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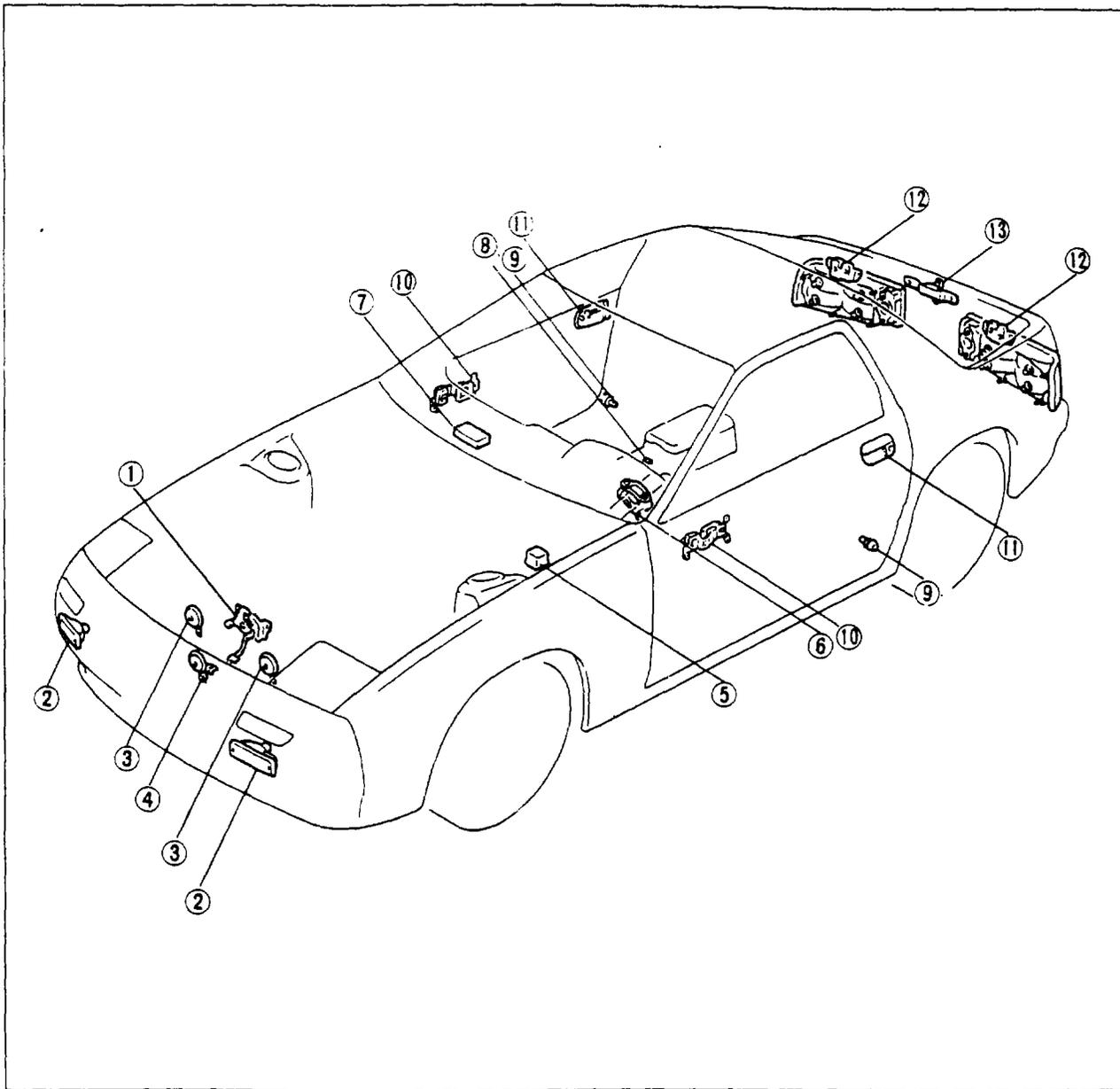
This file was not scanned to deprive Mazda of any money – it was scanned due to the rareness of the original manuals and the overwhelming need of the RX-7 owner to have this information so that they can accurately troubleshoot problems. Perhaps if Mazda's dealerships could support the Rotary Engine it wouldn't be so necessary for the owners to do so.



Many thanks to Anh Diep for scanning this file.

THEFT-DETERRENT SYSTEM

STRUCTURAL VIEW

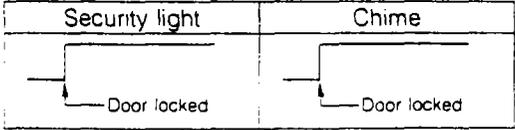
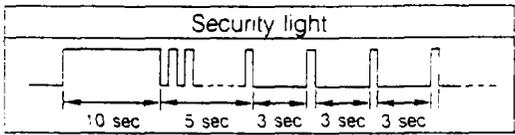


87U15X-036

- | | |
|---|--|
| 1. Hood switch | 7. Theft-deterrent control unit |
| 2. Hazard light | 8. Security light |
| 3. Horn | 9. Door switch |
| 4. Additional horn for theft-deterrent system | 10. Door lock link switch |
| 5. Starter cut relay | 11. Door key cylinder switch |
| 6. Ignition switch & key reminder switch | 12. Back door (or trunk) switch |
| | 13. Back door (or trunk) key cylinder switch |

15 TROUBLE SHOOTING

TROUBLE SHOOTING

Control unit check		
No.	Procedure	Result
1	Open door A* window, and remove ignition key.	
2	Open door A, and lock A and B lock knobs	
3	Lock door A without key.	
4	Open trunk (or back door) with key.	
5	Unlock door A lock knob.	Horn sounds intermittently. Head lights and hazard lights flash.
6	Turn ignition switch to START	Starter does not operate.
7	Turn door A dey cylinder to "unlock".	
8	Remove STOP fuse, and retest steps 1, 2, 3 and 5	Head lights and hazard lights flash for 5 min.

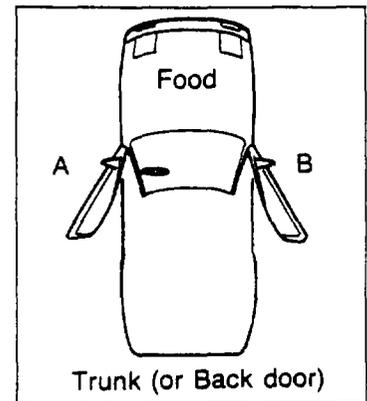
OK

NG

Go to next page.

Replace control unit.

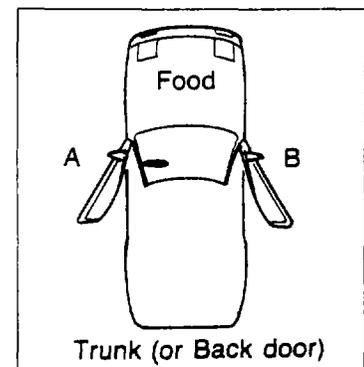
*Door guide



87U15X-037

No	Procedure	Result			Action
		Security light	Chime	Interior light	
1	Turn ignition switch OFF Open door A*.	OFF			Repair key-less switch. (Open circuit)
2	Remove ignition key.	OFF	OFF		Repair key-less switch. (Short circuit)
3	Sit in driver seat with door A open. Lock A and B lock knobs.		OFF		
4	Unlock and lock door B lock knob.				Repair door A lock link switch.
5	Unlock door B lock knobs				Repair door B lock link switch.
6	Unlock door A and B lock knobs.	OFF	OFF		
7	Pull hood release lever		OFF		Repair hood switch.
8	Pull trunk (or back door) release lever		OFF		Repair trunk (or back door) switch.
9	Remove key and exit vehicle.	OFF	OFF		
10	Close door A.	OFF	OFF	OFF	Repair door A switch.
11	Turn door A key cylinder to "unlock" and hold in position.		OFF	OFF	Repair door A key cylinder switch.
12	Remove key.	OFF	OFF	OFF	
13	Turn trunk (or back door) key cylinder to "unlock" and hold in position.		OFF	OFF	Repair trunk (or back door) key cylinder switch.
14	Remove key.	OFF	OFF	OFF	
15	Close trunk (or back door).	OFF	OFF	OFF	
16	Turn door B key cylinder to "unlock" and hold in position.		OFF	OFF	Repair door B key cylinder switch.
17	Remove key.	OFF	OFF	OFF	
18	Open door B.	OFF	OFF		Repair door B switch.
19	Close door B.	OFF	OFF	OFF	
20	Close hood.	OFF	OFF	OFF	

