



MEDIC UPDATE







TECHNICAL SERVICE BULLETIN

SUBJECT : REMOTE KEYLESS ENTRY UPDATE				No: TSB-98-42A-008	
				DATE: October, 1998	
				MODEL: All models with RKE	
CIRCULATE TO:		<input type="checkbox"/> GENERAL MANAGER	<input checked="" type="checkbox"/> PARTS MANAGER	<input checked="" type="checkbox"/> TECHNICIAN	
<input checked="" type="checkbox"/> SERVICE ADVISOR		<input checked="" type="checkbox"/> SERVICE MANAGER	<input checked="" type="checkbox"/> WARRANTY PROCESSOR	<input type="checkbox"/> SALES MANAGER	

This bulletin supercedes TSB-97-42A-010 issued July, 1997 to include 1998 and 1999 models.

PURPOSE

Mitsubishi vehicles can have one of several types of remote keyless entry (RKE) systems installed, depending on vehicle model and model year. Some systems have only remote door lock operation, while others include an alarm system. Identify the system before attempting repairs. System operation, component location, and transmitter programming are different for each system. This bulletin contains basic service information for the various types of RKE systems. For detailed information on installing and troubleshooting RKE systems, contact your Regional Tech Line.

IDENTIFICATION OF RKE/SECURITY SYSTEMS						
System	OMRON	TRW - OMRON Copy	TRW	CodeAlarm RKE Only	CodeAlarm with Security	DENSO
Transmitter						
Installed By	Factory Option	Factory Option	Port/Dealer	Port/Dealer	Port/Dealer	Factory Option
Diamante	1994-99		1993-96	1997-98		
Diamante Wagon	1994-95		1993-95			
Eclipse		1995-99	1993-94	1995-99	'93-99 Dealer	
Expo/Expo LRV	1993-96				'93-96 Dealer	
Galant	1995-98		1994-98		'93-96 Dealer	1999
Mirage *				1997-99	'93-96 Dealer	
Montero	1994-96 (SR only)		1993-96		'93-96 Dealer '97-99 Port/Dealer	
Montero Sport					'97-99 Port/Dealer	
3000GT *	1993-99			1997-98		

* As a dealer option on these vehicles, CodeAlarm systems with "RKE only" are upgradeable to CodeAlarm with Security System. The upgrade kit is available through your facing PDC.

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FILE UNDER:

Group 42A Body in the Dealer Service Information Binder

(1901)

Refer to the appropriate page in this bulletin for RKE service information:

BULLETIN CONTENTS	Refer to Page
DENSO RKE System	2
OMRON RKE System	3
TRW (OMRON Copy) RKE System	4
TRW RKE System	5
CodeAlarm RKE Only System	6
CodeAlarm RKE with Security System (1993-96 models)	7
CodeAlarm RKE with Security System (1997-99 models)	8
RKE Service Parts	10

DENSO RKE (Factory-installed - See Group 42 in service manual)

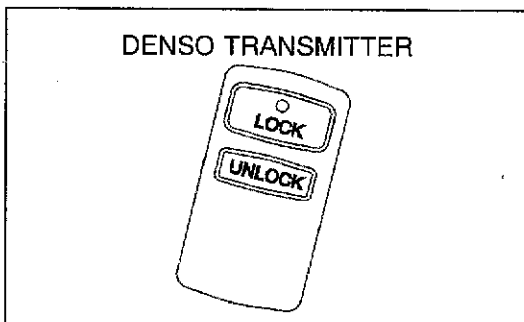
System Operation:

The system will operate if doors are open or closed. Push the UNLOCK button once to unlock the driver's door. Unlocking will cause the dome light to illuminate for 15 seconds and the hazard lights to flash. Push the UNLOCK button again to unlock the passenger doors. Push the LOCK button to lock all doors; the dome light and hazard lights will flash twice to confirm locking operation. If door is not opened within 30 seconds of unlocking, the system will relock the doors. If the vehicle is equipped with the factory alarm system, remote transmitter will also have a PANIC button, and locking/unlocking the doors will arm/disarm the alarm system. If equipped, PANIC button will activate alarm if pressed.

