

ETM Supplement: Legend Cellular Phone Troubleshooting

Test the phone as described under Components Check below. If it has one of the symptoms listed in the Symptoms Index, follow the procedure on the page listed. Illustrations of component and connector locations are on page 2. If necessary, refer to the wiring schematic in the ETM (Electrical Troubleshooting Manual).

Components Check

- 1. Check the ignition sense, the lock function, and the relay function:
 - With the ignition off, turn the cellular phone on by pressing the "Pwr" key. You should see "Wake Up" – All 8s, indicator lights and back-lighting come on, and hear a DTMF tone from the entertainment system. Note that the display then changes to locked, and a tone from the speaker confirms the "Relay Box Is Working Properly."
 - Press the "END/CLR" Enter "4," "5," "6." This is not a factory code, therefore the display should not change from locked.
 - Press the "END/CLR" Enter three digit factory unlock code, "1," "2," "3." "Locked" will be replaced by "On" in the display. The "No Svc" indicator should go off after a short delay. Turn the unit off by pressing the "Pwr" key.
 - With the vehicle ignition turned on, press the "Pwr" key. The telephone should come on. Turn the ignition off, the phone will go off. Again, turn the ignition on, the phone will come back on.
 - Press the "Fcn + 5" The unit will lock and "Locked" will appear in the display as well as an audible DTMF confirmation tone.
 - Enter the three digit unlock code "1," "2," "3" The telephone will unlock and "ON" will be displayed.
- Check the handset keyboard and the display as follows:
 - Enter "1," "2," "3," "4," "5," "6," "7," "8," "9," "*
 ," "0," and "#" The display should read
 6789A0C. This checks the function of the twelve upper keys on the handset.
 - Press the digit "8" ten times The display should read "8888888." This checks all of the segments of each digit. Then press "END/CLR."

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- 3. Check the store and recall functions from the handset:
 - Using the handset, press the digits "312" and the digit "1" seven times and then press "Sto+01" – The display will show "01" on the far left.
 - Do the same to store the telephone numbers in various memory locations that have a number greater than "4." Example memory location "04," "45," or "66."
 - Press "Rcl + 01" The display will flash between "01' 312" and "1111111" twice. Press "Rcl" to view the number again.
 - Recall the other numbers that are stored in the other memory locations that have a number greater than "4."
- Adjust the speaker, ringer, and earpiece volume (also checks the relay box):
 - With the AM/FM radio on, adjust the speaker volume with the handset mounted, by pressing and holding the volume button located on the left side of the handset. This will raise the volume. To lower the volume, release the button, then press and hold it again.
 - Adjust the ringer volume while a call is not in process, lift the handset and use the volume button as described above.
 - Adjust the earpiece volume while a call is in process, lift the handset and use the volume button as described above.

Symptoms Index

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CUSTOMER INFORMATION: The information in this bulletin is intended for use only by skilled technicians who have the proper tools, equipment, and training to correctly and safely maintain your car. These procedures should not be attempted by "do-it-yourselfers," and you should not assume this bulletin applies to your car, or that your car has the condition described. To determine whether this information applies, contact an authorized Acura automobile dealer.

BTB 17303 (9509)

Component and Connector Locations



Static in a call / Disconnects calls

- 1. Does the problem occur at the same time and place?
 - Yes Explain to the customer that the problem is not hardware related. Call the phone service provider and ask if they're having problems.□
 - No Go to the next step.
- Check the antenna connections at the transceiver (in trunk) and the coupling box (at rear window).

Are they tight?

Yes - Go to the next step.

- No Tighten the connectors and retest the phone.
- Disconnect the power harness and connect data transfer cable (P/N 07MAZ-001010A) in series at the transceiver.



- Turn the ignition switch to I (Accessory), and turn the phone on.
- As soon as the NO SVC light on the handset goes off, write down the signal strength and channel number readings.



 Turn off the phone and the ignition. Then connect the clip-mount test antenna and cable (P/N 07MAZ-001020A) to the transceiver.



7. Turn the ignition and the phone back on. Does the signal strength differ from step 5 by more than 15?

Yes - Go to the next step.

- No The phone is not showing a problem. Trouble may be related to the cellular service.□
- 8. Turn off the phone and the ignition. Then transfer the cable from the test antenna to the antenna on the rear window and repeat steps 4 and 5.
- Turn the ignition and the phone back on. Does this signal strength reading differ from the one in step 5 by more than 15?
 - Yes Replace the antenna cable between the transceiver and the rear window antenna.□
 - No Go to the next step.
- 10. Is the antenna base lined up with the coupling box?



