR INHIBITED
 To arm the system: press the button on the remote control with the doors, bonnet and luggage compartment closed and the ignition key in the OFF position (dashboard off).

ARMING IS CONFIRMED BY 3 SHORT SIGNALS FROM:


			<ul style="list-style-type: none"> - DIRECTION INDICATORS - LED (red indicator light) - TWO TONE ACOUSTIC SIGNAL (with siren SIR 027) 	
	DOORS LOCKED			
	WINDOWS CLOSED			
	ACTIVATION			BLINKING

ATTENTION

1. The remote control will be ignored when the ignition key is in the ON position (dashboard on).
2. Causes of refusal on pages 4 / 5.
3. Permanent inhibition/reset of the radar sensor on page 24.

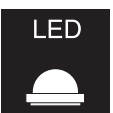

INSTALLER PROGRAMMING FOR:

22 PULSES



DOOR, BONNET, BOOT BUTTON TEST



CONTINUED ▶

	 musical scale	<ul style="list-style-type: none"> - LED OFF DURING ACOUSTIC SIGNAL - ASCENDING ACOUSTIC SIGNAL
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Then the LED (red indicator light) will FLASH FOR THE REMAINDER OF THE TEST.

If the buzzer sounds continuously and the LED stays lit, this indicates an alarm caused by a door, the bonnet or the boot opening.

- The alarm will be signalled until the door is closed

	
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- The remote control is not detected during the test.
- Both button inputs (**NO** and **NOD**) are regarded as instantaneous for test purposes.

		SIGNALS FOLLOWED BY A FURTHER CONFIRMATION:
		- FLASHING LED (red indicator light) - CONTINUOUS BUZZER


To exit radar test function, turn the ignition key **ON** (dashboard on) and then **OFF** (dashboard lights off).

NOTE: YOU WILL ALSO EXIT PROGRAMMING MODE.


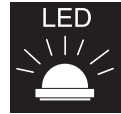




CONFIRMATION WITH 1 LONG SIGNAL FROM:

			- DIRECTION INDICATORS - LED (red indicator light) - 2-TONE BUZZER (with SIR 027 siren)
	DOOR UNLOCK		
	LED OFF (red indicator light)		

*PROGRAMMING access procedure:
page 21*

1 PULSE	DISARMING THE SYSTEM
	To disarm the system: press the button on the remote control.

DISARMING IS CONFIRMED BY 1 LONG SIGNAL FROM:

			- DIRECTION INDICATORS - LED (red indicator light) - TWO TONE ACOUSTIC SIGNAL (with siren SIR 027)
	LOCKS RELEASED		
	DISARMING		
	LED OFF (red indicator light)		

ATTENTION

1. When the automatic immobilizer arming function is activated (page 14), disarming must be repeated once the selected time has elapsed after disarming of the system.
2. When the accidental anti-disarming function is activated (page 21), the system will automatically re-arm once 40 seconds have elapsed without the system having detected an entrance into the vehicle (alarm).

EMERGENCY DISARMING

CONTINUED ▶

In the absence of the remote control, the system can still be disarmed and the engine started by using the ignition key to form a specific ON - OFF sequence as indicated by the personal code on the PIN-CARD under the sticker with the serial number.

The required operations, also given on the back of the PIN-CARD are:

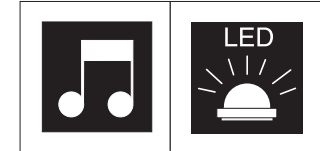
1. DETACH THE LABEL FROM THE PIN-CARD: YOU WILL SEE THE 6-FIGURE PERSONAL CODE UNDERNEATH.
2. WAIT UNTIL ANY ACOUSTIC ALARM SIGNALS HAVE TERMINATED.
3. INSERT THE IGNITION KEY INTO THE DASHBOARD IN THE OFF POSITION.
4. TURN IT: ON (DASHBOARD ON) AND OFF WITHOUT ACTIVATING THE STARTER MOTOR, FOR THE NUMBER OF TIMES INDICATED BY THE 1st. FIGURE IN YOUR PERSONAL CODE (eg. number 3 means turn the key ON - OFF, ON - OFF, ON - OFF three times in quick seccession).
5. WAIT UNTIL THE LED (red indicator light) BLINKS SHORTLY BY WAY OF CONFIRMATION.
6. REPEAT OPERATIONS 4. AND 5. FOR THE REMAINING 5 FIGURES.

