LIMITED LIFETIME WARRANTY

Products manufactured and sold by OMEGA RESEARCH & DEVELOPMENT, INC. (the Company), are warranted to be free from defects in materials and workmanship under normal use. If a product sold by the Company proves to be defective, the Company will repair or replace it free of charge within the first year and thereafter all parts to be repaired will be free with only a nominal charge for Omega Research and Development, Inc.'s labor and return shipping, to the original owner during the lifetime of the car in which it was originally installed.

All products for warranty repair must be sent postage prepaid to Omega Research & Development, Inc., P.O. Box 508, Douglasville, Georgia 30133, with bill of sale or other dated proof of purchase. This warranty is nontransferable and does not apply to any product damaged by accident, physical or electrical misuse or abuse, improper installation, alteration, any use contrary to its intended function, unauthorized service, fire, flood, lightning, or other acts of God.

This warranty limits the Company's liability to the repair or replacement of the product. The Company shall not be responsible for removal and/or reinstallation charges, damage to or theft of the vehicle or its contents, or any incidental or consequential damages caused by any failure or alleged failure of the product to function properly. Under No Circumstances Should This Warranty, Or The Product Covered By It, Be Construed As A Guarantee Or Insurance Policy Against Loss. The Company neither assumes nor authorizes any person or organization to make any Warranties or assume any liability in connection with the sale, installation, or use of this product.

One or more of these patents may apply to this product:
#5,612,669 #5,654,688 #5,663,704 #5,729,191 #5,818,329 #5,612,578 #5,739,747 #382,558 #385,878 #5,750,942
#5,739,748 #5,719,551 #406,107 #701,285 #5,973,592 #5,982,277 #5,986,571 #6,011,460 #6,037,859 #6,049,268
#6,130,605 #6,130,606 #6,140,938 #6,140,939 #6,150,926 #6,144,315 #6,184,780 #6,188,326 #6,243,004 #6,249,216
#6,275,147 #6,297,731 #6,320,514 #6,320,498 #6,346,876 #6,346,877 #6,366,198 #6,392,534 #6,429,768 #6,433,677
#6,480,095 #6,480,117 #6,480,098 Foreign Patent #199700312 #EP0817734B1 #98906445.6 #2,320,248 #701,285

01/05 MA_MARS-03/V1

MARS
>>modular_advanced_remote_start<<

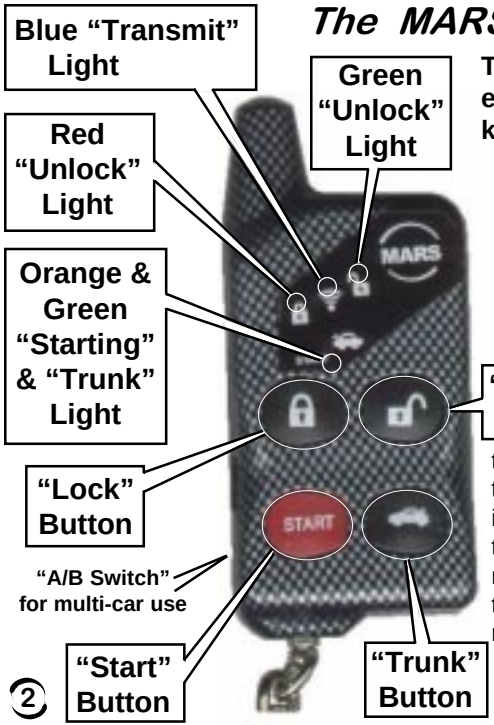
OPERATING & INSTALLATION INSTRUCTIONS

OMEGA®
RESEARCH AND DEVELOPMENT, INC.

MARS-03

2-Way Controller

The MARS-03 2-Way Controller



The MARS-03 controller adds 2-way operation to the Omega MARS remote keyless entry and starting system.

Unlike the transmitter, the MARS-03 controller receives signals from the main MARS unit installed in the vehicle, and it will **confirm to the user** the operation commands which were sent to the system. The controller does this with colored LED lights and by sounding chirp patterns.

The MARS-03 has 4 push buttons which perform the same operations as those on the system's original 1-way transmitters, and they also have the same markings. Thus using the 2-way controller to operate the system is exactly the same as the original transmitter (there is also an "A/B" slide switch on the side of the controller, so that two systems may be operated).