- Yes Go to the next step.
- No Replace the antenna and align it with the coupling box.
- 11. Is the antenna base sitting on a defogger grid wire or a window antenna wire?
 - Yes Replace the antenna, and mount it away from defogger and glass antenna wires.□
 - No Go to the next step.
- 12. Is the rear window tinted?
 - Yes Remove the tint and attach the antenna base directly to the glass.□
 - No Replace the antenna.□

Remote switch module is inoperative

- Before you begin, run the Components Check described on the first page and verify the problem.
- Turn the ignition switch to I (Accessory). Then turn the phone on, and verify that it's unlocked. The handset display should read ON and stay ON throughout this test.



 Remove the lower left dash panel to expose the 6-P connector on the control box (mounted near the steering column).



 Set your DVOM to volts, then backprobe the 6-P connector at terminal 4 and measure voltage to ground.

View from wire side



Is there about 3.9 volts? Yes – Go to the next step. No – Go to step 8.

 Again measure voltage between terminal 4 and ground while pressing the Up, Down, Audio, and Mode buttons one at a time.



Are your readings within these ranges?

Down	0.5V + or – 0.2
Up	1.3V + or - 0.2
Audio	1.9V + or - 0.25
Mode	2.7V + or – 0.35

- Yes Go to the next step.
- No Go to step 13.
- 6. With the phone ON, press the Mode button once.

Does the phone speak or give you a tone or a beep?

- Yes OK here. Check connections at the control box, handset, and transceiver.□
- No Go to the next step.
- Make sure the phone is still ON. Then backprobe the 14-P control box connector at terminal 10 and measure voltage to ground while you press the Mode button several times.



View from wire side

Does the voltage momentarily drop from about 4.5V to less than 3V each time?

- Yes Go to step 15.
- No Replace the control box.□
- 8. Disconnect the 6-P connector and remove the control box.

9. At the 6-P receptacle in the control box, measure the voltage between terminal 4 and ground.



Is there about 5 volts?

- Yes Go to the next step.
- No Replace the control box.
- 10. Reconnect the 6-P connector.
- 11. Disconnect the connector from the steering wheel remote switch.
- 12. Backprobe the remote switch connector to measure voltage between terminal 1 and ground.



Is there about 5 volts?

- Yes Replace the steering wheel switch.□
- No Repair open or short in the wire between the control box and the steering wheel switch.⁽¹⁾
- 13. Remove and disconnect the steering wheel switch.
- 14. Set your DVOM to ohms and check resistance between the two terminals on the switch while pressing the buttons one at a time.



Are your readings about the same as these?

Down Up Audio Mode Off	100 ohms 335 ohms 610 ohms 1.1 ohms 3.6 ohms
Off	3.6 ohms

- Yes Repair the open or short in the wire between the steering wheel switch and the control box.□
- No Replace the steering wheel switch.
- 15. Press this sequence of keys on the handset to check the electronic voice groups:
 - FCN, 0, 9, 1, CLR FCN, 0, 9, 2, CLR



16. Then press the Mode button once.



Does the phone speak?

- Yes Check connections at the control box and transceiver. Make sure the handset is securely plugged into the control box.□
- No Replace the control box.□

Hands-free microphone is inoperative

NOTE: The microphone is located near the map light above the rear view mirror.

- 1. Before you begin, run the Components Check described on the first page and verify the problem.
- Turn the ignition switch to I (Accessory). Then turn the phone on, and verify that it's unlocked. The handset display should read ON and stay ON throughout this test.



 Remove the lower left dash panel so you'll be able to reach the 6-P connector on the control box (mounted near the steering column).



- 4. Remove the map light assembly to expose the microphone connector.
- Set your DVOM to volts. Backprobe the microphone connector at terminal 1 (yellow wire) and measure voltage to ground.



Is there about 9 volts? Yes - Go to the next step. No - Go to step 8.

6. Backprobe the connector at terminal 2 (white wire) and measure voltage to ground.



Is voltage less than 0.2V?

Yes - Go to the next step.

No - Go to step 22.

 Backprobe the control box 6-P connector between terminal 6 and ground while blowing hard into the microphone from about one inch away.



Does the voltage drop to about 8V when you're blowing into the microphone?