8

If the buzzer sounds continuously and the LED stays lit, this indicates a movement detected with the protected zone that has provoked a real radar sensor alarm.

CONTINUED ▶

- THE ALARM SIGNAL STOPS WITH A DELAY OF **2/3 SECONDS** FROM THE TIME THE CAUSE OF THE ALARM IS REMOVED.

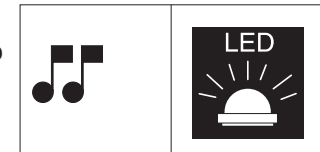


- RADAR SENSOR SENSIBILITY CAN BE CHANGED DURING THE TEST SIMPLY BY PRESSING THE REMOTE CONTROL THE NUMBER OF TIMES INDICATED BELOW



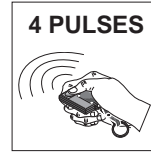
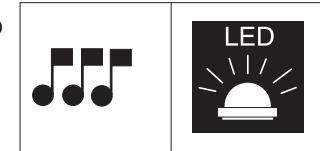
2 PULSES

2 SHORT SIGNALS FROM BUZZER AND LED
for: **LOW SENSITIVITY**



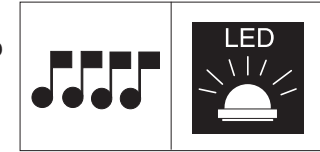
3 PULSES

3 SHORT SIGNALS FROM BUZZER AND LED
for: **MEDIUM SENSITIVITY**





4 PULSES

4 SHORT SIGNALS FROM BUZZER AND LED
for: **HIGH SENSITIVITY**



37

INSTALLER PROGRAMMING FOR:

21 PULSES  **RADAR SENSOR TEST**  **CONTINUED** ▶

The buzzer and LED signals after the musical scale indicate sensitivity level setting.

LED   **musical scale**







- LED OFF DURING ACOUSTIC SIGNAL
- ASCENDING ACOUSTIC SIGNAL

INDICATED FOLLOWED BY:

2 SHORT SIGNALS FROM BUZZER AND LED
for: **LOW**

3 SHORT SIGNALS FROM BUZZER AND LED
for: **MEDIUM**

4 SHORT SIGNALS FROM BUZZER AND LED
for: **HIGH**

then the LED (red indicator light) flashes for the entire test time.

7. IF THE OPERATION HAS BEEN CORRECT, THE CENTRAL UNIT WILL DISARM THE SYSTEM (page 7). YOU NOW HAVE 10 MINUTES WITHIN WHICH TO START THE ENGINE.
8. **IF THE ENGINE STOPS, THE SYSTEM WILL REMAIN DISARMED FOR 10 MINUTES.** REPEAT THE SEQUENCE FROM POINT 2 IF THE ENGINE REMAINS AT A STANSTILL FOR A LONGER PERIOD.
- **IF THE OPERATION IS INCORRECT** (SERIES OF SHORT BLINKS) REPEAT IT FROM POINT NUMBER 3 AS SOON AS THE SLOW BLINKS RETURN.
- **IF THE OPERATION IS INTERRUPTED**, REPEAT THE SEQUENCE FROM POINT 3 AS SOON AS THE SLOW BLINKS RETURN.

NOTE: There is no limit to the number of times the described procedure can be repeated. The personal code is also used to automatically set automatic arming of the immobilizer after 10 minutes (page 14). When the remote control is used again, automatic immobilizer arming returns to the original program.

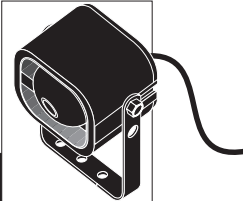
ATTENTION

- NEVER LEAVE YOUR PIN-CARD IN THE VEHICLE
- KEEP IT A SAFE PLACE
- DO NOT SHOW YOUR 6-FIGURE PERSONAL CODE TO ANYONE

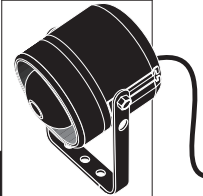
ALARM FUNCTIONS

CONTINUED ▶

If the Central Unit is armed by means of the remote control, the alarm will be indicated by:



SELF-POWERED SIREN - SIR 027



SUPPLEMENTARY SIREN - SIR 020



- THE MOTOR HORN OF THE VEHICLE



- DIRECTION INDICATORS
- LED (red indicator light)

INSTALLER PROGRAMMING FOR:

19 PULSES



SELECTING CONTINUOUS ALARM RELAY OUTPUT

ATTENTION: Only available if the auxiliary relay is programmed as alarm relay (see page 33).