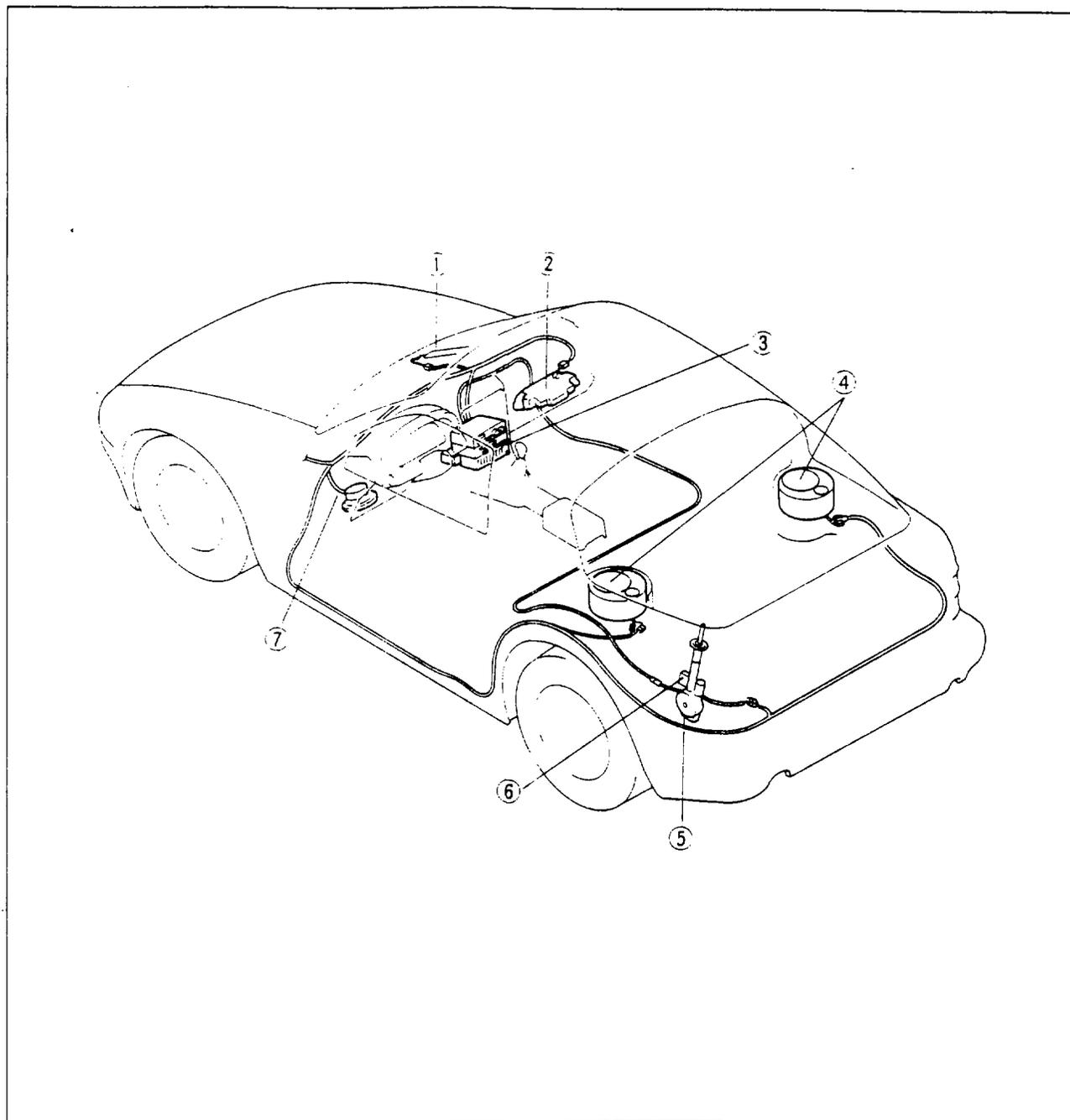
*Door guide



87U15X-038

AUDIO SYSTEM

STRUCTURAL VIEW



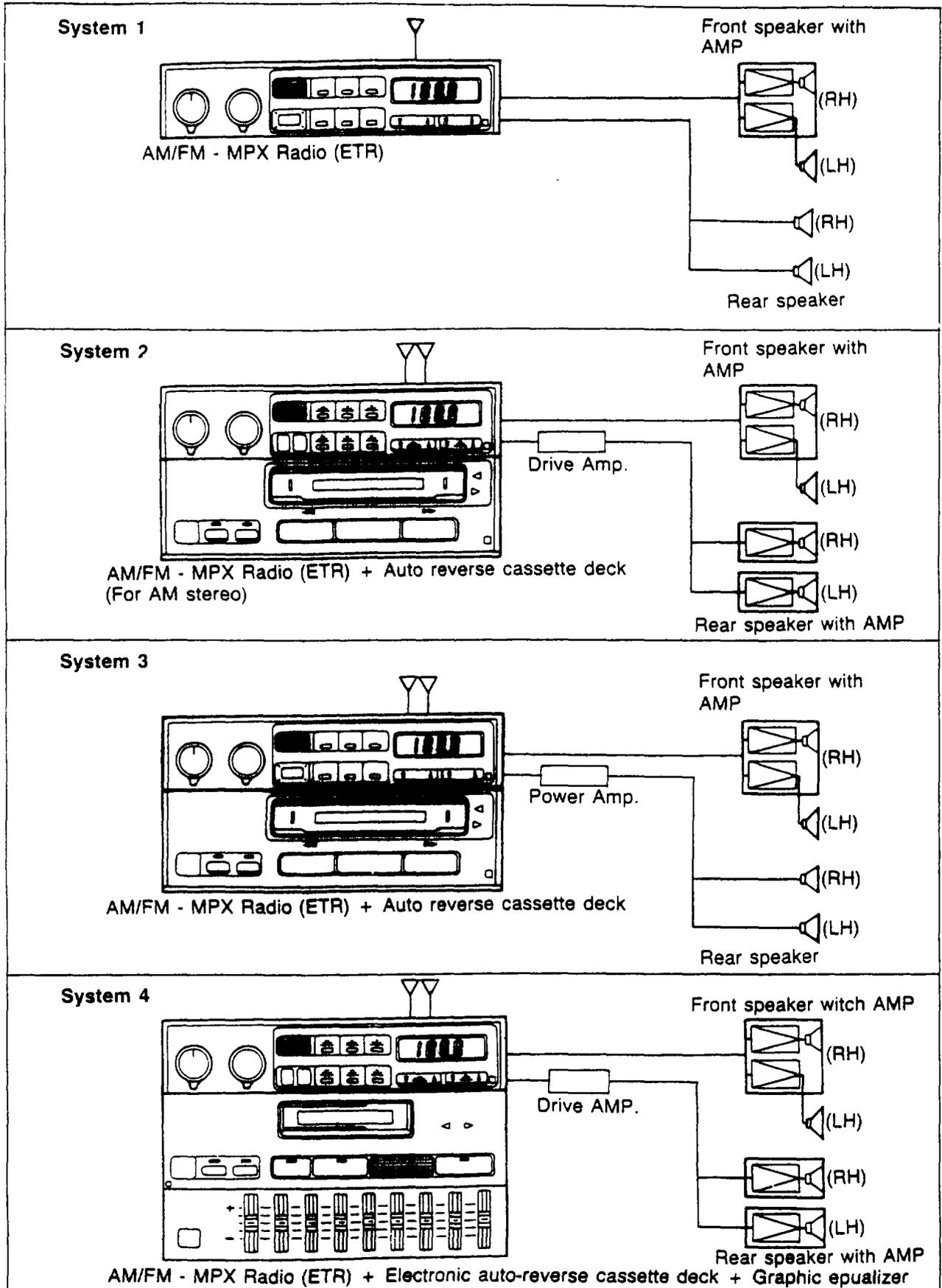
67U15X-156

- | | |
|---|---------------------------------|
| 1. Front windshield antenna | 4. Rear speakers with amplifier |
| 2. Front speaker with amplifiers (RH) | 5. Power antenna |
| 3. AM/FM-MPX radio, electronic auto-reverse
cassette deck, graphic equalizer | 6. Power antenna relay |
| | 7. Front speaker (LH) |