- Yes Replace the transceiver.
- No Replace the microphone.□
- Disconnect the 2-P connector from the microphone and the 6-P connector from the control box.
- 9. Set your DVOM to ohms, and check continuity between terminal 1 (yellow wire) of the 2-P connector and terminal 6 of the 6-P connector.



Is there continuity? Yes – Go to the next step. No – Repair the open wire.□ 10. At the 2-P connector, check continuity between terminal 1 (yellow wire) and ground.



Is there continuity?

Yes - Repair the shorted wire.□

- No Go to the next step.
- 11. Check continuity between the 2-P connector terminals.



Is there continuity?

Yes - Repair the shorted wires.

No - Go to the next step.

- Reconnect the 6-P connector to the control box, but leave the 2-P connector disconnected from the microphone. The phone should be on.
- Set the DVOM to volts, then backprobe the 2-P connector at terminal 1 and measure voltage to ground.



is there about 9.5 volts?

Yes - Replace the microphone.□

- No Go to the next step.
- 14. Backprobe the 14-P control box connector at terminal 3 and measure voltage to ground (the microphone must remain disconnected).



No - Go to the next step.

15. Disconnect the 14-P connector from the control box. Then disconnect the handset from the console and take it to the trunk. Open the trunk, remove the rubber plug from the socket in the underside of the transceiver, and plug the handset into that socket.



16. At the 14-P connector, check for voltage between terminal 3 and ground.



View from wire aide

is there about 9.5 volts?

Yes - Replace the control box.□

- No Go to the next step.
- Disconnect the 25-P connector from the transceiver and leave the 14-P connector disconnected from the control box.
- Set the DVOM to ohms. Then, at the 14-P connector, check for continuity between terminal 3 and ground.



View from wire side

Is there continuity?

- Yes -- Repair the shorted wire between the 25-P transceiver connector and the 14-P control box connector.□
- No Go to the next step.

 Check for continuity between terminal 15 of the 25-pin connector and terminal 3 of the 14-P connector.



Is there continuity?

Yes - Go to the next step.

No - Go to step 21.

20. Check continuity between terminal 3 of the 14-P control box connector and each of the other terminals in that connector.



Is there continuity between terminal 3 and any other terminal in the connector?

- Yes Repair or replace the shorted wires between the 25-P transceiver connector and the 14-P control box connector.□
- No Replace the transceiver.□
- 21. Check the connections at both DIN connectors (one at the control box, one at the transceiver). Are the DIN connectors OK?
 - Yes Repair the open wire between the 25-P transceiver connector and the 14-P control box connector.□
 - No Repair the faulty DIN connectors.□
- 22. Set your DVOM to ohms, then disconnect the 6-P connector from the control box, and the 2-P connector from the microphone. Check for continuity between terminal 2 of the 2-P connector and terminal 5 of the 6-P connector.



Is there continuity?

Yes - Go to the next step.

No – Repair open wire; check the white wire in the 3-P connector at the control box.□ Backprobe the 14-P control box connector at terminal 4 and check continuity to ground.



View from wire side

is there continuity?

Yes - Replace the control box.□

- No Go to the next step.
- Disconnect the 14-P control box connector and the 25-P transceiver connector. Then check for continuity between terminal 4 of the 14-P connector and terminal 14 of the 25-P connector.





Is there continuity?

Yes - Replace the transceiver.

- No Go to the next step.
- 25. Check the connections at both DIN connectors (one at the control box, one at the transceiver).

Are the DIN connectors OK?

- Yes Repair/replace the open wire between the 25-P transceiver connector and the 14-P control box connector.□
- No Repair the faulty DIN connectors.

Hands-free speaker is inoperative

- Before you begin, run the Components Check described on the first page and verify the problem.
- Turn the ignition switch to I (Accessory). Then turn the phone on, and verify that it's unlocked. The handset display should read ON and stay ON throughout this test.



- 3. Verify the speaker problem by pressing keys on the handset and listening for tones. (You should also have heard a tone when you turned the phone on.)
- With the handset, enter the programming mode of the Number Assignment Module (NAM) by pressing FCN + 0 + 6-digit security code + repeat the 6-digit security code + RCL (refer to the programming instructions at the end of this bulletin).
- Scroll to step 10 by repeatedly pressing the * key. Does step 10 display "010100?"



- Yes Go to step 7.
- No Enter "010100." Hold down the * key until "01" appears in the display, then press the "Snd" key.
- 6. Press the keys on the handset and listen for the tones. Can you hear the tones through the speaker?
 - Yes The hands-free speaker function is OK.□
 - No Go to the next step.
- 7. Remove the lower left dash panel so you'll be able to reach the connectors on the control box (mounted near the steering column).



