

## Carbest CA-990

# CarBest CA-990 Vehicle Security Paging Car Alarm System User Manual

Model: CA-990 | Brand: Carbest

## INTRODUCTION

Thank you for choosing the CarBest CA-990 Vehicle Security Paging Car Alarm System. This system is designed to provide advanced security and convenience for your vehicle. It features a two-way communication remote with an LCD display, allowing you to monitor your vehicle's status and control various functions from a distance. For optimal performance and safety, please read this manual thoroughly before installation and operation. Professional installation by a qualified technician is highly recommended due to the complexity of vehicle wiring systems.

## PACKAGE CONTENTS

Before beginning installation, please verify that all components are present in your package:

- Main Control Unit
- Two-Way LCD Remote Controls (2 units)
- Siren
- Wiring Harnesses
- Shock Sensor
- Antenna Module
- Relay
- User Manual



Image: Overview of the CarBest CA-990 car alarm system components.



Image: The two-way LCD remote controls for the CarBest CA-990 system.

## SETUP AND INSTALLATION

Installation of the CarBest CA-990 system involves electrical wiring and integration with your vehicle's existing systems. Due to the complexity, professional installation by a qualified technician is strongly recommended to ensure proper functionality and to avoid damage to your vehicle or the alarm system.

### Key Installation Considerations:

- **Main Control Unit Placement:** Securely mount the main control unit in a hidden, dry location within the

vehicle, away from direct heat or moisture.

- **Siren Mounting:** Mount the siren in the engine bay, facing downwards to prevent water accumulation, and away from heat sources.
- **Wiring Connections:** All wiring connections must be secure and properly insulated. Refer to the detailed wiring diagrams provided in the manual for specific connections to your vehicle's electrical system (e.g., ignition, door triggers, trunk trigger, parking lights, siren output).
- **Shock Sensor Adjustment:** The shock sensor sensitivity can be adjusted to prevent false alarms while ensuring adequate protection.
- **Antenna Placement:** Position the antenna module for optimal signal reception, typically on the windshield or dashboard, away from metal obstructions.