This same 2-way controller is also used with the MARS remote security alarm and starting system.

controllers and/or transmitters total can be programmed to operate the MARS system.

Exiting Programming Mode:

Simply allow the MARS to time out of the programming mode, by not transmitting for 15 seconds; or, turn the ignition "Off" to exit immediately.

The MARS indicates its exit from programming mode by turning off the Status Lights and a series of horn chirps.

Any time that transmitters are programmed to operate the MARS, for 48 hours afterward every time that the ignition key is turned "on" the horn will briefly chirp and the Status Light will flash the number of operating transmitters. This is "Unauthorized Transmitter Alert", protecting against unauthorized transmitters.

MARS-03 Controller Battery

The MARS-03 controller uses a standard "AAA" 1.5 volt battery. To install the battery, locate the battery compartment on the back of the controller. Slide the lock tab away from the door, and then slide the door downward to open. Insert the battery, reinstall the door and slide the lock back into place.

The MARS-03 will indicate when to replace the battery. When the voltage is lower than 1.1V the 2-color LED will flash when a button pressed, indicating that the battery should be replaced. The controller will chirp 3 times when a new battery is inserted, if it takes more 60 seconds to install the new battery, or if the old battery is completely dead.

Programming the Controller and original Transmitters

- Have all of the controller and transmitters which are to operate the MARS present. When one controller or transmitter is programmed to the system, all prior codes are erased.
- All of the controllers and transmitters which are to operate system must be programmed in during the same programming procedure.
- If the controller and/or transmitters are for a second car, be sure that the multi-car A/B switch is in the desired position before programming it into the system.
- See the controller battery installation instructions following the programming instructions.

1) Turn the ignition key "On" (and leave it "on").

2) Within 7 seconds press the Valet Switch 5 times (the Valet Switch is on the new window-mounted transceiver unit).

The transceiver unit's Status Lights turn on, and the horn chirps once (if connected).

3) Within 15 seconds press the first controller or transmitter's "LOCK" and "UNLOCK" buttons (both at the same time).

The MARS system will acknowledge the transmission by momentarily turning off the Status Lights and chirping the horn (if connected) 1 time.

4) Within 15 seconds press the next controller or transmitter's "LOCK" and "UNLOCK" buttons together.

The Status Lights turn off and the horn chirps once.

Keep repeating this action for each remaining transmitter or controller- up to four

continued next page

Using the MARS-03

Using the MARS-03 in place of the 1-way transmitter is very easy; the button functionality and vehicle system operation are the same. The MARS-03's confirming operations are easy to understand; many controller confirmations simply mimic the MARS system operation in the vehicle. In the following descriptions, the user action or event is on the left; the controller's confirmation is center; and the system operation at right. The controller's blue LED always lights when it is transmitting a signal, and see the MARS keyless entry system manual for complete details of the system operation.

User's action or event	MARS-03 controller	MARS system in vehicle
Locking & Unlocking the Doors		
Press LOCK button (Blue LED lights)	1 chirp; 1 red LED flash	Doors lock, 1 parking light flash, horn chirps once (if connected)
Press UNLOCK button (Blue LED lights)	2 chirps; 2 green LED flashes	Doors unlock, 2 park light flashes then on 30 sec., horn chirps twice (if connected)

Even if the MARS system doorlocking confirmation chirps are turned off, the controller still has chirps. The system indicators listed does not include the system Status Light on the Receiver Unit.

Locking & Unlocking the Doors, System in Valet Mode		
Press LOCK button (Blue LED lights)	4 chirps; 4 red LED flashes	Doors lock, 1 parking light flash, horn chirps once (if connected)
Press UNLOCK button (Blue LED lights)	4 chirps; 4 green LED flashes	Doors unlock, 2 park light flashes then on 30 sec., horn chirps twice (if connected)

Valet Mode prevents the use of the remote starting feature only.

User's action or event	MARS-03 controller	MARS system in vehicle

Remote Starting

Press START button (Blue LED lights)	Makes a long chirp & 2-color LED flashes rapidly green and orange	Parking lights turn on & horn chirps 3 times (if connected)

The MARS unit turns on the ignition and engages the starter. The parking lights turn off.

