

Dakota Digital

MMR-1/MMR-2

Digital Rear View Mirror with Temperature and Compass

You may need the following tools to complete this installation:

- Safety glasses
- DC voltmeter
- Wire strippers
- Flashlight
- Crimping pliers
- Power drill
- #20 Torx bit
- 9/16" drill bit
- Phillips screwdriver
- Knife

1. **In the interior of the vehicle, remove the upper windshield trim, the driver's side A-pillar trim and kick-panel (plastic trim panel on the floor by your feet).**
2. **Remove the factory rearview mirror from the windshield.**
3. **Install the new mirror.**
 - **If the mirror does not fit your vehicle, it may be necessary to replace your mirror button with a different one. Pre-1996 Ford units are a commonly compatible style.**
4. **Starting at the bottom of the dash on the driver's side, feed the black, flat connector up to the opening for the A-pillar at the base of the windshield. Routing the wires straight up the pillar, pull enough through to reach the mirror.**
 - **For a neat installation, tuck the wires up above the headliner.**
5. **Find an existing bolt to ground the black grounding wire to the body near the kick panel.**
6. **Next, find a switched power source that maintains 12 volts when each accessory is turned on.**
 - **Connect the red wire in the harness to the switched power source.**

Mounting the temperature probe

7. **Route the temperature probe to the front of the vehicle. The small square plug needs to go through the firewall into the passenger compartment to keep it dry.**
 - **The best location for the temperature probe is in the center of the car, in front of the radiator. The probe needs to be in free air; behind the bumper often works. Avoid placing it inside a wheel well or in the engine compartment; no higher than the center of the radiator and no lower than eight inches off the ground. Look for a location near the center of the vehicle, never outside the frame rails. Avoiding engine heat is essential.**
8. **With the ignition 'OFF,' plug the temperature probe in to the harness. Clip the probe to the mounting location chosen in the previous step.**
9. **Route the temperature probe harness to the passenger compartment and plug it in to the main harness.**

Steps 10-13 are for MMR-2 mirrors only. MMR-1 mirrors do not have map lights.

10. **Locate a constant power source, and connect the yellow wire (labeled 'battery') to it. This power source must maintain 12 volts even when the key is in the 'OFF' position.**

11. There are two types of dome light circuits:

- All GM, most Chrysler and some Fords have constant 12 volts to the dome light. Upon opening the door, the circuit is grounded and the lights come on. The wire at the switch will have 12 volts when the door is closed and 0 volts when it is open.
- Most full-size Fords and some Chryslers have two wires at the door jam switch. When the door is closed, there is 12 volts running through one wire, but not the other. Upon door opening, there is 12 volts on both wires.

12. Route the brown wire to the door switch and connect it with the proper wire. Again, the wire at the door switch must go from 0 volts to 12 volts or 12 volts to 0 volts upon door opening and closing.

13. Once the brown wire is connected, compare the map lights to the vehicle dome lights. If they work opposite one another, open the black box on the brown wire and flip the switch inside.

14. Double check that all wires are away from sources of heat, moving parts as well as the accelerator and brake pedals.

Testing the mirror

15. Turn the ignition switch to the 'ON' position

- Make sure the auto-dimming feature is active, evident when green LED is on.
- In a well-lit area, cover the forward-facing photocell with your finger or black tape.
- Shine a flashlight on the photocell next to the green LED. After a few seconds the mirror will begin to darken.
- Remove finger or tape and turn off the flashlight; the mirror should begin to lighten.

16. Ensure the display for the compass and temperature is illuminated.

- Check accuracy of temperature.

17. If you have an MMR-2 mirror with map lights, check that they turn on and off with the switch as well as with the dome lights.

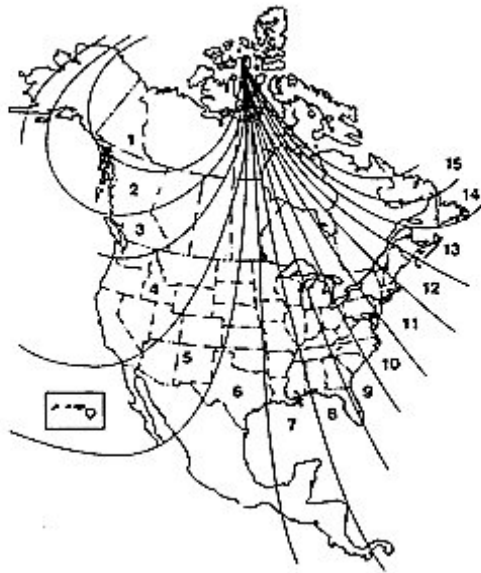
Compass Calibration

18. Zone Variation needs to be set to compensate for the variation between true north and magnetic north. To set:

- Turn ignition to 'ON'
- Using the map on the next page, find your geographic location.
- Push the center button for three seconds and release when 'Z' is illuminated on the display. Press the center button until the correct zone is displayed. After five seconds the zone setting will save.

19. The compass automatically calibrates itself while the vehicle is driven as your route takes you in complete circles. Ideally, no calibration should be required, but it may take up to an hour.

- To manually calibrate the compass:
 - Turn ignition 'ON'
 - Hold center button for six seconds until 'CAL' is displayed. Drive the vehicle in at least three circles, allowing 45 seconds to complete one circle.



Temperature

20. Push the center button to toggle between °F, °C or display off.

21. Ice warning is indicated when temperature is below 37°F.

Troubleshooting

Problem	Solution
Temperature reading of -20°F or lower.	Turn ignition 'OFF' for 2 ½ hours. Do not unplug the mirror. This problem is most often caused by connecting or disconnecting the temperature circuit while mirror is powered on.
Temperature reading higher than ambient air temperature and/or rises after vehicle engine has warmed up.	The temperature probe location is improper. Move probe away from heat sources (radiator, engine, exhaust etc.) Mount the probe where it can be exposed to free outside airflow.
Temperature reading low.	Clean corrosion from temperature probe contacts and/or at the harness connection. Corrosion changes the resistance in the temperature circuit. Never use butt splices where wires are exposed to road spray – always use solder and heat shrink if green wires are cut.
Temperature display shows OC.	There is an open circuit in the temperature wires. Confirm that temperature probe and harness are plugged in. Make sure the mirror is not powered when connecting/disconnecting the temperature circuit. Check green wires for break or damage. Ohm test temperature probe; if open, replace probe.
Temperature display shows SC.	There is a short circuit in the green temperature wires. Check green wires for pinch and or short to ground.

Service and repair

DAKOTA DIGITAL offers complete service and repair of its product line. In addition, technical consultation is available to help you work through any questions or problems you may be having installing one of our units. You can contact our technicians at 605-332-6513 or by email at dakotasupport@dakotadigital.com.

Should you ever need to send the unit back for repairs, please package the product in a good quality box along with plenty of packing material. Ship the product by UPS or insured Parcel Post. **Be sure to include your RMA#, a complete description of the problem, your full name and address (street address preferred), and a telephone number where you can be reached during the day.** A return authorization number (RMA#) for products being return for repair is required. Do not send any money. We will bill you for the repair charges.

Dakota Digital

4510 W. 61ST St. N., Sioux Falls, SD 57107
 Phone: (605) 332-6513 FAX: (605) 339-4106

www.dakotadigital.com
dakotasupport@dakotadigital.com

©Copyright 2009 Dakota Digital Inc.

MAN# 650289