Caution

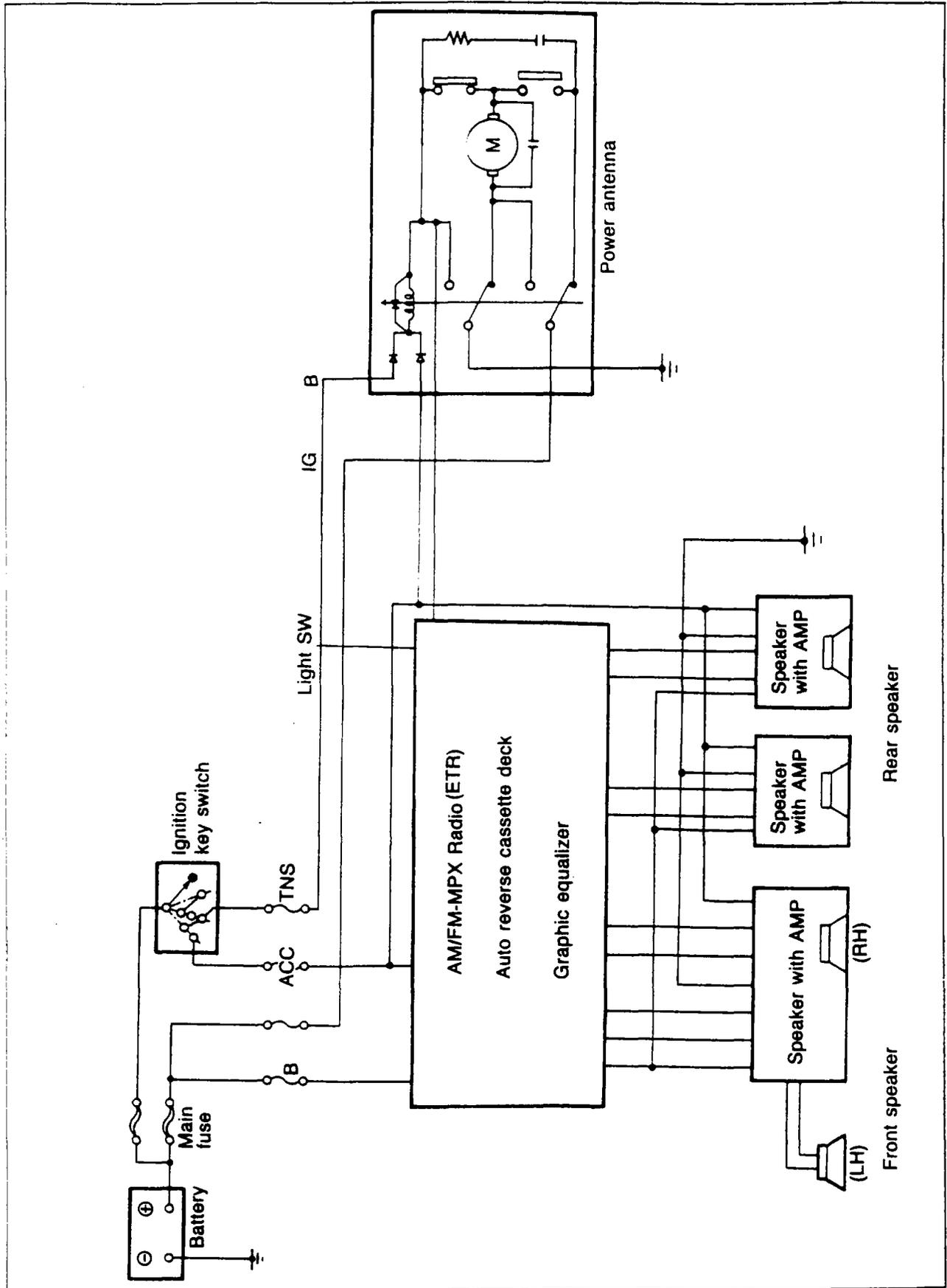
Because of delicate acoustic balancing, the factory seal on the speaker/amp assembly must not be broken. If the seal is broken the assembly cannot be repaired.

OUTLINE OF AUDIO



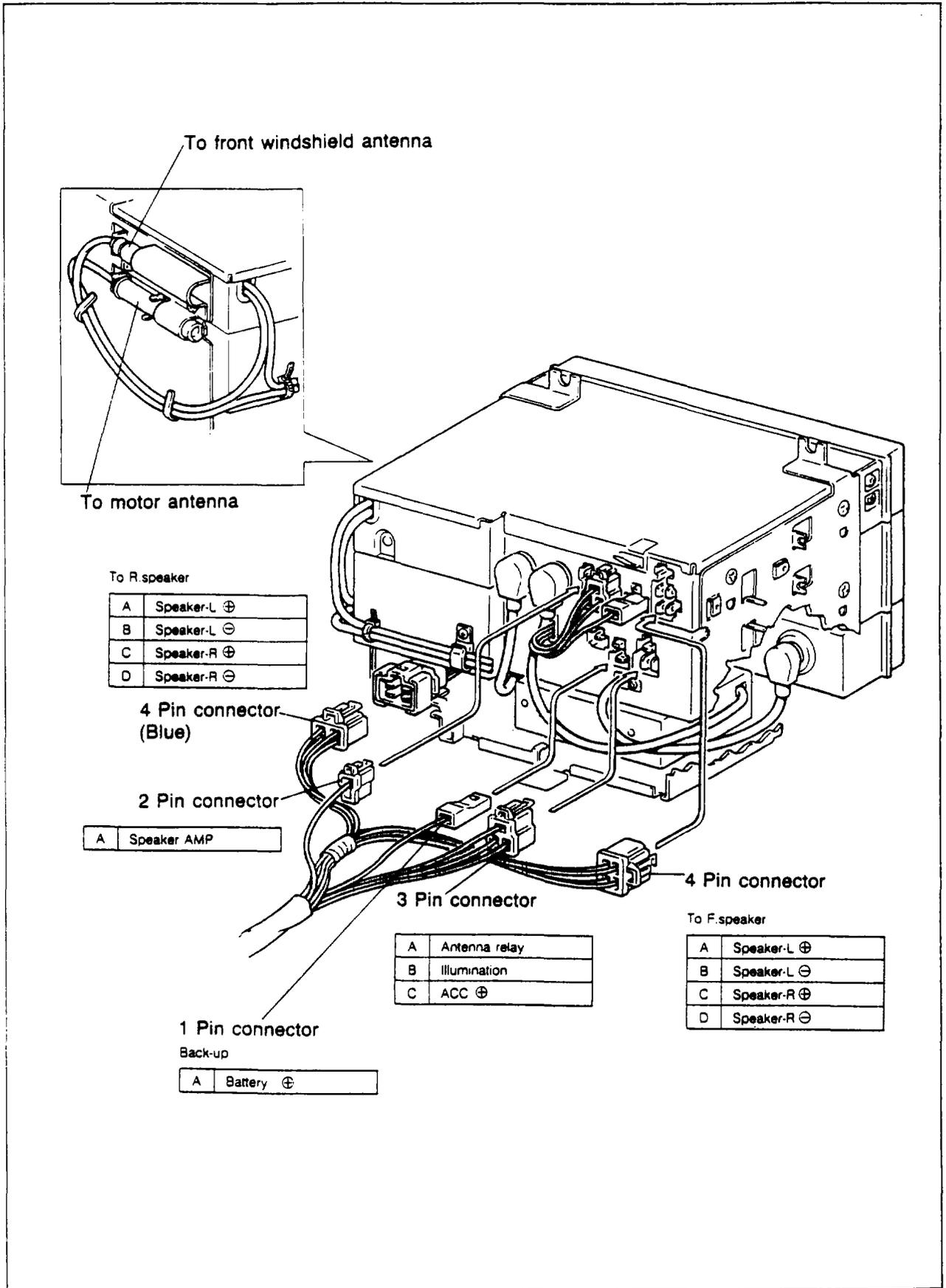
15 AUDIO SYSTEM

CIRCUIT DIAGRAM



67U15X-158

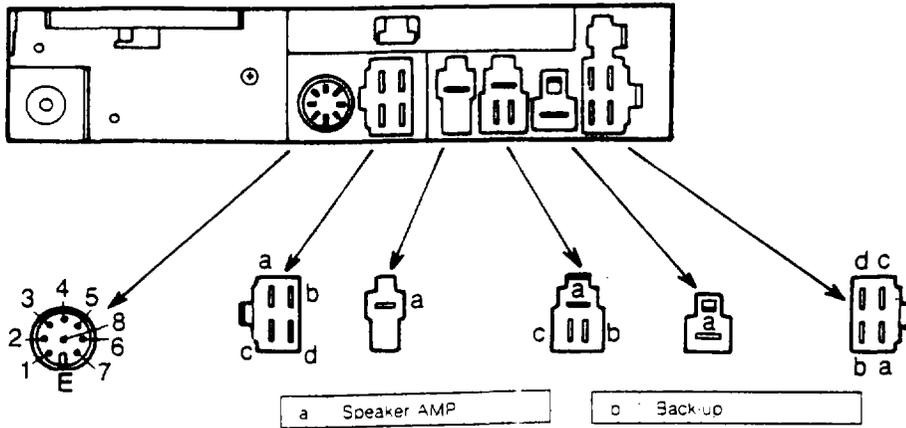
CONNECTOR VIEW



15 AUDIO SYSTEM

AM/FM multiplex radio (ETR)