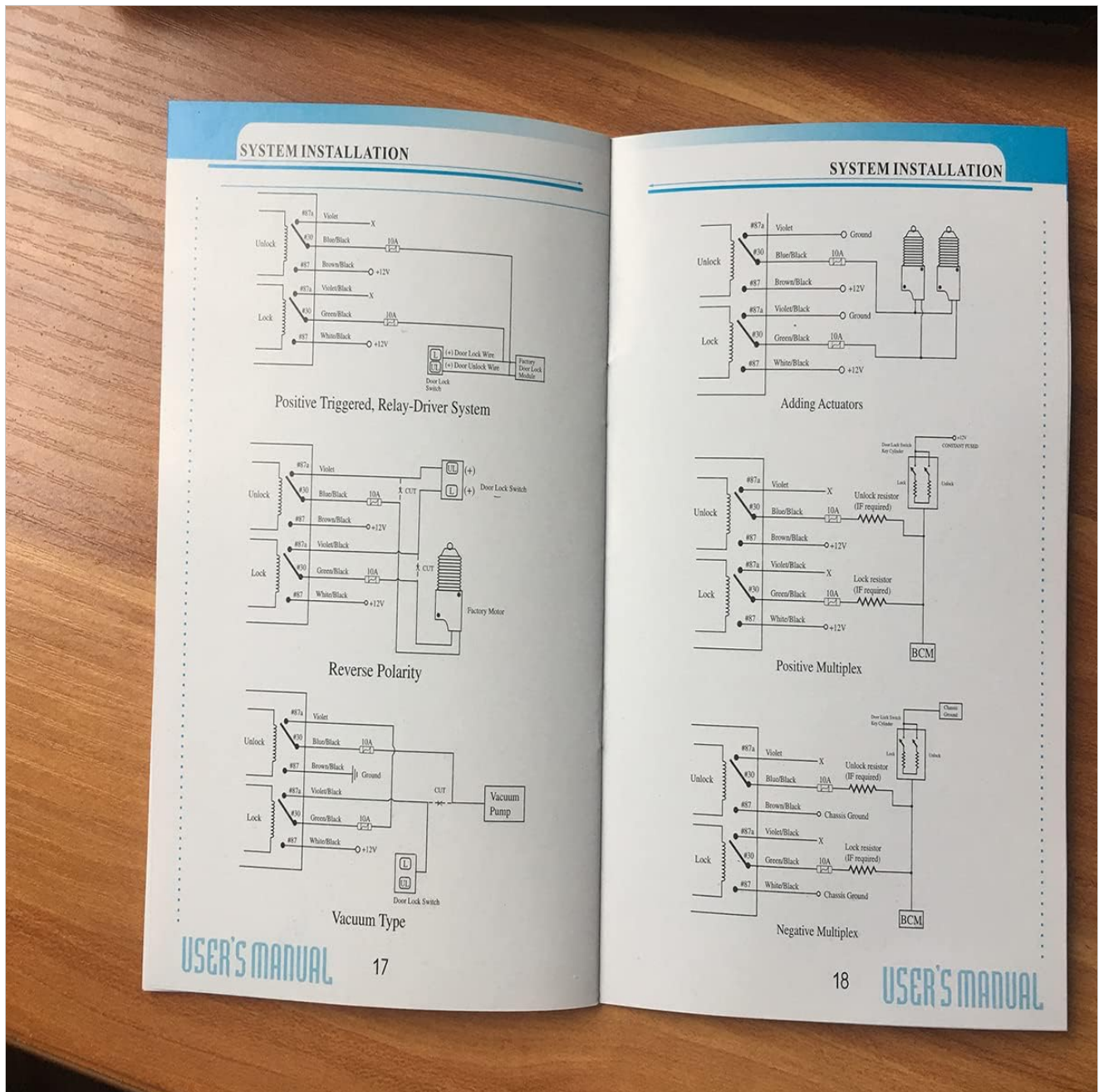


Image: Detailed wiring diagrams for various door lock systems and actuator connections.



## SYSTEM INSTALLATION

- Pin4: Blue/Black: Unlock #30 Common (Output)
- Pin5: Brown/Black: Unlock #87 Normally Open (Input)
- Pin6: Violet/Black: Lock #87a Normally Closed
- Pin7: Green/Black: Lock #30 Common (Output)
- Pin8: White/Black: Lock #87 Normally Open (Input)
- Pin9: Red: Constant +12V Input. Connect this wire to the battery or Constant Power wire at the Ignition Switch with a 15Amp Supply.
- Pin10: Black: System Ground. Connect this wire firmly to the Chassis Ground.

### 6-pin Secondary Harness for Outputs(H2)

- Pin 1: ORANGE WIRE: Armed Output (-) 500mA. The orange wire supplies a ground output while armed to activate a relay for starter defeat and anti-grind protection.
- Pin 2: BLUE WIRE: Second unlock (passenger unlock) output (-) 200mA. This system is equipped with a dedicated passenger unlock output allowing two stage door lock operation. When connected this wire, disarming the system will unlock only the driver's door. Pressing the disarm button again will unlock all doors.
- Pin 3: WHITE/BLACK WIRE: Auxiliary Channel 5 Output (-) 200mA. This wire provides a (-) 200mA output whenever the transmitter button is pressed for 2S. This output can be programmed to provide the following types of outputs:
  - a. 0.8-second timed: Output that will send a ground pulse of 0.8 second.
  - b. 15-second timed: Output that will send a ground continuous pulse for 15 seconds.
  - c. Latched, reset with ignition: Output that will send a signal when the Channel 5 button (button with a car icon) is pressed and will continue until the same button (button with a car icon) is pressed again. It additionally stops output whenever the ignition is turned on.
- Pin 4: PURPLE/BLACK WIRE: Auxiliary 4 Output (-) 500mA for windows rolling-up option. Connect to a power window module.
- Pin 5: BLACK/WHITE WIRE: Dome Light Output (-) 500mA. Connect to the wire that activate the vehicle's dome light, usually the door pin switch wire. Note: the dome light output can usually connect to the same wire used for the door trigger input (see purple and green door input wire).

**Note:** This output is only intended to drive a relay. It can not be connected directly to the dome light circuit, as the output cannot support the current draw of one or more light bulbs. Never use this wire to drive anything but a relay or a low-current input. The transistorized output can only supply 200mA of current. Connecting directly to a solenoid, motor, or other high-current device will cause it to fail.

- Pin 6: RED/WHITE WIRE: Vehicle Trunk Release Wire (-) 500mA. Connect this wire to the electronic trunk opener. (Relay may required).