Receiver Module Location: Receiver module is the ETACS module on the back side of the fuse block in the left end of the dash.

Electrical Connections: This is a factory-installed system and is "hard-wired" into the vehicle. Refer to the appropriate service manual for specific electrical connections.

Transmitter Programming:



1. You can program up to 4 transmitters, and you program them all at once.
2. Insert the key in to the ignition lock on the steering column. Do not turn it on.
3. With the ignition key off, connect the MUT-II scan tool into the data link connector.
4. Within 10 seconds of plugging the MUT-II in, press the Hazard switch 6 times. The door locks should cycle indicating you are in the "program" mode.
5. Press either button on the first transmitter slowly three times within 10 seconds. The power door locks should cycle after the first transmitter is programmed.
6. Press either button on the second transmitter slowly three times within 10 seconds. The door locks should cycle after the second transmitter is programmed. The same procedure applies to a third or fourth transmitter.
7. Disconnect the MUT-II, remove the ignition key and verify that all transmitters operate properly.

OMRON RKE (Factory-installed – See Group 42 in service manual)

System Operation:

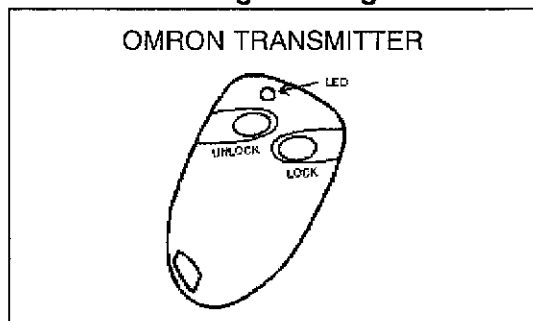
The system will not operate if doors are open or if the key is in the ignition. Push the UNLOCK button once to unlock the driver's door and illuminate the dome light for a few seconds. Push the UNLOCK button again to unlock the passenger doors. Push the LOCK button to lock all doors; the dome light will flash twice to confirm locking operation. If door is not opened within 30 seconds, the system will relock the doors. If equipped with the factory alarm system, locking/unlocking the doors will arm/disarm the alarm system. If the alarm is activated, the key must be used in a door to silence the alarm. If equipped, the TRUNK button must be pressed twice to unlock the trunk.

Receiver Module Location:

- Expo/Expo LRV – Behind rear quarter panel at "C" pillar, above rear wheel well (driver side on Expo LRV; passenger side on Expo)
- Montero – Behind rear quarter panel, forward of passenger side rear combination light
- Diamante and Galant – Under rear shelf trim (access from trunk except on 1997-up Diamante)
- 3000GT – Behind rear quarter trim panel on driver side, near left rear speaker

Electrical Connections: This is a factory-installed system and is "hard-wired" into the vehicle. Refer to the appropriate service manual for specific electrical connections.

Transmitter Programming:



- With the ignition key off, connect the MUT-II scan tool into the data link connector.
- Close all doors and the trunk (or hatch).
- Turn the ignition key to "ACC" then to "OFF." The power door locks should cycle, indicating that you are in "Program" mode.
- Press either button on the first transmitter slowly three times within ten seconds. The power door locks should cycle after the first transmitter is programmed.

- Press either button on the second transmitter slowly three times within ten seconds. The door locks should cycle after the second transmitter is programmed.
- Disconnect the MUT-II and remove the ignition key.
- Verify that both transmitters operate properly.

If the transmitters do not operate properly, use the following alternative method:

- Gain access to the RKE receiver module. Refer to the appropriate service manual for trim panel removal instructions.
- The switch on the receiver module has 3 positions: "SET I", "FIX", and "SET II." (In the normal operating position, the switch should be in the middle ("FIX") position.) To program the transmitters, first move the switch to one of the "SET" positions.
- Press either the LOCK or UNLOCK button on the first transmitter.
- Move the switch on the receiver module to the other "SET" position.
- Press either the LOCK or UNLOCK button on the second transmitter.
- Move the switch on the receiver module to the "FIX" position.
- Remove the ignition key and close all vehicle doors and trunk (or hatch).
- Verify that both transmitters operate properly.