Type 1



To cassette deck or equalizer

1	Output L ⊕
2	Input L ⊕
3	⊕ 13.2V (ACC)
4	Illumination
5	Signal ground
6	Input R ⊕
7	Output R ⊕
8	NC
E	Shield ground

To rear sp

a	Speaker LH ⊕
b	Speaker LH ⊖
c	Speaker RH ⊕
d	Speaker RH ⊖

a	Motor antenna grounded when radio is ON
b	Illumination
c	⊕ 13.2 V (ACC)

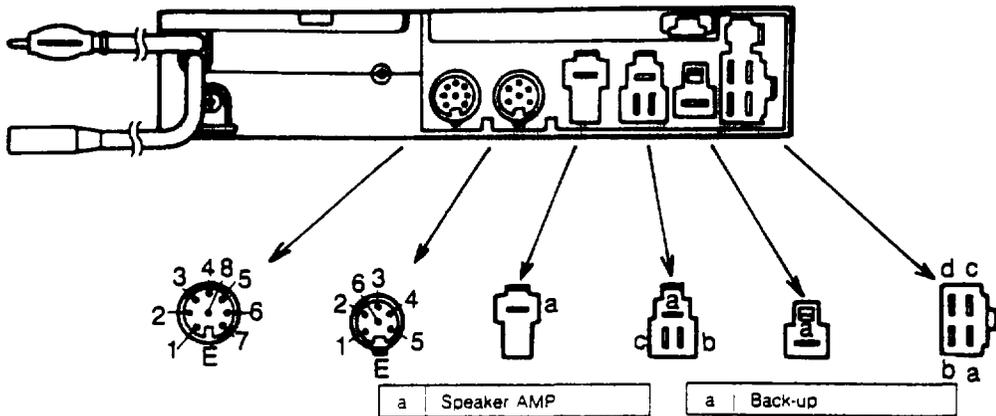
To front sp.

a	Speaker LH ⊕
b	Speaker LH ⊖
c	Speaker RH ⊕
d	Speaker RH ⊖

67U15X-160

AM-MPX/FM-MPX radio (ETR) (FOR AM Stereo and Non AM Stereo)

Type 2



To cassette deck or equalizer

1	Output L ⊕
2	Input L ⊕
3	⊕ 13.2V (AMP)
4	Illumination
5	Signal ground
6	Input R ⊕
7	Output R ⊕
8	Bass/Treb cut cont
E	Shield ground

To rear sp
Drive AMP

1	Output RR ⊕
2	⊕ 13.2V (AMP)
3	Output RL ⊕
4	Output RR ⊖
5	Output RL ⊖
6	Ground
E	Shield ground

a	Antenna relay grounded when radio is ON
b	Illumination
c	⊕ 13.2V (ACC)