If the engine starts and runs	Chirps twice & the 2-color LED slowly flashes green and orange	Parking lights turn back on
If the engine won't run	2-color LED continues to flashes rapidly green and orange	Parking lights turn back on, then on & off as the system re-attempts to start the engine

When the engine turns off, if it is stopped, or if it does not start and run after several tries.

	Makes 4 chirps & 2-color LED flashes orange 4 times	Parking lights turn off and stay off

Remote Starting in Valet Mode, or a Violated Safety Circuit

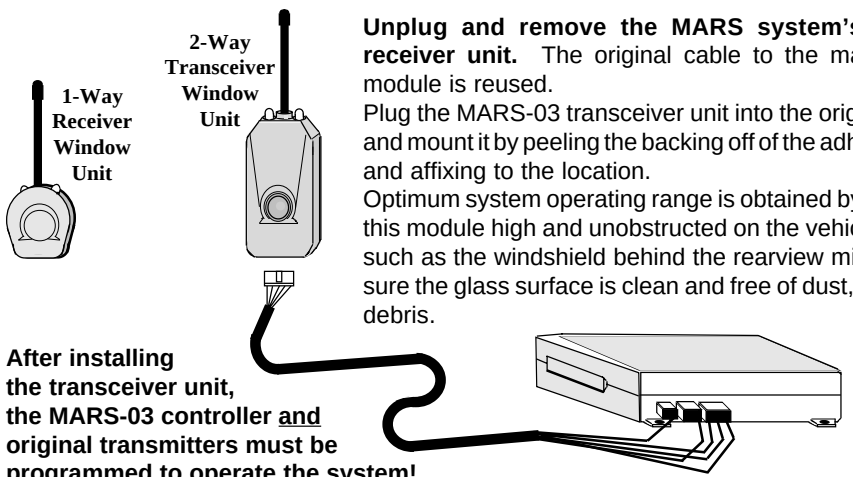
Press START button (Blue LED lights)	2-color LED flashes orange 4 times & has 4 chirps	Park lights flash 4 times, horn chirps 4 times (if connected); NO STARTING ATTEMPT WILL BE MADE

Having the MARS system in Valet Mode prevents remote starting. This is the purpose of the Valet Mode, which should be used whenever the vehicle is serviced, etc.
Safety circuits monitor for a pressed brake pedal or an open hood. Should either become non-operable, have the system checked immediately by a professional installer!
Even if the MARS system remote start confirmation chirps are turned off, the controller still has chirps.

Installing the MARS-03

Installing the MARS-03 is simple- the MARS system's 1-way receiver unit is replaced with the MARS-03 2-way transceiver unit, and the controller and original transmitters are programmed to the system, to operate it.

Replacing the Receiver with the Transceiver



Unplug and remove the MARS system's original receiver unit. The original cable to the main control module is reused.
Plug the MARS-03 transceiver unit into the original cable, and mount it by peeling the backing off of the adhesive tape and affixing to the location.
Optimum system operating range is obtained by mounting this module high and unobstructed on the vehicle's glass, such as the windshield behind the rearview mirror. Make sure the glass surface is clean and free of dust, grease, or debris.

After installing the transceiver unit, the MARS-03 controller and original transmitters must be programmed to operate the system!

Other MARS-03 Operational Notes

- The MARS system in the vehicle will only transmit a signal to the controller if it was last used to operate the system (as in locking, unlocking, etc.). Example: if the 1-way transmitter is used to lock the doors, the system will not transmit a signal which will cause the controller to chirp and flash its indicator LED.
- If multiple controllers are programmed to operate the system, the system will send its confirmation signal to only one controller- the last one used.
- When the MARS system does send a signal to the controller, a few seconds is needed for this “handshake” to occur. If the system is operated in a rapid fashion, as in quickly repeating lock and unlock cycles, the controller will not have time to receive the signal from the system, and therefore stop responding and reporting the system’s status. Normally operating the system corrects this symptom.
- When the MARS-03 controller receives a signal, it will stay in receive mode to keep “listening” for a signal for a few seconds, even while it is performing the confirmation action (i.e.- chirping and lighting its LEDs). If the user tries to immediately use the controller, the first button press will only switch off the “receive” mode (the blue LED will not light). To send a transmission, the button must be released and then it can be pressed again. Or, waiting a few seconds after the controller starts the confirmation action will allow the controller to switch itself from “receive” to “standby” mode.
- A final point to remember is that neither the MARS-03 controller nor the MARS system in the vehicle can receive signals while they are transmitting- allow a couple of seconds for each controller or system operation to be completed before attempting or expecting another operation.