RKE TRANSMITTER TROUBLESHOOTING (OMRON ONLY)

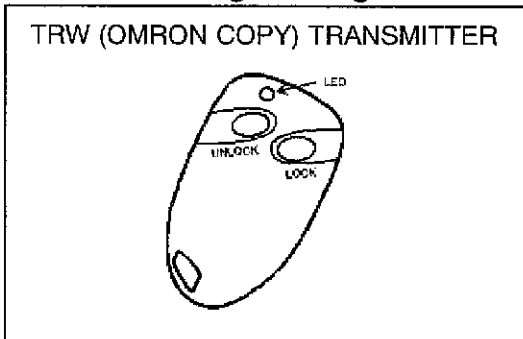
If an RKE transmitter will not lock or unlock vehicle doors, transmitter replacement may not be necessary. The battery may be dead or missing. Perform the following steps before replacing the transmitter:

1. Press each button on the transmitter. If the red indicator lamp comes on when each button is pressed, the transmitter is functioning properly. Do not replace the transmitter if the indicator light comes on with each button press.
2. If the red indicator lamp does not come on when each button is pressed, replace the battery or batteries.
3. Check the transmitter function again. The indicator light should come on with each button press. If it does not, replace the transmitter.
4. If you replace the transmitter, program the new transmitter.

TRW (OMROM COPY) RKE (Factory-installed – See Group 42 in service manual)

System Operation: This is the U.S.-sourced version of the OMRON RKE system. It operates the same as the OMRON RKE and is “hard-wired” into the vehicle. Refer to the appropriate service manual for specific electrical connections. The receiver module is located near the rear speaker on the left side.

Transmitter Programming:



1. With the ignition key off, connect the MUT-II scan tool into the data link connector.
2. Close all doors and the trunk (or hatch).
3. Turn the ignition key to “ACC” then to “OFF.” The power door locks should cycle, indicating that you are in “Program” mode.
4. Press either button on the first transmitter slowly three times within ten seconds. The power door locks should cycle after the first transmitter is programmed.
5. Press either button on the second transmitter slowly three times within ten seconds. The power door locks should cycle after the second transmitter is programmed.
6. Disconnect the MUT-II and remove the ignition key.
7. Verify that both transmitters operate properly.

TRW RKE (Port/Dealer installed – Not included in service manual)

System Operation:

Push the LOCK button to lock all doors. Push the UNLOCK button to unlock all doors. Does not operate the dome light. If equipped with the factory alarm system, locking/unlocking the doors will arm/disarm the alarm system.

Receiver Module Location:

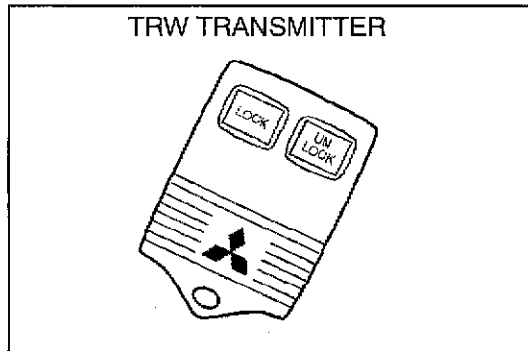
- a. Diamante – Near glove box
- b. Eclipse and Montero – Behind knee bolster on driver's side
- c. Galant – On blower motor, above glove box

Electrical Connections: Spliced into central door locking system harness

- a. Diamante and Galant – Above glove box
- b. Eclipse and Montero – Interior relay box

Transmitter Programming:

1. Locate the white RKE programming connector located near the receiver module.
2. Using a jumper wire, connect the two programming connector pins to each other. The doors should lock and unlock to indicate that you are in programming mode.