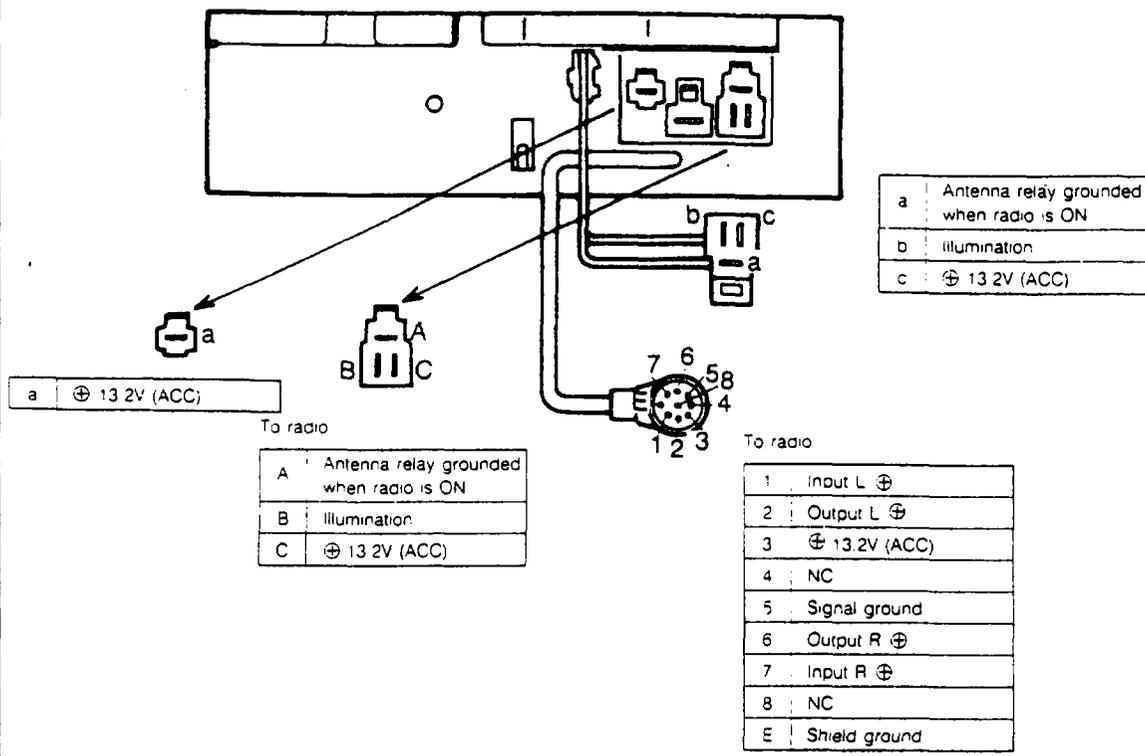
To front sp AMP

a	Speaker LH ⊕
b	Speaker LH ⊖
c	Speaker RH ⊕
d	Speaker RH ⊖

87U15X-039

Auto-reverse cassette deck

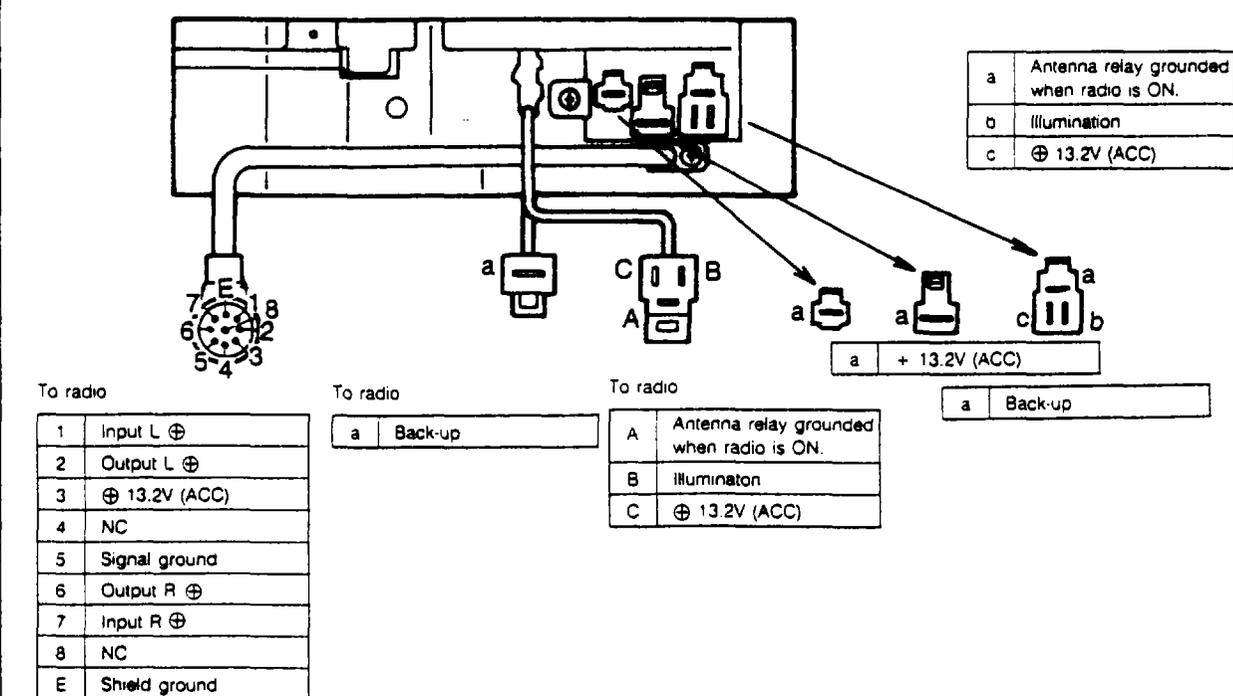
Type 1



67U15X-162

Electronic auto-reverse cassette deck

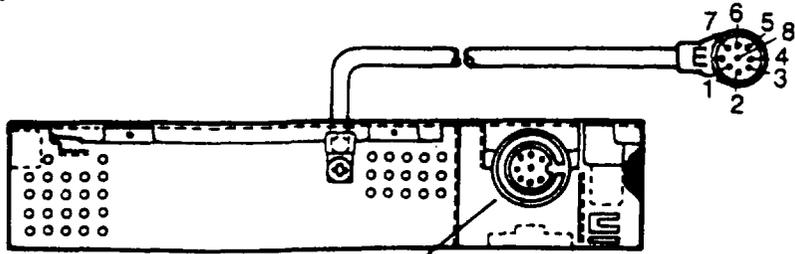
Type 2



67U15X-163

15 AUDIO SYSTEM

Graphic equalizer



To cassette deck

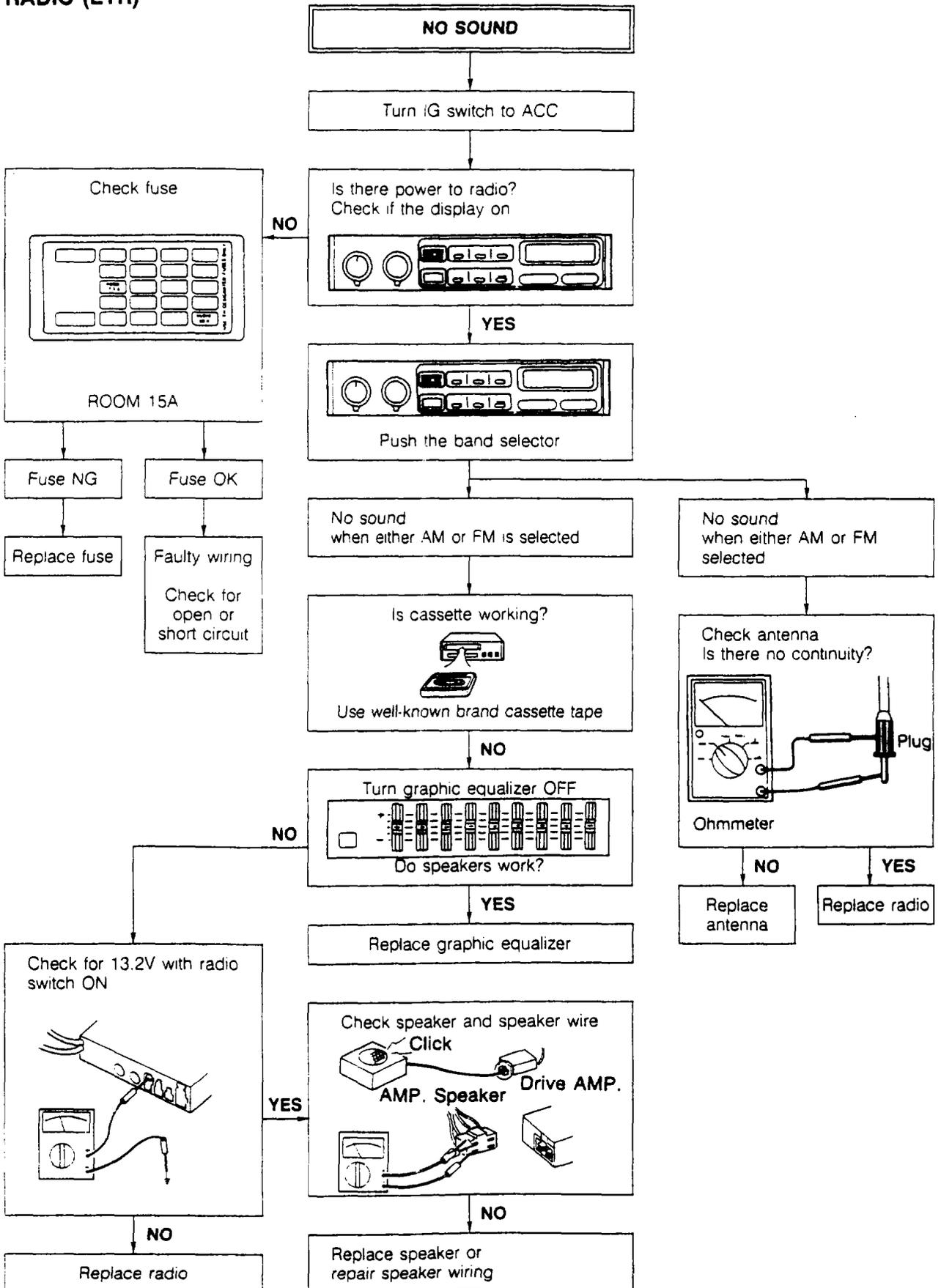
1	NC
2	Input L ⊕
3	⊕ 13.2V (AMP)
4	NC
5	Signal ground
6	Input R ⊕
7	NC
8	NC
E	Shield ground

To radio

1	Input L ⊕
2	Output L ⊕
3	⊕ 13.2V (ACC)
4	NC
5	Signal ground
6	Output R ⊕
7	Input R ⊕
8	Bass/Treb cut cont
E	Shield ground