CONTINUOUS OUTPUT (if it was intermittent).



- CONTINUOUS BUZZER
- FLASHING LED (red indicator light)

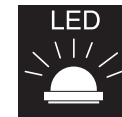
19 PULSES



SELECTING INTERMITTENT ALARM RELAY OUTPUT

INTERMITTENT (if it was continuous)















IMPORTANT: The intermittent output must be used if the relay is connected to the vehicle's original horn.



- BUZZER SIGNAL FIRST INTERMITTENT THEN CONTINUOUS
- FLASHING LED (red indicator light)

STANDARD setting

PROGRAMMING access procedure: page 21

AUTOMATIC IMMOBILIZER ARMING			
15 PULSES 	1 SHORT SIGNAL FROM BUZZER AND LED for: 5 MINUTE DELAY FROM IGNITION KEY SWITCH OFF.		
16 PULSES 	2 SHORT SIGNALS FROM BUZZER AND LED for: 10 MINUTES DELAY FROM IGNITION KEY SWITCH OFF.		
17 PULSES 	3 SHORT SIGNALS FROM BUZZER AND LED for: AUTOMATIC IMMOBILIZER ARM INHIBITION <i>STANDARD setting</i>		
18 PULSES 	4 SHORT SIGNALS FROM BUZZER AND LED for: IMMEDIATELY WHEN A DOOR IS OPENED AND IGNITION KEY IS OFF.		
SIGNALS FOLLOWED BY A FURTHER CONFIRMATION :			
<ul style="list-style-type: none"> - CONTINUOUS BUZZER - FLASHING LED (red indicator light) 			
			

OPENING of doors, bonnet or luggage compartment

(25 seconds cycle, deactivated by means of the remote control or the emergency procedure).

- The alarm cycle is not repeated if the door remains open.
- The alarm is only repeated if the door is closed and opened again after the end of the cycle in progress.
- Alarm cycles of unlimited number.
- The Central Unit has two separate inputs to detect alarms via buttons: INSTANTANEOUS when the door is opened. DELAYED for the first seconds after the system has been armed, then instantaneous.

IGNITION KEY for at least 2 seconds

(25 seconds cycle, deactivated by turning the key OFF).

- The alarm cycle is not repeated if the key remains in the ON position.
- The alarm cycle is only repeated if the key is turned OFF and then left ON for at least 2 seconds.
- Alarm cycles of unlimited number,

RADAR SENSOR

(25 seconds cycle, deactivated by means of the remote control or the emergency procedure).

- The alarm cycle is repeated after a 5 seconds pause if the alarm cause persists in a continuous way.
- A maximum 10 alarm cycles indicated by the radar sensor can be obtained during the arming time of the system.

ATTENTION:

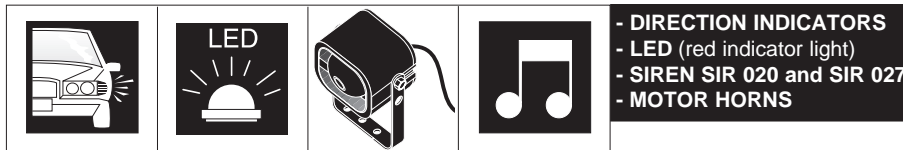
If an alarm activates while another is still active, this latter will be ignored. If the automatic immobilizer arming function activates when the system is on hold (page 14), only the immobilizer will activate along with the optical - acoustic signal for the arming time of the ignition key in the ON position (so long as this exceeds 2 seconds).

RADAR SENSOR ANTI-BLINDING AND ANTI-MASKING

The anti-blinding and anti-masking functions of the radar sensor allow the transducers (MTR 2000) to be monitored and electrically connected.

FAULT DETECTION is indicated in the following way:

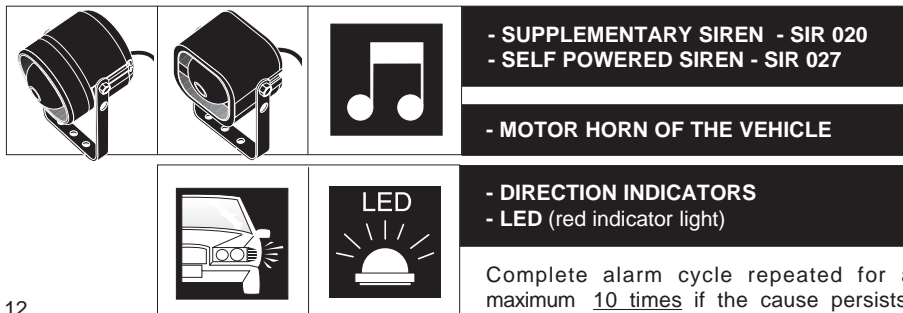
- **BY SHORT SIGNALS AFTER THE SYSTEM HAS BEEN ARMED:**



ATTENTION:

- Inhibition of the radar sensor also inhibits this functions.
- If the system is NOT disarmed, the central unit will activate a complete alarm signal and will then automatically inhibit the radar sensor.