3. Press the "LOCK" button on the first transmitter. The door locks should lock and unlock again.
4. Press the "LOCK" button on the second transmitter. The door locks should lock and unlock again.

NOTE: If programming transmitters on a 1992 or 1993 Diamante, you can set up the system so that the doors automatically unlock when the transmission is shifted into "PARK" as follows:

- a. On the first transmitter, press buttons in the following sequence: LOCK-UNLOCK-LOCK-UNLOCK-LOCK-UNLOCK. The door locks should lock and unlock three times.
 - b. Repeat the above sequence in step a. with the second transmitter.
5. Remove the jumper wire from the programming connector.
 6. Verify that both transmitters operate properly.

CODEALARM RKE ONLY (Port/Dealer installed – Not included in service manual)

NOTE: For technical assistance on installing and servicing CodeAlarm systems, call 800-421-3209 Monday-Friday between 8:00 a.m. and 7:00 p.m. or Saturday between 10:00 a.m. and 2:00 p.m. Eastern Standard Time.

System Operation:

Push the "1" or "LOCK" button to lock all doors. Push the "2" or "UNLOCK" button to unlock all doors and illuminate the dome light for 60 seconds or until the ignition key is turned to the "ON" position. After the ignition key is turned to the "OFF" position, the dome lamp will remain illuminated for 60 seconds.

Receiver Module Location: For all models except 1997-98 Diamante, behind knee bolster on driver's side. For 1997-98 Diamante, at base of passenger side "A" pillar.

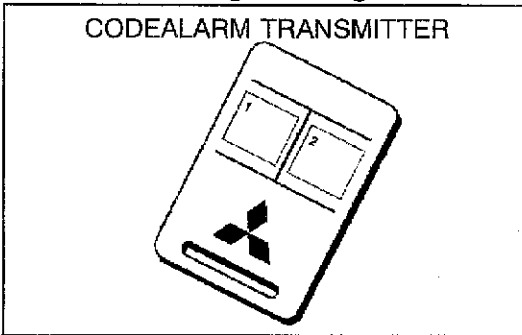
Ignition Switch Connection: 6-pin ignition switch connector on left side of steering column

Ground Connection: Hex bolt on left side kick panel

Courtesy Light Connection: For all models except 3000GT, at ETACS unit connected to fuse block. On 3000GT, under dash on driver's side.

Door Lock Connection: For all models except 1997-98 Diamante, near the ETACS unit with fuse block. On 1997-98 Diamante models, at engine ECU.

Transmitter Programming:



1. Locate the programming button in the RKE harness near the RKE receiver.
2. Open driver's door. Leave door open until programming is completed.
3. Turn the ignition key to the "ON" position. Press and hold the programming button for about 15 seconds. The power door locks should lock and unlock three times.
4. While still holding the programming button down, press the "1" or "LOCK" button on the first transmitter. The door locks should lock and unlock.
5. While still holding the programming button down, press the "1" or "LOCK" button on the second transmitter. The door locks should lock and unlock.
6. Release the programming button.
7. Turn the ignition key to the "OFF" position.
8. Verify that both transmitters operate properly.

CODEALARM RKE WITH SECURITY SYSTEM (1993 – 1996 models) (Port/Dealer installed – Not included in service manual)

System Operation:

Operates same as CodeAlarm RKE system, except also provides siren, alarm, and "panic" features. The status indicator light is also used as the alarm override button. Can install on vehicles without power door locks to function as just an alarm system.

When the system is armed, unlocking a door with the key will activate the alarm. To disarm the system in this condition, press the "1" button or simultaneously press the status indicator light and turn the ignition key and start the engine.