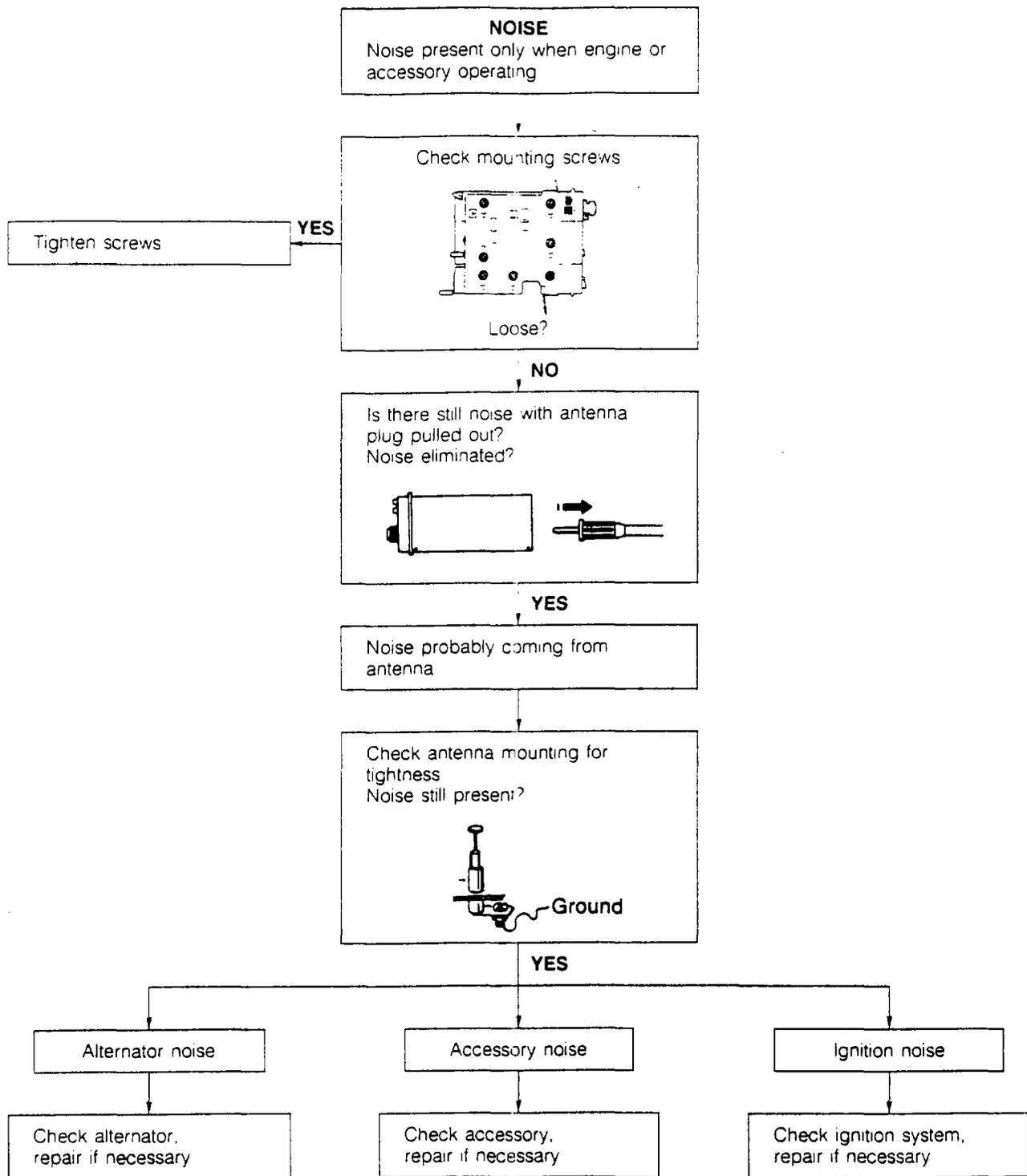
67U15X-164

TROUBLESHOOTING RADIO (ETR)