- **AFTER AN ALARM SIGNAL:**



INSTALLER PROGRAMMING FOR:

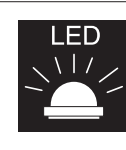
14 PULSES



SELECTING AUXILIARY RELAY OUTPUT

ALARM RELAY FUNCTION

Programming permits you to change the functional status of the auxiliary relay and make it an alarm relay. The output can be INTERMITTENT (standard) or PERMANENT (see page 35).



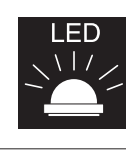
- 2-TONE LOW/HIGH BEEP
- FLASHING LED (red indicator light)

14 PULSES



"GREEN WIRE" FUNCTION

Programming permits you to change the operational status of the auxiliary relay and convert it to a GREEN WIRE output to pilot an NC contact relay (for example BOSCH 0 332 204 125) used to cut off vehicle electric supply.














- 2-TONE HIGH/LOW BEEP
- FLASHING LED (red indicator light)

STANDARD setting

INSTALLER PROGRAMMING FOR:







COMFORT CLOSING TIME SETTING

Only to be used in vehicles equipped with a window winding COMFORT system with command transmitted on a SEPARATE wire from the door locking one. If the wire is the same, the door locking time must be lengthened as a consequence (page 30).

<p>11 PULSES</p> 	<p>1 SHORT SIGNAL FROM BUZZER AND LED for: <u>10 SECONDS</u></p> <p><i>STANDARD setting</i></p>		
<p>12 PULSES</p> 	<p>2 SHORT SIGNALS FROM BUZZER AND LED for: <u>20 SECONDS</u></p>		
<p>13 PULSES</p> 	<p>3 SHORT SIGNALS FROM BUZZER AND LED for: <u>30 SECONDS</u></p>		
<p>SIGNALS FOLLOWED BY A FURTHER CONFIRMATION:</p> <ul style="list-style-type: none"> - CONTINUOUS BUZZER - FLASHING LED (red indicator light) 			

ALARM MEMORIES

An alarm that occurs when the system is armed will be indicated when the system is disarmed after the usual disarming signals (page 7) by means of:

		<p>SHORT AND SPACED SIGNALS</p> <ul style="list-style-type: none"> - MONOTONE ACOUSTIC SIGNALS (with siren SIR 027) - LED (red indicator light) spaced and after the disarming signal
	<p>1 SHORT SIGNAL from BUZZER and LED for: DOOR, BONNET and LUGGAGE COMPARTMENT BUTTONS</p>	
	<p>2 SHORT SIGNALS from BUZZER and LED for: ATTEMPT TO START (IGNITION KEY ON)</p>	
	<p>3 SHORT SIGNALS from BUZZER and LED for: RADAR SENSOR</p>	
	<p>5 SHORT SIGNALS from BUZZER and LED for: BLINDING OR MASKING OF RADAR SENSOR</p>	

The signal indicates the 1st. alarm to have occurred throughout the entire plant arming time.

It is cancelled by inserting the ignition key (ON) after disarming the system.



SELF-DIAGNOSTICS

The **med 2000** Central Unit is complete with a "SELF - DIAGNOSTIC" function. The installed peripherals are also checked, particularly those of the INTELLIGENT type, i.e. handled by their own microprocessor, such as the internal radar sensor and siren **SIR 027**.

6 BIPS of the buzzer and **6 BLINKS** of the LED after the disarming signal (page 7) indicate that a fault has been identified in the Central Unit.

If this occurs, please contact the installed and have the system checked.

The **FAULTS** detected by the **SELF-DIAGNOSTICS** function are indicated by **SHORT** and **SPACED BIPS** from the **BUZZER** and by the **LED**.