 Exit the programming mode by pressing * until 01 appears and press "Snd." Then, set the DVOM to ohms, disconnect the 7-P connector from the control box, and check resistance between terminals 2 and 3.



View from wire side

Is there about 4.5 ohms?

Yes - Go to step 10.

No - Go to the next step.

 Disconnect the connector from the speaker (below the glove box), then check resistance between the terminals on the speaker.

NOTICE: On LS and GS models, connecting the foot well light connector to the phone speaker will damage the speaker. Check the foot well light. If it doesn't work because its connector has been switched with the connector for the phone speaker, switch the connectors back where they belong.

Is there about 4.5 ohms?

- Yes Repair the open wire between terminal 2 or terminal 3 of the 7-P connector and the terminals in the speaker connector.□
- No Replace the speaker.□
- At the control box 7-pin connector, check resistance between terminal 2 and ground, and terminal 3 and ground.



Is there continuity?

Yes - Repair short to ground.□

No - Go to the next step.

The " " symbol indicates the end of troubleshooting for this symptom.

11. Reconnect the 7-P connector to the control box. Then, with the phone on, backprobe to check continuity between terminal 2 of the 7-P connector and terminal 6 of the 14-P connector while pressing any key on the handset.



Is there continuity for about 4 seconds after you release the handset key?

- Yes Go to the next step.
- No Replace the control box.□
- 12. With the phone still on, backprobe to check continuity between terminal 3 of the 7-P connector and terminal 5 of the 14-P connector while pressing any key on the handset.



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Is there continuity for about 4 seconds after you release the handset key?

Yes - Go to the next step.

No – Replace the control box.□

 Turn the phone off and disconnect the 25-P connector from the transceiver and the 14-P connector from the control box. Then check for continuity between terminal 19 of the 25-P connector and terminal 6 of the 14-P connector.



Yes - Go the next step.

No - Repair open in the wire from the 25-P connector to the 14-P connector.□

 Check for continuity between terminal 25 of the 25-P connector and terminal 5 of the 14-P connector.



Is there continuity?

- Yes Go the next step.
- No Repair open in the wire from the 25-P connector to the 14-P connector.□
- Check for continuity between terminal 19 of the 25-P connector and all the other terminals.





Is there continuity?

- Yes Go to the next step (to find the shorted wire).
- No Replace the transceiver.
- 16. Disconnect the DIN cable (13-P) connector at the control box and repeat step 15.

is there continuity?

- Yes Go to the next step.
- No Replace the control box and harness (harness is not available separately).□
- 17. Disconnect the other end of the DIN cable (at the transceiver) and repeat step 15 again.

Is there continuity?

- Yes Replace the power harness.□
- No Replace the DIN cable.□

Phone will not power-up

NOTE: If the complaint is that the "phone intermittently will not power-up with the ignition key," refer to Service Bulletin 93-023.

- 1. Before you begin, run the Components Check described on the first page and verify the problem.
- 2. Check the phone fuses:
 - #4 in the under-dash fuse box. (If the radio works, fuse 4 is OK.) If the fuse is blown, the phone will power-up in locked mode even with the ignition key on.



 #56 in the under-hood fuse box. (If the radio works, fuse 56 is OK.) If the fuse is blown, the phone will not power-up.



Are the fuses OK?

Yes - Go to the next step.

No - Replace any blown fuses and retest.

 Inspect the handset as described in Service Bulletin 93-009. If possible, substitute a known-good handset and retest; if none is available, try wiggling the handset cord as you power-up.

Is the handset OK?

Yes - Go to the next step.

No - Replace the handset.

4. Disconnect the handset from the console and take it to the trunk. Open the trunk, remove the rubber plug from the socket in the underside of the transceiver, and plug the handset into that socket. Then press the power button on the handset.

Does the phone power-up when you press the power button?

Yes - Go to step 16.

No - Go to the next step.

 Set your DVOM to volts. Disconnect the 25-P connector from the transceiver. Then turn the ignition switch on and check voltage at terminals 4, 5, and 16 of the 25-P connector.





is battery voltage present at all three terminals?

- Yes Go to the next step.
- No Repair open between fuse 4 or fuse 56 and the 25-P connector.□
- Set your DVOM to ohms. Check continuity to ground at terminal 3 and at terminal 17 of the 25-P connector.

Both views from terminal side



Is there good continuity to ground at both terminals?