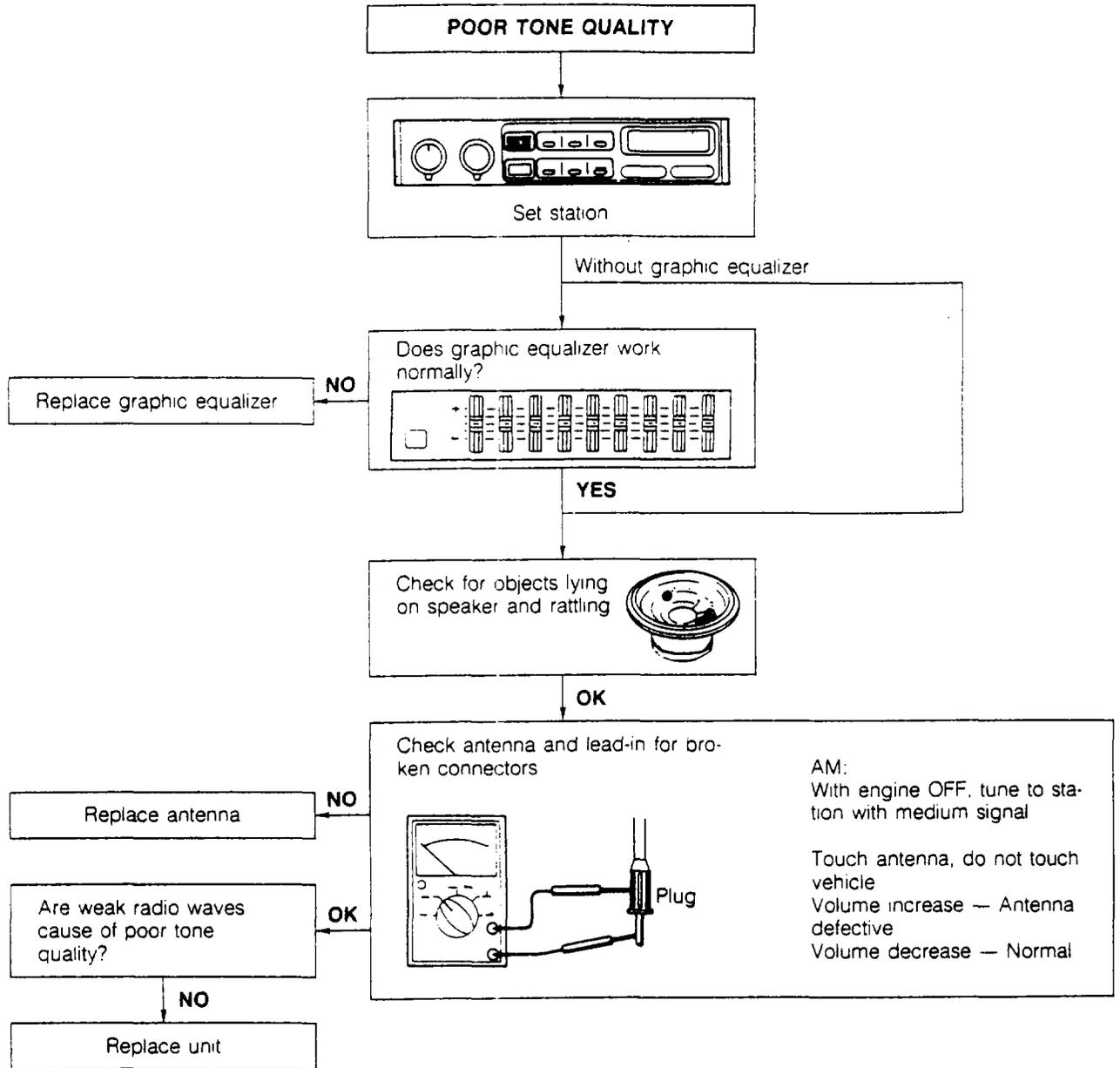


15 AUDIO SYSTEM

RADIO



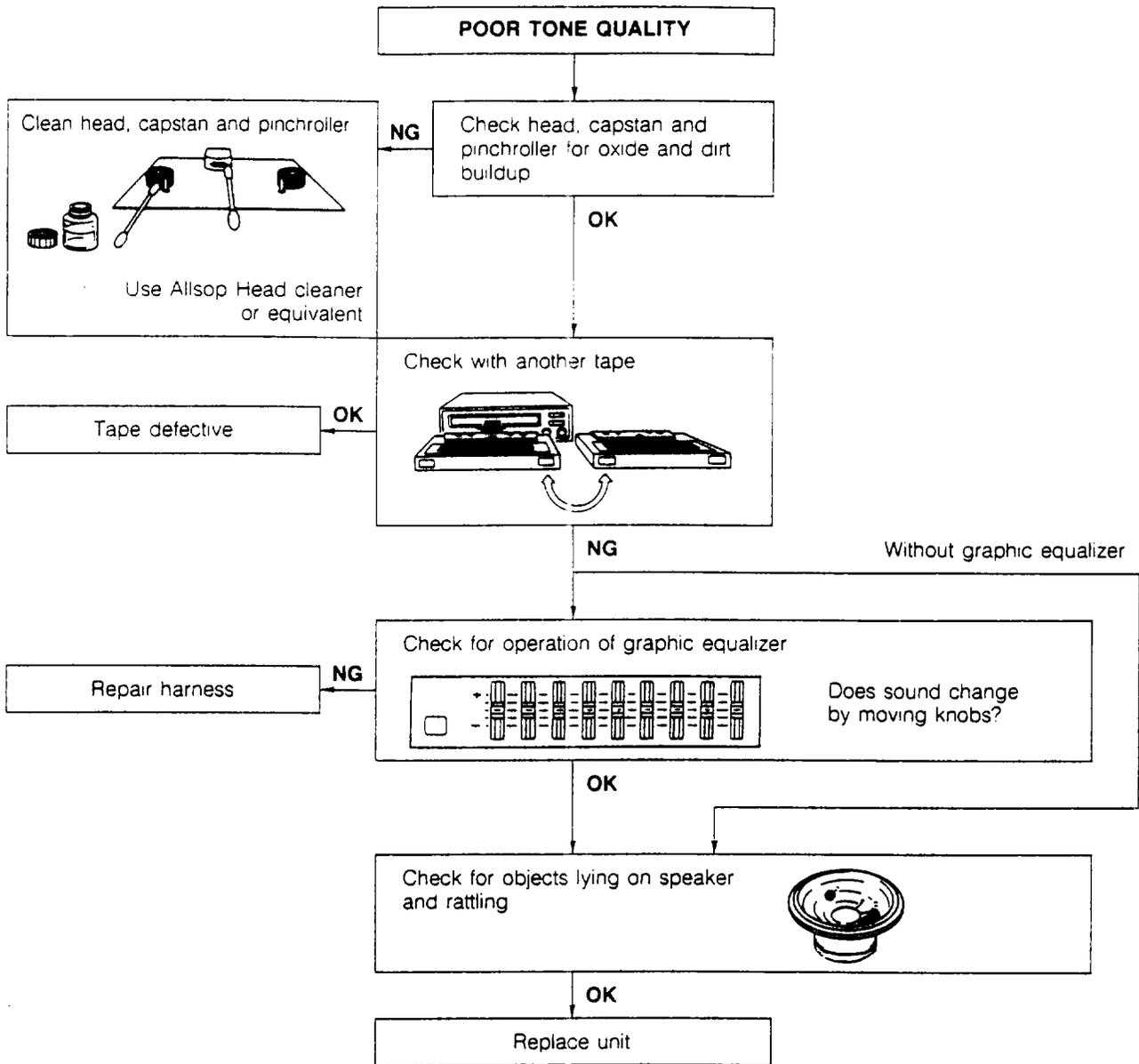
67U15X-291



67U15X-292

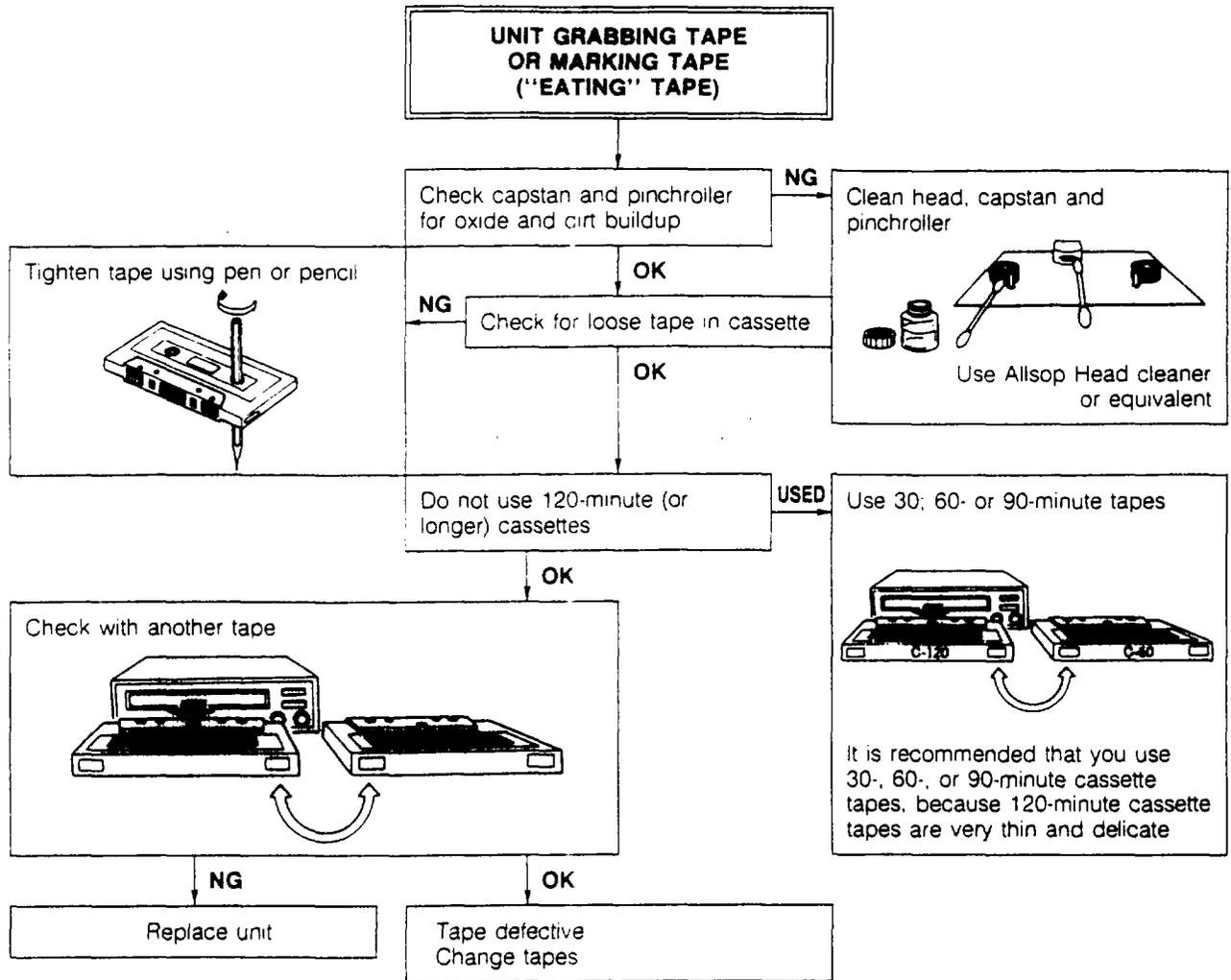
15 AUDIO SYSTEM

CASSETTE TAPE PLAYER



67U15X-293

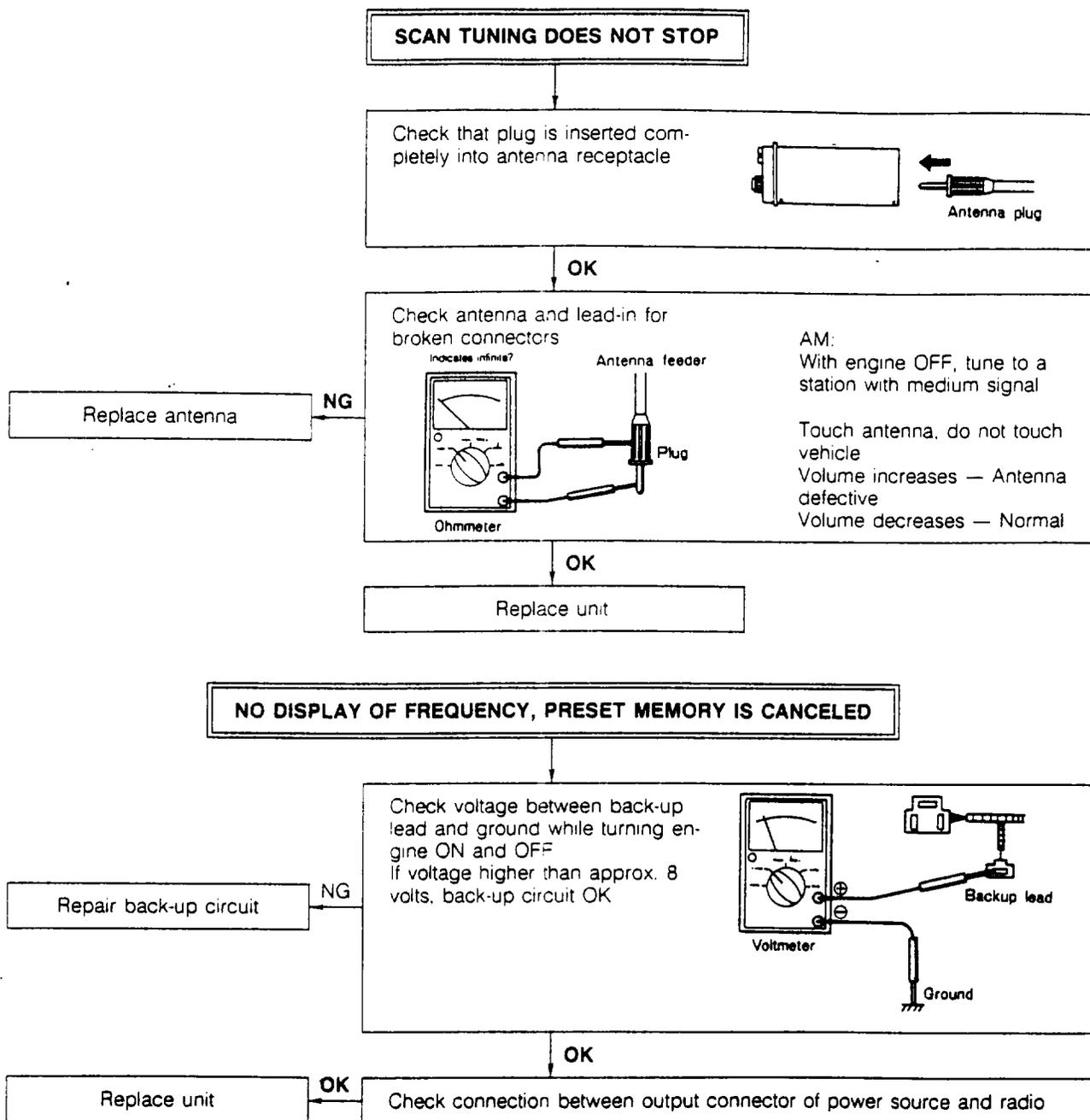
CASSETTE TAPE PLAYER



67U15X-294

15 AUDIO SYSTEM

RADIO

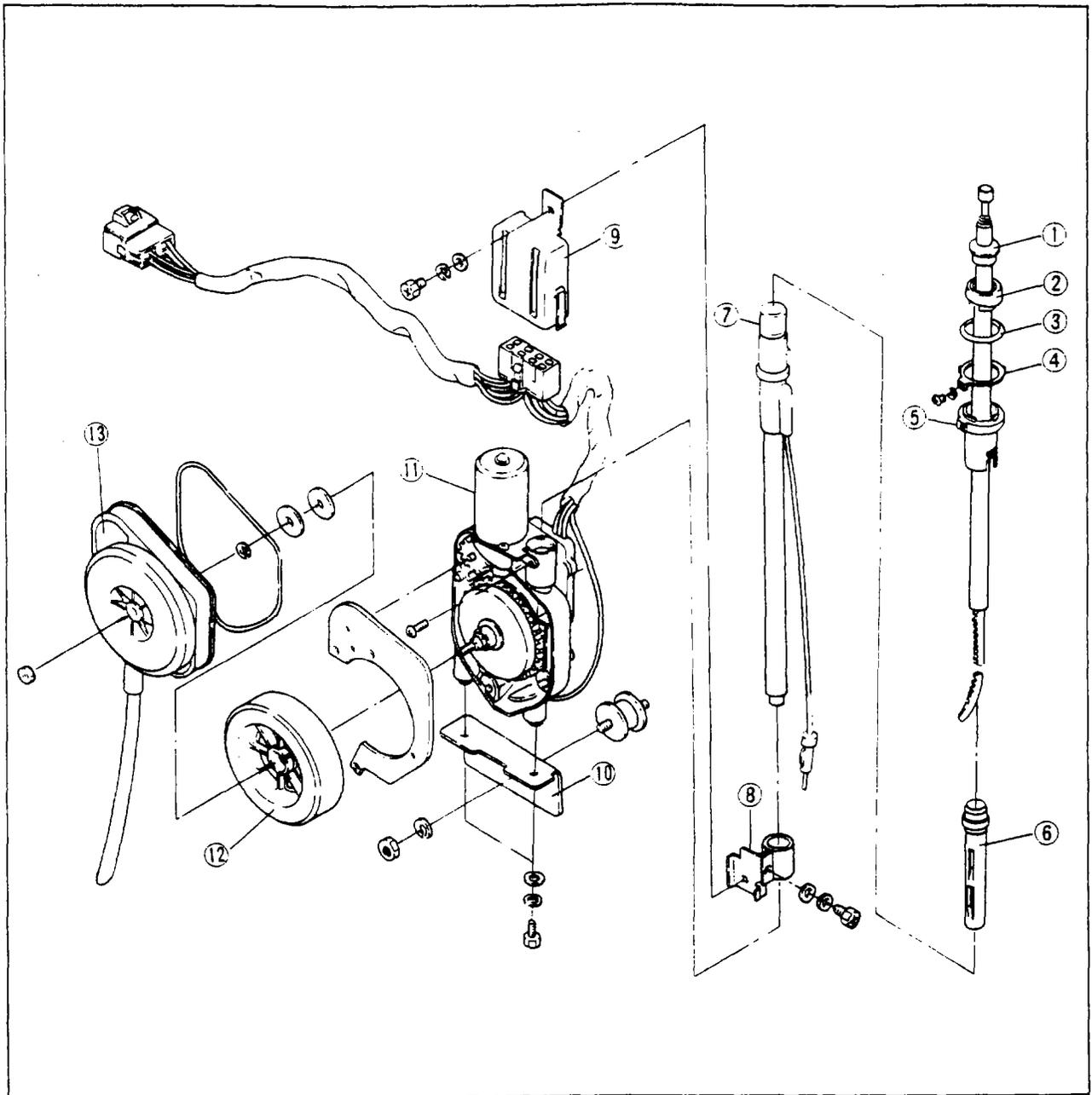


Note

When battery is dead or radio is disconnected from battery for repair, all memory is canceled. The stations must be preset again.

67U15X-295

POWER ANTENNA

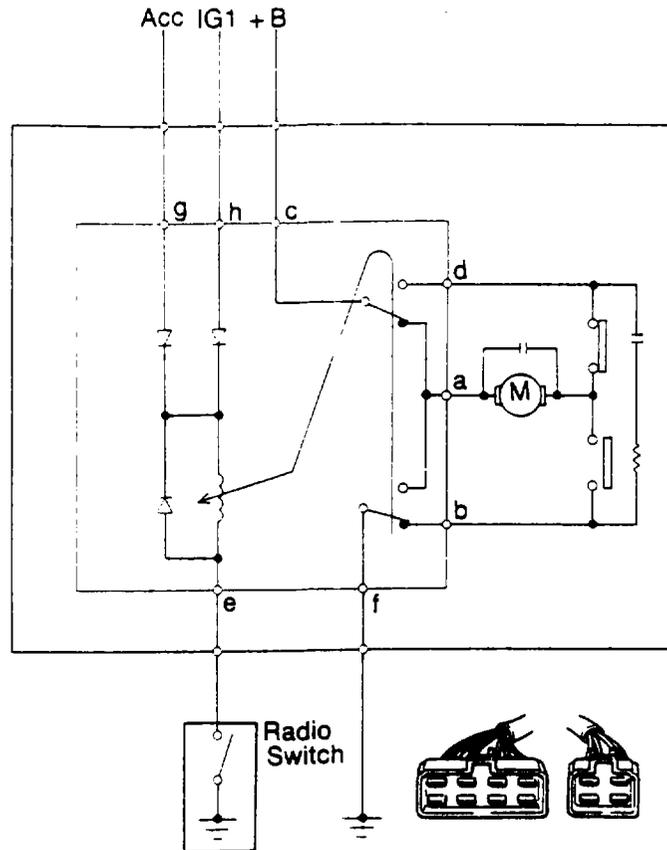