### 8-pin 2510 Harness for Inputs and Outputs(H3)

- Pin 1: GREEN/BLACK WIRE: Factory Disarm Output (-) 500mA. This wire provides a ground output on disarming and before remote starting to disarm a factory security system. Connect to the wire that requires a ground pulse to disarm the factory security system.
- Pin 2: GREEN/WHITE WIRE: Factory Rearm Output (-) 500mA. This wire supplies a ground output on remote start shutdown to rearm a factory security system. Connect to the wire that requires a ground pulse to rearm the factory security system.
- Pin 3: BLACK WIRE: Optional Sensor Input (-). Connect to an optional instant sensor such as trunk pin switch.

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## SYSTEM INSTALLATION

Pin 4: GREY WIRE: Hood Pin Input (-). Connect this wire to the hood pin switch. The switch must supply a ground output - when switch is opened. This input will disable or shut down the remote start when the hood is opened. It will also trigger the security system if the hood is opened while the system is armed.

Pin 5: BROWN WIRE: Brake Input (+). Connect to the wire that shows +12V when pressing the brake. The brown wire is a safety shutdown wire that must be connected.

Pin 6: YELLOW WIRE: (+) Ignition Input of the Key Cylinder to Alarm. Connect to the ignition wire that provides +12V when the ignition is on and while cranking the starter.

Pin 7: GREEN WIRE: Negative Door Input (-). Most vehicles use negative door trigger circuit. Connect the green wire to the wire that shows ground when any door is opened. In vehicles with factory delays on the dome light circuit, there is usually a wire that is unaffected by the delay circuit.

Pin 8: PURPLE WIRE: Positive Door Input (+). Connect to the door switch circuit wire that shows +12V when any door is opened. This type of door circuit is usually found on Ford Vehicle.

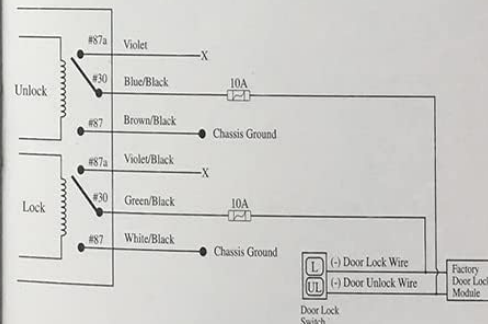
### Peripheral Plug-in Connectors

7-PIN White Connector: Two-way Transceiver Communication Port

3-PIN Black Connector: Optional Sensor Input port, for example, the Microwave Sensor.

2-PIN White Connector: LED Port. Mount LED in an area where it may be easily seen from either side of the vehicle.

### Door Lock Wiring Diagram



Negative Triggered, Relay-Driven System

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Image: Comprehensive wiring diagram for the main system and door lock integration.

## OPERATING INSTRUCTIONS

The CarBest CA-990 system is operated using the two-way LCD remote control. The remote provides visual feedback on your vehicle's status and allows for various functions.

### Remote Control Functions:

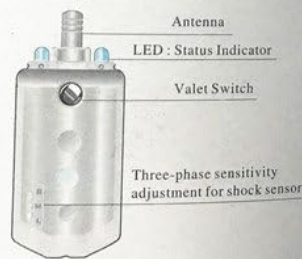
Thank you for purchasing this Long-Range Two-Way FM Vehicle Security System

This vehicle security system features a state-of-the-art technology and FM design to give you maximum safety and satisfaction in using the system.

- 1) Please read this manual carefully before using this car alarm so that you'll take the full advantage of every marvelous features provided by the system.
- 2) The local authorized dealer is responsible for the service and warranty.
- 3) The system requires no specific maintenance. Your remote control is powered by a small 1.5volt LR03AAA Alkaline battery. When the battery weakens, operating range will be shortened. When the battery icon "B" begins flashing on the LCD screen, please replace the battery.
- 4) This device complies with part 15 of FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device.
- 5) Due to the complexity of this system, it must be installed by an authorized dealer only.
- 6) All the modules and interconnection cables are inaccessible to the end user except the remote control, the communication unit and its signal cables.



