Car Alarm CA-10 „*REX*“

installation manual

The CA-10 is a compact remote controlled car alarm with a building block architecture. It can be easily extended with CR-11 modules to be tailored to particular installation requirements (central locking control, immobilization etc.). This remotely controlled car alarm can have a maximum of two additional RC-10 remote controllers added to the one provided. Remote control signals are protected by a hopping code and an Anti-scan feature.

The CA-10 provides additional features for the ease and convenience of the user (dome light control, car locator feature, indication of alarm memory, rearm function, etc.).

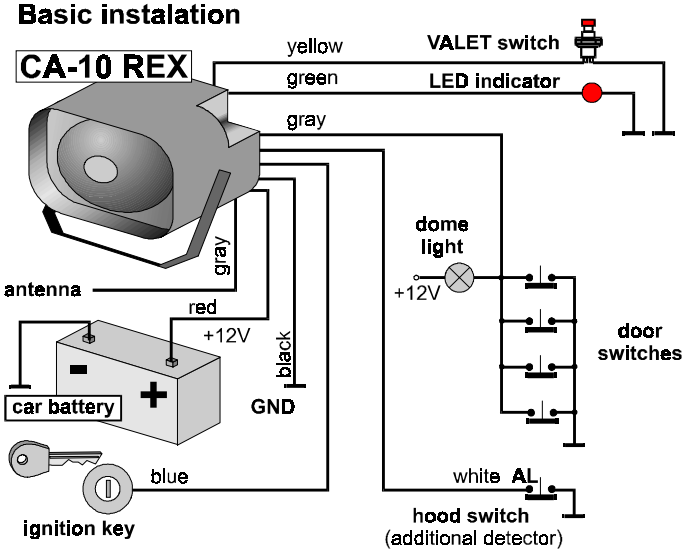
Installation

The installation of the CA-10 Rex is not complicated. However, professional installation is highly recommended to ensure 100% functionality.

The main unit of the car alarm should be installed in the engine or passenger compartment. Disconnect the car battery before starting installation. No one should be inside a car equipped with airbags while the battery is being connected or disconnected. Refer to the car owners' manual before disconnecting the battery. If you drill a hole in the car, be sure to check the intended hole location before drilling to prevent damage to the car.

Screw the metal bracket of the main unit firmly to the car body. It is critical that the unit is firmly secured to assure proper function of the vibration sensor. Do not place the unit close to any hot objects (exhaust pipe, radiator etc.).

Basic instalation



WIRING - route the wires of the car alarm along with the pre-existing electrical harness of the car. Check each connection made to ensure that it is firm and properly insulated. Use only a real crimping tool to make needed connections:

- **RED = power +12V** - connect it to a direct line from the positive battery terminal
- **BLACK = grounding** - connect it to the original GND point in the car.
- **BLUE = ignition key** - to the ignition key switch (+12V when ignition is ON).
- **GRAY = door switches input** - is a negative alarm trigger input. Connect it to the door switch which should be installed on every door. This input also functions as the dome light control output (the max. load of the light is 10W).
- **WHITE = AL trigger input** - is activated when connected to the ground (or when disconnected from the ground - selectable). The type of reaction (Alarm or Warning) can be selected for this input. An additional sensor can be connected to this wire (for example a hood switch etc.).
- **GREEN = LED indicator** - drill a 6.5mm (4/16") hole in the dashboard and install the LED with the attached plastic bracket.
- **YELLOW = VALET switch** - install it in a hidden location in the car

After routing wires from the green LED & Valet, insert their ends, equipped with metal contacts, into the corresponding positions on the main unit 's connector (see color marks on the connector housing).

A short gray wire going directly from the CA-10 unit is a remote control antenna. Location of this antenna effects remote control working range.

Testing of the installed car alarm

Complete and check all wiring before switching on the power. After switching on the power, check all basic functions of the car alarm (see operation). Fix new wires to the original wireharness of the car. **This is the end of basic installation.**

Adding of a new remote control

There is one remote control in provided with the set. The car alarm can be operated with by maximum of three RC-10 remote controllers. To add an additional remote control:

- switch on the ignition key when the car alarm is disarmed and press the hidden VALET button five times, consecutively.
- the siren will sound two signals and the alarm is now in a learning mode
- activate all remote controls (one by one, button A) that you want the car alarm to accept.
- if you activate only one controller in the learning mode, you will be able to control the car alarm only with this one controller
- to close the learning mode, switch off the ignition key

Setting mode

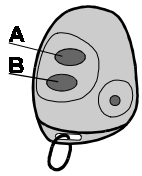
Optional functions can be modified the following way:

- press VALET button when the car alarm is disarmed and hold it pressed
- after 5 seconds or more, switch on the ignition key. The siren will indicate opening of the setting mode, and you may now release the Vallet button.
- now you are in row no. 1 of the following table. Setting of the parameters is indicated by the LED. Bold printed parameters are factory default settings.
- settings can be changed by pressing a remote control button (A or B), Each short pressing will change the parameter (on - off - on - off - etc.).
- to select next parameter (next row in the table), press the VALET button quickly. The number of beeps from the siren will correspond with the parameter number.
- Pressing the VALET button on parameter no. 13 will store data to the memory and the setting mode will be exited (confirmed by a long signal from the siren).