Yes - Go to the next step.

No - Repair open between the end of the transceiver ground wire and the 25-P connector.□

The " " symbol indicates the end of troubleshooting for this symptom.

 Reconnect the 25-P connector to the transceiver. With the handset still plugged into the transceiver, get back in the car and disconnect the handset harness at the 8-P connector.

Does the phone power-up when you press the power button?

Yes - Repair the short in the handset harness.□

No - Go to the next step.

8. Disconnect the 10-P connector from the control box.

Does the phone power-up when you press the power button?

Yes – Repair the short between the 10-P control box connector and the 8-P handset harness connector.□

No - Go to the next step.

 Disconnect the DIN cable 13-P connector at the pigtail from the control box.

Does the phone power-up when you press the power button?

Yes - Replace the control box.□

No - Go to the next step.

10. In the trunk, disconnect the DIN cable 13-P connector at the transceiver pigtail.

Does the phone power-up when you press the power button?

Yes – Replace the DIN cable. Cut off one end and use the old cable to pull the new cable into place.□

No - Go to the next step.

11. Disconnect the 25-P connector from the transceiver, then inspect the harness. If the harness has been damaged, replace it.

12. Turn the ignition switch off, and check continuity from terminal 2 at the DIN cable connector to terminals 8 and 7 at the 25-P connector.

Both views from terminal side



is there continuity?

Yes - Go to the next step.

- No Replace the transceiver harness.□
- 13. Check continuity from terminal 6 at the DIN connector to terminal 1 at the 25-P connector.



No - Replace the transceiver harness.

14. Check continuity to the DIN cable ground shield from all terminals in the DIN connector.



Is there continuity to ground at any terminal?

- Yes Go to the next step.
- No Replace the transceiver harness.D
- 15. Check continuity from each terminal in the DIN connector to each of the other terminals as follows:



Is there continuity between any of the terminals?

- Yes Replace the transceiver harness.
- No Replace the transceiver.

- Disconnect the 25-P connector from the transceiver, and the 14-P connector from the control box, and then check continuity between these terminals:
 - Between terminal 8 at the 25-P connector and terminal 13 at the 14-P connector.



 Between terminal 1 at the 25-P connector and terminal 8 at the 14-P connector.



 Between terminal 23 at the 25-P connector and terminal 14 at the 14-P connector.



Is there continuity in all three wires?
Yes – Go to the next step.
No – Repair open(s) in wire(s).□

- 17. Disconnect the 10-P connector from the control box and check continuity between these terminals:
 - Between terminal 7 at the 10-P connector and terminal 2 at the handset harness connector.

View from wire side



modular jack harness

 Between terminal 7 at the handset harness connector and terminal 2 at the 10-P connector.



 Between terminal 8 at the handset harness connector and terminal 1 at the 10-P connector.



- 18. Reconnect all connectors except the one on the handset harness. (Leave the handset connected to the transceiver.)
- Set your DVOM for volts, and check voltage between terminal 7 and terminal 1 at the 10-P control box connector. Watch the voltage reading as you press the handset power button.





Does battery voltage drop to about 5 volts when you press the power button?

- Yes Go to the next step.
- No Replace the control box.□
- 20. Check voltage between ground and terminal 2 at the 10-P control box connector when you press the power button.



is there about 9.5 volts when you press the button?

Yes - Replace the transceiver.□

No - Replace the control box.□

STATE

TENN

MODULE (NAM)

PROGRAMMING THE ACURA CELLULAR TELEPHONE NUMBER ASSIGNMENT MODULE (NAM)

Contact The Customer

If arrangements are not made through your dealership, the customer must arrange with a cellular phone company, and give them all the necessary information for billing. The customer can then give you the following:

- The customer's choice of a 6-digit security code: put on Line 7 to the right.
- The customer's choice of a 3-digit unlock code: put on Line 8 to the right.
- Contact The Customer

Give the phone company the following number:

• The ESN number located on the transmitter/receiver that starts with 82_____, or the number that starts with 130_____.

Ask the phone company for the following numbers:

- System ID number: put on Line 1 to the right.
- · Cellular area code: put on Line 2 to the right.
- Cellular phone number: put on Line 3 to the right.
- · Access overload class: put on Line 5 to the right.
- Group ID mark: put on Line 6 to the right.
- Program the Phone. Use the worksheet to the right



NOTE: Additional optional programming can be changed to meet the owner's specific desires, see the Telephone Owner's Manual.

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