		<ul style="list-style-type: none"> - MONOTONE ACOUSTIC SIGNALS - LED (red indicator light) spaced and after the DISARMING signal
<p>6 SHORT SIGNALS from BUZZER and LED for:</p>		
<p>FAULTS DETECTED BY SELF-DIAGNOSTICS FUNCTION</p>		
<p>ATTENTION!!! CONTACT THE INSTALLER</p>		

INSTALLER PROGRAMMING FOR:

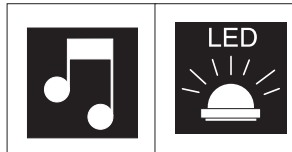
10 PULSES



COMFORT AND DOOR CLOSING SYNCHRONISATION

Sends the door closing and COMFORT arming sequence commands to be sent at the same time.

This is recommended when the installation is made on some early production Series **W124** and **W129 MERCEDES**.



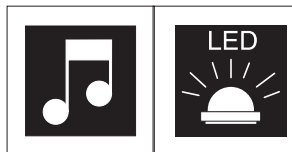
- **2-TONE HIGH/LOW BEEP**
- **FLASHING LED** (red indicator light)

10 PULSES



COMFORT COMMAND DELAYED COMPARED WITH DOOR CLOSING















If programming is repeated, the COMFORT window closing command resets to its normal delayed status compared with door closing.



- **2-TONE LOW/HIGH BEEP**
- **FLASHING LED** (red indicator light)

STANDARD setting

PROGRAMMING access procedure: page 21

DOOR CLOSING TIME SETTING			
6 PULSES 	1 SHORT SIGNAL FROM BUZZER AND LED for: <u>1,25 SECONDS</u> STANDARD setting		
7 PULSES 	2 SHORT SIGNALS FROM BUZZER AND LED for: <u>10 SECONDS</u>		
8 PULSES 	3 SHORT SIGNALS FROM BUZZER AND LED for: <u>20 SECONDS</u>		
9 PULSES 	4 SHORT SIGNALS FROM BUZZER AND LED for: <u>30 SECONDS</u>		
SIGNALS FOLLOWED BY A FURTHER <u>CONFIRMATION</u>:			
<ul style="list-style-type: none"> - CONTINUOUS BUZZER - FLASHING LED (red indicator light) 			

AUTOMATIC IMMOBILIZER ACTIVATION



RECOMMENDED OPTIONAL FUNCTION for anyone who thinks he may forget to arm the system. Can be selected from amongst those indicated by the installer:

- A. **IMMEDIATE**
- B. With a delay of **5 minutes**
- C. With a delay of **10 minutes**
- D. **INHIBITED**

A. IMMEDIATE

- When a door is opened, if this occurs after the ignition key has been turned OFF.
- With a **1 minute** delay if a door is already open.

With the automatic immobilizer activated, if the ignition key is turned ON and an attempt is made to start the engine:

- The engine fails to start, the buzzer bips in continuous mode and the direction indicators and LED remain permanently on.
- When the ignition key is turned back to the OFF position, there are SHORT BIPS from the buzzer along with BLINKS from the LED.
- The LED now blinks.

If the key is turned ON again and an attempt is made to start:

- the engine fails to start and the LED remains permanently on until the ignition key is turned OFF again.

To start the engine, disarm the system using the remote control or use the emergency procedure (pag. 8).

CONTINUED►

B. with a DELAY of 5 minutes and **C. with a DELAY of 10 minutes**

The delay time to activate the automatic immobilizer function is calculated from the time the ignition key is turned OFF.

- **ATTENTION: an ALARM from the buttons (e.g. if a door is opened) causes:**
Interruption of the time count if it precedes automatic immobilizer arming.
- Counting will start from the beginning again if the door is closed.
- If a door remains open or if it is opened and NOT closed again, automatic immobilizer arming is activated in this mode.






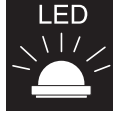



Automatic immobilizer arming is indicated by a few short bips from the buzzer and blinks from the led.

- **If it follows automatic immobilizer arming the LED and the direction indicators will remain permanently ON and the buzzer will BIP in continuous mode until the door is closed.**
- The signal will be repeated for a maximum 5 times and will then be stopped.
- The door open signals will cease if the ignition key is turned ON.