- **Arming:** Press the "1" button to arm the alarm and lock all doors. The parking lights will blink and the siren will chirp. When the system completes arming, the parking lights blink again and the siren chirps again. A status indicator light will begin blinking.
- **Activating:** If the alarm is armed, it is activated by either opening a door or by the motion/pressure sensor. The siren sounds and the parking lights flash. After a few minutes, the alarm deactivates and automatically re-arms itself. If the alarm has been activated, the status indicator light will blink faster, indicating that the alarm was previously activated.
- **Disarming:** Press the "2" button to disarm the alarm and unlock all doors. The parking lights blink, the siren chirps, and the dome light illuminates for 60 seconds or until the ignition key is turned to "ON." To disarm the system without a transmitter, simultaneously press the status indicator light (which is also used as the alarm override button) and turn the ignition key to start the engine.
- **Panic Feature:** Press both buttons "1" and "2" simultaneously to activate the alarm. Press either button to silence the alarm.
- The dome light always illuminates for 1 minute after the ignition key is turned off.

Receiver Module Location: Behind knee bolster on driver's side

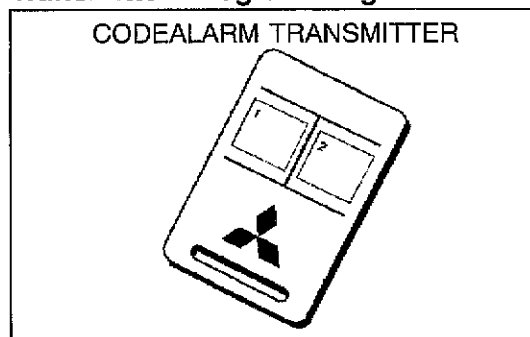
Ignition Switch Connection: WHITE, BLACK/WHITE and BLACK wires in 6-pin ignition switch connector on left side of steering column

Ground Connection: Behind left side kick panel, attached with a 10 mm hex bolt.

Parking Light Connection: GREEN/WHITE wire in 7-pin combination switch connector on upper left side of steering column

Door Lock/Courtesy Light Connection: At ETACS unit connected to fuse block

Transmitter Programming:



1. Open the driver's door.
2. Turn the ignition key to the "ON" position.
3. Press and hold the status indicator LED button (serves as the programming button). After about 15 seconds, the doors should lock and unlock three times to indicate that you are now in programming mode. Continue holding the LED button.
4. Press the "1" button on the first transmitter. The doors should lock and unlock.
5. Press the "1" button on the second transmitter. The doors should lock and unlock.
6. Release the programming button.

7. Turn the ignition key to the "OFF" position and close the doors.
8. Verify that both transmitters operate properly.

If the transmitters do not operate properly, use the following alternative method:

1. Enter the vehicle and shut all doors.
IMPORTANT: Steps 2 through 5 must all be performed within 10 seconds in order for the system to enter the programming mode.
2. Turn the ignition key to the "ON" position.
3. Using either the driver's door button or the dome light switch, turn the dome light on and off three times.
4. Turn the ignition key to the "OFF" position. The door locks should lock and unlock three times to indicate that you are in the programming mode.
5. Press the "1" button on the first transmitter. The door locks should lock and unlock again.
6. Press the "1" button on the second transmitter. The door locks should lock and unlock again.
7. Turn the ignition key to the "ON" position, then to the "OFF" position.
8. Verify that both transmitters operate properly.

CODEALARM RKE WITH SECURITY SYSTEM (1997-99 models) (Port/Dealer installed - Not included in service manual)

System Operation:

Operates the same as the CodeAlarm RKE Only system, except also provides siren, alarm, shock sensor and "panic" features. The status indicator light is also used as the alarm override button. Can be installed on vehicles without power door locks to function as just an alarm system.

When the system is armed, unlocking a door with the key will activate the alarm. To disarm the system in this condition, press the "UNLOCK" button or simultaneously press the status indicator light and turn the ignition key and start the engine.