Remote Control



Communication Unit

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Icons	Icons Descriptions
Y	Indication of no Acknowledgement
A	Door Locked (Car Armed)
A	Door Unlocked (Car Disarmed)
A	Trunk Released
A	Triggered by Shock Sensor
A	Door Opened
A	Ignition On or Triggered by Illegal Start
A	Hood Opened
A	Triggered by Microwave Sensor
A	Car Light Flashing
A	Keypad is Locked
A	Sound Arming
A	Silent Arming
A	RTC (Real-time Clock)
A	RTC Mode
A	PAC (Personal Alarm Call) Mode
A	Battery Life Indicator
A	Auxiliary Output
A	The System is in Arming Mode
A	The Engine is in Short-Run/Turbo Mode
A	The LCD Back Light is Enable

Button	Duration	Function	Condition
Car Icon	0.5 sec	Arm and Lock	Non-driving
Car Icon	2.0 sec	Panic Mode	
Car Icon	0.5 sec	Disarm and Unlock	
Car Icon	2.0 sec	Trunk Release	
Car Icon	0.5 sec	Remote Query	
Car Icon	2.0 sec	Auxiliary Channel 5 Output	Non-driving, Armed
* + Car Icon	0.5 sec	Remote Start Timer Mode	
* + Car Icon	0.5 sec	Remote Start ON/OFF	
Car Icon	0.5 sec	Lock	Driving
Car Icon	2.0 sec	Anti-robbery	
Car Icon	0.5 sec	Unlock	
* + * + *	0.5 sec	Turbo Mode	
* + *	2.0 sec	To Activate Set-up Menu	Any time
* + Car Icon	0.5 sec	Keylock ON/OFF	
Car Icon	0.5 sec	Hours or Minutes Increment	
Car Icon	2.0 sec	Hours or Minutes Increase Continuously	
Car Icon	0.5 sec	Function Select	Menu Activated
Car Icon	0.5 sec	Function Cancel	
* + *	0.5 sec	Function Shift	

Note: "+" means press the buttons in sequence within 2 seconds.

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Image: Table of button configurations and LCD icons for the remote control.

### Remote Control Button Functions

Button	Duration	Function	Condition
Lock Icon	0.5 sec	Arm and Lock	Non-driving
Lock Icon	2.0 sec	Panic Mode	Anytime
Unlock Icon	0.5 sec	Disarm and Unlock	Non-driving
Trunk Icon	2.0 sec	Trunk Release	Non-driving
Car Icon	0.5 sec	Remote Query	Anytime
Car Icon	2.0 sec	Auxiliary Channel 5 Output	Anytime
Lock + Car Icons	0.5 sec	Remote Start Timer Mode	Non-driving, Armed
Lock + Car Icons	2.0 sec	Remote Start ON/OFF	Driving
Unlock + Car Icons	0.5 sec	Anti-robbery	Driving
Unlock + Car Icons	2.0 sec	Unlock	Anytime

Button	Duration	Function	Condition
Star Icon	0.5 sec	Turbo Mode	Anytime
Star Icon	2.0 sec	To Activate Setup Menu	Anytime
Lock + Star Icons	0.5 sec	Keylock ON/OFF	Anytime
Unlock + Star Icons	0.5 sec	Hours or Minutes Increase	Correction of Real-time Clock, Remote Start Set-up for Personal Alarm
Unlock + Star Icons	2.0 sec	Hours or Minutes Decrease	Correction of Real-time Clock, Remote Start Set-up for Personal Alarm
Trunk + Star Icons	0.5 sec	Function Select	Menu Activated
Trunk + Star Icons	2.0 sec	Function Cancel	Menu Activated
Car + Star Icons	0.5 sec	Function Shift	Menu Activated

Note: "+" means press the buttons in sequence within 2 seconds.

## Demonstration Video:

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Video: This video demonstrates key functions of the CarBest two-way car alarm, including locking/unlocking, shocking warning, side door warning, illegal engine start warning, and trunk release.

## MAINTENANCE

- **Remote Control Battery:** The remote control requires 1 AAA battery. When the battery is low, the LCD screen will display a low battery indicator. Replace the battery promptly to ensure reliable operation.
- **Cleaning:** Use a soft, dry cloth to clean the remote control and main unit. Avoid using harsh chemicals or abrasive cleaners.
- **System Checks:** Periodically test the alarm functions (arming, disarming, shock sensor) to ensure the system is operating correctly.