User’s action or event	MARS-03 controller	MARS system in vehicle

Activating Remote Panic

Press LOCK button for 3 sec. (Blue LED lights) **OR**	1 chirp & 1 red LED flash; then 2-color LED flashes green once then orange for 3 seconds, three times	Doors **lock**, parking lights flash & horn sounds (if connected)
Press UNLOCK button for 3 sec. (Blue LED lights)	2 chirps & 2 green LED flashes; then 2-color LED flashes green once then orange for 3 seconds, three times	Doors **unlock**, parking light flash & horn sounds (if connected)

Turning Off Remote Panic

Press LOCK button (Blue LED lights) **OR**	1 chirp & 1 red LED flash	Doors **lock**, parking lights stop flashing & horn stops sounding (if connected)
Press UNLOCK button (Blue LED lights)	2 chirps & 2 green LED flashes	Doors **unlock**, parking lights stop flashing & horn stops sounding (if connected)

Remote Panic is operable at all times, even if the vehicle horn is not connected. Having the horn connected greatly increases the effectiveness of remote panic.
MARS Remote Panic is enhanced by allowing user choice of locking OR unlocking the doors, upon activation and deactivation.
If Remote Panic is activated while the MARS system is in Valet Mode, the controller’s door lock or unlock LED changes to 4 flashes, and it has 4 chirps. Remote Panic’s horn operation is also removed when the system is in Valet Mode.
If not stopped with the controller, Remote Panic will automatically stop after 60 seconds.

User's action or event	MARS-03 controller	MARS system in vehicle

Trunk Release

Press TRUNK button for 2 sec. (Blue LED lights)	2-color LED lights green for 3 seconds, then 2 chirps & 2 green LED flashes	Trunk release, doors unlock, 2 park light flashes then on 30 sec., horn chirps twice (if connected)

This is with the "out-of-box" operation of the MARS system. Trunk release confirmation chirps cannot be turned off in the MARS system (only the doorlocking functions chirps). **If the MARS system is programmed to NOT unlock the doors when Trunk Release is used, the operation is:**

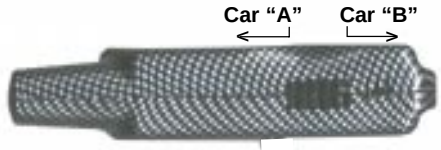
Press TRUNK button for 2 sec. (Blue LED lights)	2-color LED lights green for 3 seconds	Trunk release only occurs

Trunk Release in Valet Mode

Press TRUNK button for 2 sec. (Blue LED lights)	2-color LED flashes green 4 times & has 4 chirps; then 2 green LED flashes & 2 chirps (unlock indicator)	Trunk release, doors unlock, 2 park light flashes then on 30 sec., horn chirps twice (if connected)

If the MARS system is programmed to NOT unlock the doors with Trunk Release, the 2 green LED (unlock light) and final 2 chirps will not occur.

Multiple Vehicle Operation



The "multi-car" switch on the side of the MARS-03 controller

The MARS-03 controller can operate two different vehicles equipped with MARS systems. The slide switch on the side of the controller is utilized for this- one car can be operated in switch position "A" and the second car in switch position "B".

Controllers and 1-way transmitters must be coded for multiple vehicle operation- an easy procedure which is explained on pages 10-11.

Muting the Controller's Chirps

The user may configure the MARS-03 to not have the confirmation chirps. When the controller has the chirps muted, the controller will still confirm system events visually with all of the normal LED light displays.

At the same time press both the LOCK and TRUNK buttons and release them together

When this is done the controller will light the blue "transmit" LED and also light either the red "lock" LED or the green "unlock" LED:

Red LED indicates "chirps OFF" Green LED indicates "chirps on"

Repeated pressing of these two buttons alternates the chirp setting.