16

INSTALLER PROGRAMMING FOR:

RADAR SENSITIVITY REGULATION

2 PULSES 	2 SHORT SIGNALS FROM BUZZER AND LED for: <u>LOW SENSITIVITY</u>		
3 PULSES 	3 SHORT SIGNALS FROM BUZZER AND LED for: <u>MEDIUM SENSITIVITY</u> <i>STANDARD setting</i>		
4 PULSES 	4 SHORT SIGNALS FROM BUZZER AND LED for: <u>HIGH SENSITIVITY</u>		

SIGNALS FOLLOWED BY A FURTHER **CONFIRMATION:**

- CONTINUOUS BUZZER - FLASHING LED (red indicator light)		
---	---	---

PROGRAMMING access procedure: page 21

29

OPTIONAL INSTALLER PROGRAMMING FOR:

17 PULSES



PERMANENT INHIBITION OF THE RADAR SENSOR

This program allows the radar sensor to be permanently deactivated. The window winding function remains activated.



- HIGH/LOW TWO-TONE ACOUSTIC SIGNAL
- LED BLINKS (red indicator light)

CENTRAL UNIT ARMED, LED BLINKING

ATTENTION: when the SYSTEM is ARMED, 3 BIPS, 3 blinks of the directional indicators and the LED remind the user that the system is activated without the radar sensor (page 6).

17 PULSES



RESETTING THE RADAR SENSOR

This program allows the radar sensor to be re-activated.



- LOW/HIGH TWO-TONE ACOUSTIC SIGNAL
- LED BLINKS (red indicator light)

SYSTEM ARMED LED PERMANENTLY ON THEN BLINKING

Whit automatic immobilizer armed, if the ignition key is turned ON and attempt is made to start the engine:

- the engine fails to start, the buzzer bips continuously and the direction indicators and the LED remain permanently ON.
- When the ignition key is turned OFF again, the buzzer makes a few short bips and the LED blinks.
- The LED now blinks.

If the ignition key is turned ON again and an attempt is made to start:

- the engine fails to start. The alarm activates, the direction indicators and LED blink until the ignition key is turned OFF again.


To start the engine, first disarm the system by means of the remote control or use the emergency procedure (page 8).

D. INHIBITED

The automatic immobilizer arming function can be inhibited by the installer by means of the programming function.

USER PROGRAMMING

When there is no power supply to the **med 2000** Central Unit, the set programming is memorised:

pulses	DESCRIPTION		page
5	OUT OF SERVICE / RETURN TO SERVICE		23
7	PERSONALISE ALARM SOUND WITH SIR 027 (OPTIONAL SIREN)		24
9	ACCIDENTAL ANTI-DISARM ON/OFF		25
11	TURN ARM/DISARM INDICATION WITH OPTIONAL SIR 027 SIREN ON/OFF PERMANENTLY		26
15	ACOUSTIC ALARM SIGNAL PERMANENTLY ON/OFF		27
17	RADAR SENSOR PERMANENTLY ON/OFF		28

OPTIONAL USER PROGRAMMING FOR:

15 PULSES



INHIBITING THE ACOUSTIC ALARM SIGNAL

This program disables the acoustic alarm signal, inhibiting both the main siren and any other auxiliary devices (motor horns, supplementary siren, etc.).



- HIGH/LOW TWO-TONE ACOUSTIC SIGNAL
- LED BLINKS (red indicator light)

PROGRAM only advisable in exceptional cases: when the vehicle is in a place where acoustic and alarm signals must absolutely not occur. The system gives no acoustic signal in the case of an alarm. There is only a visual signal from the direction indicators and LED.

15 PULSES



RESETTING THE ACOUSTIC ALARM SIGNAL

Re activates the acoustic alarm signals, re-activating both the main siren and any other auxiliary devices (motor horn of the vehicle, supplementary siren, etc.).



- LOW/HIGH TWO-TONE ACOUSTIC SIGNAL
- LED BLINKS (red indicator light)

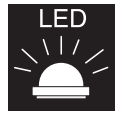
OPTIONAL USER PROGRAMMING FOR:

11 PULSES



PERMANENT INHIBITION OF THE ACOUSTIC ARMING DISARMING SIGNALS WITH SIR 027

This program allows the acoustic signal to be disabled when the system is armed and disarmed, maintaining the visual given by the direction indicators and the LED.



- HIGH/LOW TWO-TONE ACOUSTIC SIGNAL (BIP)
- LED BLINKS (red indicator light)

ATTENTION:

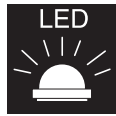
All the other service signals remain enabled: alarm memory, programming, etc.

11 PULSES



RESETTING THE ACOUSTIC ARMING/DISARMING SIGNALS WITH SIR 027

Re-activates the acoustic signals when the system is armed and disarmed.