Note: If you switch the ignition key off before the setting mode is completed, the setting mode will be terminated and no changes will be stored. Removing power from the car alarm will not change stored data.

no.	parameter	status (LED)		description
		☼ (on)	● (off)	
1	**REARM**	**enabled**	disabled	if car is not entered within 1 min. after disarming, it will arm again
2	**AUTOIMMO**	enabled	**disabled**	5 min. after turning off the ignition key, the engine will be blocked (CR-11 only)
3	**duration of locking pulses**	**0,3 sec.**	4 sec.	modify „lock“ and „unlock“ output pulse duration (CR-11 only)
4	**longer „lock“ signal**	60 sec.	**normal**	60sec. signal can be used for powered windows control (CR-11 only)
5	**VALET button function**	**enabled**	disabled	emergency disarm with VALET can be disabled (only manufacturer can disarm when the remote control is lost and VALET disarming is disabled !!!)
6	**arming / disarming chirps**	**all arming**	limited	if limited, no sounds for button A arming and normal disarming are generated
7	**PANIC (car finding) signal**	**enabled**	disabled	can be triggered if A&B buttons are pressed simultaneously
8	**current detector**	**enabled**	disabled	switches the detector completely off
9	**vibration detector**	**enabled**	disabled	completely disabled
10	**vibration detector reaction**	**ALARM**	WARNING	alarm after several vibrations or short siren chirp after each vibration
11	**open door warning**	**enabled**	disabled	if disabled, it will not indicate if all the doors are closed when arming
12	**AL input reaction**	**ALARM**	WARNING	alarm or short siren chirp only when AL input activated
13	**AL input logic**	**N.O.**	N.C.	Normally Closed contact logic can be used as a positive trigger input

Operation



The CA-10 is operated by the RC-10 remote control in the following way:

ARMING - after switching off the ignition, close all the doors (closing of all windows is also recommended). Press the remote control button:

A for complete arming
B for arming without vibration detector

One siren chirp* confirms arming. If four fast siren chirps are generated, it indicates that an input is activated (a door is not closed properly).

DISARMING - press either button (A or B), and the siren should chirp twice*. After opening a door the dome light will come on until you switch the ignition key on. If you do not enter the car within 1 min. after disarming, the car alarm will rearm automatically*.

ALARM is indicated by siren for 30 sec. It will then return to the armed mode. Sound can be stopped by either button (A or B) but the car alarm will remain armed. To disarm it, press either button once more.

ALARM MEMORY - press button A while the ignition key is on to learn the cause of the last alarm. The LED indicates the cause by the number of flashes (2=ignition, 3=door, 5=AL input, 6=current detector, 7=vibrations). Use button B the same way for the second from the last alarm indication.

PANIC (car finding) signal - can be triggered any time if the A&B buttons are pressed simultaneously.

EMERGENCY DISARMING* - If you lost your remote control, open the car (this triggers the alarm), switch on ignition and press the VALET button.

REMOTE CONTROL BATTERY - if the remote control's working distance continuously decreases, then replace the remote control battery (after releasing the screw on the rear side of its housing). A suitable replacement battery is L1016 (6VDC). A quality battery's approximate life time is one year.

**/ marked features are selectable in setting mode*

Remarks about the CA-10 features:

- all trigger inputs starts to work 8 sec. after arming. The current consumption detector is active 10 minutes after arming. This enables the cooling system fan to function.
- if any trigger input is active when arming (not properly closed door etc.), the CA-10 will be armed without this input. The siren will indicate such arming with four fast beeps.
- the vibration detector can only trigger 3 alarms as a maximum during each arming period.
- number of LED flashes after ignition key turning on indicates how many remote controls are available for the car alarm.
- if central locking is connected to the car alarm (with CR-11 module), arming will lock the doors and disarming will unlock them
- if the car alarm has an immobilization function (with CR-11 module), the immobilization will be switched off only when the car alarm is disarmed and the ignition key is turned on