## TROUBLESHOOTING

If you encounter issues with your CarBest CA-990 system, refer to the following common troubleshooting steps:

- **Remote Control Not Responding:**
  - Check the remote control battery and replace if necessary.
  - Ensure you are within the operating range of the system.
  - Verify that the remote is properly paired with the main unit. Refer to the pairing instructions in the full manual if available.
- **Disarm Function Fails / Doors Do Not Unlock:**

- This can sometimes be resolved by resetting the system. Consult a professional installer for guidance on system resets.
  - Check for any loose wiring connections to the door lock actuators.
- **Remote Start Issues:**
    - Ensure the vehicle is in neutral (for manual transmissions) or park (for automatic transmissions) and the parking brake is engaged.
    - Verify all safety interlocks (e.g., hood pin switch) are correctly installed and functioning.
    - A bypass module may be required for some vehicles with immobilizer systems. Confirm compatibility with your vehicle.
  - **False Alarms:**
    - Adjust the sensitivity of the shock sensor.
    - Ensure all door, hood, and trunk sensors are properly closed and not faulty.

For persistent issues or complex problems, it is recommended to contact a professional car alarm installer or the manufacturer's support.

## SPECIFICATIONS

Feature	Detail
Model Number	CA-990
Item Weight	2.2 pounds
Product Dimensions	9.06 x 5.91 x 2.76 inches
Batteries Required	1 AAA battery (for remote)
Wireless Remote	Yes
Maximum Range	150 Meters
Noise Level (Siren)	120 Decibels

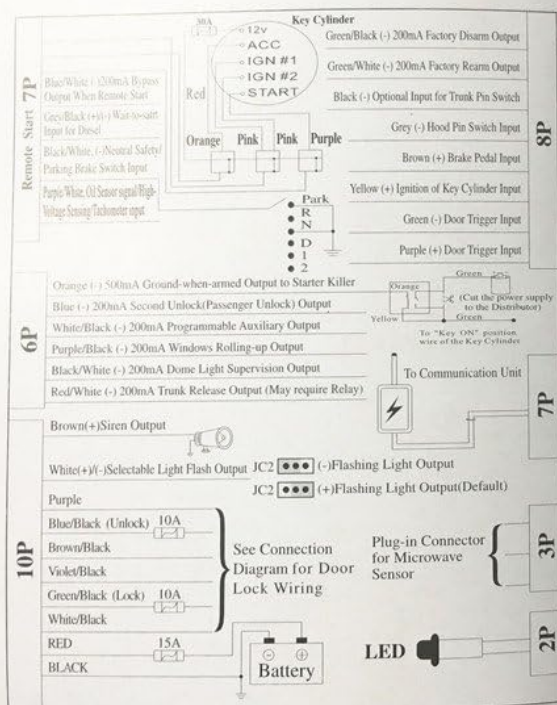
## LIMITED WARRANTY

This CarBest CA-990 Alarm & Starter product is warranted against manufacturing defects in material and workmanship for 180 days from the date of purchase from the authorized dealer. During the warranty period, the dealer will repair the product without charging for parts and labor costs.

The warranty does not cover damage or failure caused by or attributed to Acts of God, abuse, misuse, improper or abnormal usage, improper maintenance, lightning or other incidence of excess voltage, or any repairs other than those provided by the dealer's authorized repair facility. When the warranty period expires, the dealer will repair the products only charging the parts cost.



Quick Reference Guide for System Wiring



LIMITED WARRANTY

This Alarm & Starter product is warranted against manufacturing defects in material and workmanship for 180 days from the date of purchase from the authorized Dealer.

During the period, the Dealer will repair the products without charging the parts and labor cost.

The warranty does not cover damage or failure caused by or attributed to Act of God, abuse, misuse, improper or abnormal usage, improper maintenance, lightning or other incidence of excess voltage, or any repairs other than those Provided by the Dealer's engineer and their facility.

When warranted time is expired, Dealer will repair the products only charging the parts cost.

Purchase Information

Name of Dealer \_\_\_\_\_

Address \_\_\_\_\_

Zip Code \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

Date of Purchase \_\_\_\_\_

Signature of Installation Engineer \_\_\_\_\_

Product Information

Model \_\_\_\_\_

Type of Vehicle \_\_\_\_\_

Serial number of Remote Control#1 \_\_\_\_\_

Serial number of Remote Control#2 \_\_\_\_\_

Image: Excerpt from the manual detailing the limited warranty terms.

SUPPORT

For further assistance, technical support, or warranty claims, please contact your authorized CarBest dealer or the seller from whom you purchased the product. Ensure you have your purchase information and product model number (CA-990) available when contacting support.