- LOW/HIGH TWO-TONE ACOUSTIC SIGNAL (BIP)
- LED BLINKS (red indicator light)

PROGRAMMING BY THE INSTALLER

CONTINUED ▶





pulses	DESCRIPTION	page
RADAR SENSOR SENSIBILITY REGULATION		
2.....	LOW	29
3.....	MEDIUM - <i>STANDARD setting</i>	
4.....	HIGH	
SETTING DOOR CLOSING TIME		
6.....	1,25 SECONDS - <i>STANDARD setting</i>	30
7.....	10 SECONDS	
8.....	20 SECONDS <input type="checkbox"/> <i>for vehicles with COMFORT SYSTEM</i>	
9.....	30 SECONDS <input type="checkbox"/> <i>piloted by same door closing wire</i>	
COMFORT / DOOR CLOSING SYNCHRONISATION		
10.....	START AT THE SAME TIME	31
10.....	DELAYED START - <i>STANDARD setting</i>	
SETTING COMFORT SYSTEM CLOSING TIME		
11.....	10 SECONDS - <i>STANDARD setting</i>	32
12.....	20 SECONDS	
13.....	30 SECONDS	
SELECTING AUXILIARY RELAY OUTPUT		
14.....	ALARM RELAY FUNCTION (INTERMITTEN or CONTINUOUS)	33
14.....	"GREEN WIRE" FUNCTIONS - <i>STANDARD setting</i>	

When power is OFF, the set programming is memorised.

pulses	DESCRIPTION	page
15	AUTOMATIC IMMOBILIZER ARMING AFTER 5 minutes	34
16	AUTOMATIC IMMOBILIZER ARMING AFTER 10 minutes	
17	INHIBIT automatic immobilizer arming	
18	IMMEDIATE AUTOMATIC IMMOBILIZER ARMING	
19	Select AUXILIARY RELAY OUTPUT set as ALARM relay	35
19	INTERMITTENT - <i>STANDARD setting</i> CONTINUOUS	
FUNCTION TESTS		36
21	RADAR SENSOR	
22	DOOR, BONNET AND BOOT BUTTONS	39
RADAR SENSOR PERMANENT ON/OFF		41
23	OFF	
23	ON - <i>STANDARD setting</i>	
PERMANENT RADAR SENSOR ANTI-BLIND/ANTIMASKING ON/OFF		42
24	OFF	
24	ON - <i>STANDARD setting</i>	
RESET TO DEFAULT FACTORY SETTINGS		43
26	<i>STANDARD setting</i> - RESET Central Unit to default settings	
DIGITAL CONTROL IMMOBILIZER		44
30	Change med 2000 Central Unit if combined with digital control immobilizer (e.g. med 30.1)	

20 When power is OFF, the set programming is memorised.

RECOMMENDED USER PROGRAMMING FOR:

<p>9 PULSES</p> 	<p style="text-align: center;">ACCIDENTAL ANTI-DISARMING</p> <p>When this function is activated, the entire system, automatically re-arms each time the system is disarmed with the remote control but the vehicle is not accessed within <u>40 seconds</u>.</p>
	<div style="background-color: black; color: white; padding: 5px;"> <p>- LOW/HIGH TWO-TONE ACOUSTIC SIGNAL (BIP) - LED BLINKS (red indicator light)</p> </div> <p>NOTE: It is obligatory to connect the door, bonnet and luggage compartment buttons to prevent undesired re-activations of the system. Activation of this function protects against undesired use of the remote control.</p>
<p>9 PULSES</p> 	<p style="text-align: center;">RESETTING THE ACCIDENTAL ANTI-DISARMING FUNCTION</p> <p>Allows this further protection to be disabled.</p>
	<div style="background-color: black; color: white; padding: 5px;"> <p>- HIGH/LOW TWO-TONE ACOUSTIC SIGNAL (BIP) - LED BLINKS (red indicator light)</p> </div>

PROGRAMMING access procedure: page 18

OPTIONAL USER PROGRAMMING FOR:

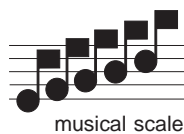
7 PULSES



PERSONALISING THE ALARM SIREN WITH SIR 027

This program allows the sound sequence of siren **SIR 027** to be personalised during an alarm cycle. The sound can be varied between the two different configurations as desired.