- **Arming:** Press the LOCK button to arm the alarm and lock all doors. The parking lights will blink and the siren will chirp. When the system completes arming, the parking lights blink again and the siren chirps again. A status indicator light will begin blinking.
- **Activating:** If the alarm is armed, it is activated by either opening a door or by the shock sensor. The siren sounds and the parking lights flash. After a few minutes, the alarm deactivates and automatically re-arms itself. If the alarm has been activated, the status indicator light may blink faster.
- **Disarming:** Press the UNLOCK button to disarm the alarm and unlock all doors. The parking lights blink, the siren chirps, and the dome light illuminates for 60 seconds or until the ignition key is turned to "ON." To disarm the system without a transmitter, simultaneously press the status indicator light (which is also used as the alarm override button) and turn the ignition key to start the engine.
- **Panic Feature:** Press both transmitter buttons simultaneously to activate the alarm.
- Even if the system is not armed, the dome light illuminates for 60 seconds after the ignition key is turned to "OFF."

Receiver Module Location: Behind driver side front speaker

Ignition Switch Connection: 6-pin ignition switch connector on left side of steering column

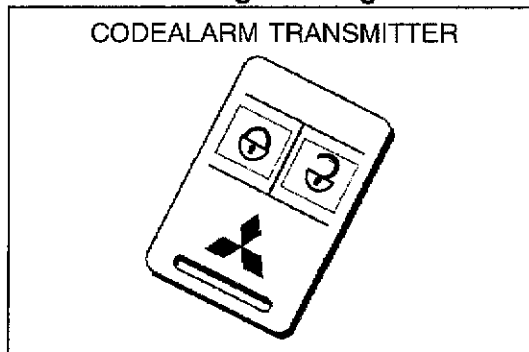
Parking Light Connection: GREEN/WHITE wire in 10-pin connector above the ignition switch connector in the parking light harness

Ground Connection: 10 mm bolt in left front kick panel area

Courtesy Light Connection: At ETACS unit in harness behind driver foot rest (NOTE: There are two wires of this color in the harness.)

Door Lock Connection: At ETACS unit connected to fuse block

Transmitter Programming:



1. Turn the ignition key to the "ON" position.
2. Open the driver's door. (The courtesy light should come on.)
3. Press and hold the emergency override button (status indicator light). In 15 seconds the door locks should lock and unlock three times to indicate that you are in the programming mode. Continue holding the ignition override button.
4. Press the LOCK button on the new transmitter.
5. Release the ignition override switch.
6. Turn the ignition key to the "OFF" position.

PARTS INFORMATION



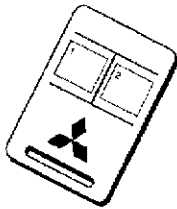
OMRON System	
Transmitter (1993-97 models)	MB920014
Transmitter with panic button (1996-98 models)	MR207969
Transmitter with trunk button (1994-95 Diamante)	MB920013
Transmitter (1998 Diamante)	MR238004
Transmitter with panic and trunk buttons (1997-99 Diamante)	MR238179
Transmitter without panic or trunk buttons (1998 Diamante)	MR238004
Transmitter with panic button (1998-99 3000GT)	MR368851
Screw	MR207501
O-Ring	MR238207



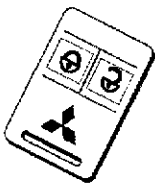
TRW (OMRON Copy) System	
Transmitter (1995 models)	MR122506
Transmitter with panic button (1996-99 models)	MR123944
Receiver Module	MB953726



TRW System	
Transmitter	A993NK1X03
Receiver Module	A993NK1X02



CODEALARM RKE Only System	
Transmitter	A993NC1X03
Receiver Module	A993NC1X02
Upgrade Kit for RKE with Security	A997NA1X01



CODEALARM RKE with Security System	
Transmitter	A993NC1X03
Receiver Module	A993NC1X02
Shock Sensor	A993NC1X04
Siren	A993NC1X05



DENSO RKE With Security System	
Transmitter - 2-button (no factory theft alarm)	MR301714
Transmitter - 3-button (has panic with factory theft alarm)	MR282108
Transmitter Screw	MR372535

Produced by the MMSA Technical Information Department.