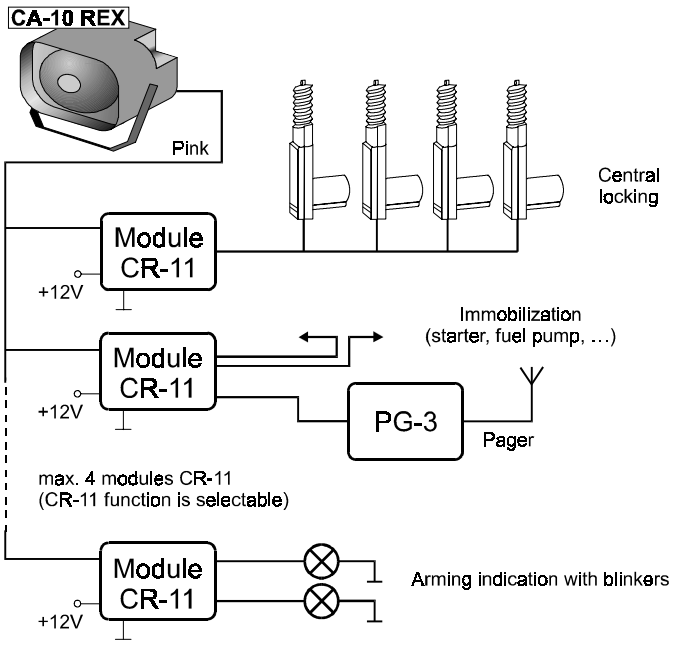
Specifications

voltage	12VDC (8 - 15VDC)
stand by consumption	max. 20 mA
remote control	radio signal, hopping code, ANTISCAN
working temperature	-40 to +125°C
siren loudness	120dB/1m
alarm memory	possibility to indicate last 2 events
built in drop voltage detector	disabled for 10 min. after arming
built in vibration detector	selectable reaction (alarm or warning)
inputs/outputs:	
1x door switches input	(also courtesy light output) - negative trigger
1x input AL	selectable logic for NC or NO detector
1x ignition input	+12V
1x VALET push button	setting and executive override
1x digital bus output AUX	for CR-11 extending modules

The CA-10 complies with IEC 839-10-1 and UN ECE No. 97

Extension of CA-10 for more functions

There is a blank position on the CA-10 main unit connector marked with an pink mark. You can insert the pink wire (included in the set) here. This wire is a digital bus which provides data for a CR-11 extending module.

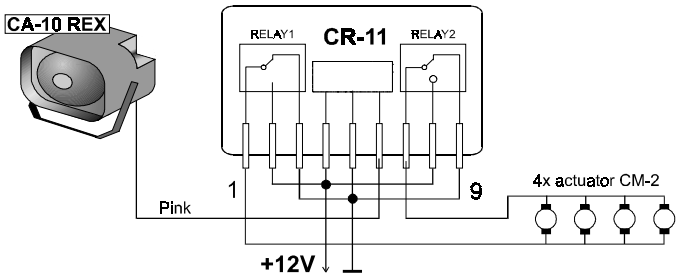


Four CR-11 modules, as a maximum, can be connected to the CA-10 (see diagram above). The CR-11 module has two built in relays, each with over switching contact of 15Amp. Functions of the relays are selectable with a switch inside each CR-11 module (8 options - see the table bellow).

By using the CR-11 modules, requested functions can be added to the car alarm (central locking control, immobilization, additional siren, wireless pager, powered windows remote control etc.). This way the CA-10 car alarm can be tailored according to your needs.

Wiring of each CR-11 module is simple, just +12V, ground and the pink wire (data from CA-10). There are also relay contact outputs (6 pins). You will find more details regarding CR-11 in its manual.

Example of CR-11 use for central locking actuators control



Selectable functions of CR-11 output relays

mode #	relay no. 1 function	relay no. 2 function
1	**1sec. pulse** after simultaneous **pressing of A&B** buttons on the remote control, **when armed**	**1sec. pulse** after simultaneous **pressing of A&B** buttons on the remote control, **when disarmed**
2	relay **will change status** after simultaneous **pressing of A&B**, on RC, **when armed /***	relay **will change status** after simultaneous **pressing of A&B**, on RC, **when disarmed /***
3	**left blinker** signals (arming, disarming, alarm)	**right blinker** signals (arming, disarming, alarm)
4	**lock** (pulse duration selectable in CA-10 setting mode)	**unlock** (pulse duration selectable in CA-10 setting mode)
5	**immobilization** (switched ON when disarmed and key is ON)	**alarm** (switched ON during alarm condition)
6	**immobilization** (switched ON when disarmed and key is ON)	**arming signals** (1 pulse = arming, 2 pulses = disarming)
7	**courtesy light control** follows door switches + 1 min.	**arming signals** (1 pulse = arming, 2 pulses = disarming)
8	**immobilization** (switched ON when disarmed and key is ON)	**courtesy light control** follows door switches + 1 min.

/* relay will also switch off 15 minutes after arming or disarming

JABLOTRON s.r.o.
Pod Skalkou 33
466 01 Jablonec nad Nisou
http://www.jablotron.cz