LED

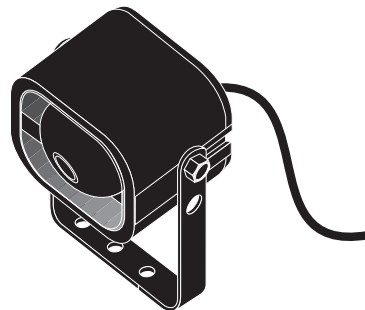


- LED OFF DURING THE ACOUSTIC SIGNAL
- ASCENDING ACOUSTIC SIGNAL

Access to the programming status is indicated by the LED, which comes on, and by the continuous buzzer sound. Each pulse from the remote control corresponds to a buzzer sound and led status (on or off) variation, indicating the different sound set for the entire alarm cycle.

ATTENTION:

- The set sound sequence remains valid until the same procedure is repeated to vary it, or if the installer resets the system.
- Programming is not interrupted during execution.



PROGRAMMING ACCESS PROCEDURE

CONTINUED ▶

Two types of programming can be carried out:

- **USER** : for system use;
- **INSTALLER** : to interface with vehicle systems.

The system is disengaged and the ignition key is on OFF (dashboard lights off):

USER PROGRAMMING

(shown with headings on a WHITE background)

1. Turn the ignition key to ON (dashboard lights on) and then OFF (dashboard lights off) four times consecutively (ON - OFF, ON - OFF, ON - OFF, ON - OFF) ending with the ignition key on OFF.

Check the status of the LED and Buzzer after the process:

- if there are no signals after 2 seconds, wait at least 10 seconds and repeat point 1;
- if at first the LED flashes and then stays on and the buzzer gives an intermittent acoustic signal, the Central Unit is in User Programming mode.
- go on to point 2.

INSTALLER PROGRAMMING

(shown with headings on a GREY background)

1. Turn the ignition key to ON (dashboard lights on) and then OFF (dashboard light off) ten times consecutively (ON - OFF, ON - OFF, ON - OFF, ON - OFF, ON - OFF, ON - OFF, ON - OFF, ON - OFF, ON - OFF, ON - OFF) ending with the ignition key OFF.







With the system OFF and the ignition key in the OFF position (dashboard off):

1. Set the ignition key to the ON position (dashboard ON). As soon as the LED comes on, turn it OFF 6 times (ON-OFF, ON-OFF, ON-OFF, ON-OFF, ON-OFF, ON-OFF), terminating with the key in the OFF position.
When power is OFF, the set programming is memorised.
 - if there is no signal after 2 seconds wait at least 10 seconds and repeat point 1;
 - if at first the LED flashes and then stays on and the buzzer gives a continuous acoustic signal, the Central Unit is in Installer programming mode;
 - go on to point 2.
2. When the Central Unit is in programming mode, the LED will be on continuously.
3. Programme as desired using the pulses of the remote control (following each valid pulse, the LED will go out for about ½ a second) and the buzzer will give a beep.
4. Once the programming has been completed:
 - if after a short delay the LED and the buzzer highlight the sequence detailed in the specific page of the programming as entered, this means that the programming has been accepted and you can move on to the next.
 - if there are not signals after 2 seconds, programming should be repeated from point 2.
5. To end the programming procedures and activate the programming entered (or to interrupt the procedure) turn the ignition key ON and then back to OFF.

IMPORTANT:

- The programming procedure can only be accessed with the system OFF.
- If Central Unit power supply is turned off, only the completed programming will be memorised.

OPTIONAL USER PROGRAMS FOR:

<p>5 PULSES</p> 	<p>SYSTEM OUT OF SERVICE</p>
<p>Recommended if the vehicle is to remain in: a garage, car-wash, workshop or other occasions when the vehicle must not be protected. This to avoid leaving the remote control in the car and to prevent unintentional activation or incorrect manoeuvres by persons who do not know how to use the system.</p>	
<p>LED</p> 	<p>- LED OFF DURING ACOUSTIC SIGNAL - DESCENDING ACOUSTIC SIGNAL</p>
 <p>musical scale</p>	<p>ATTENTION: in out of service status, the system responds to the remote control with a refusal signal: (5 bips and 5 blinks of the LED).</p>
<p>5 PULSES</p> 	<p>RESETTING THE SYSTEM</p>
<p>The system programmed by out of service mode becomes fully operative and maintains all the previously entered programs.</p>	
<p>LED</p> 	<p>- LED OFF DURING ACOUSTIC SIGNAL - ASCENDING ACOUSTIC SIGNAL</p>
 <p>musical scale</p>	