67U15X-165

- | | |
|------------------|---------------------------|
| 1. Mounting nut | 8. Relay bracket |
| 2. Base | 9. Antenna relay |
| 3. Base pad | 10. Bracket |
| 4. Ground plate | 11. Motor drive unit |
| 5. Ground base | 12. Drive mechanism |
| 6. Rod insulator | 13. Drive mechanism cover |
| 7. Mast assembly | |

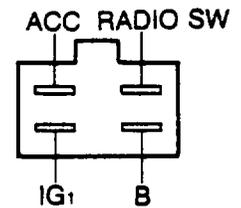
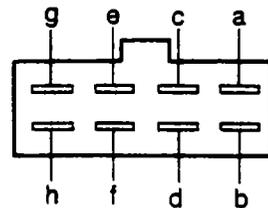
15 AUDIO SYSTEM

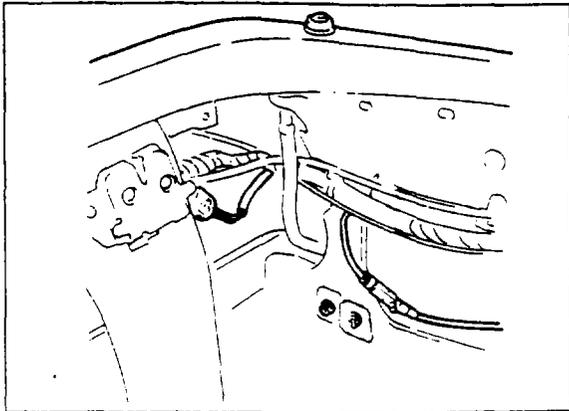
CIRCUIT DIAGRAM



	RADIO SW	ACC or IG	a	b	c	d	f
UP	○	○	○	○	○	○	○
DOWN	X	○	○	○			
	○	X		○			○

○—○ Indicates continuity



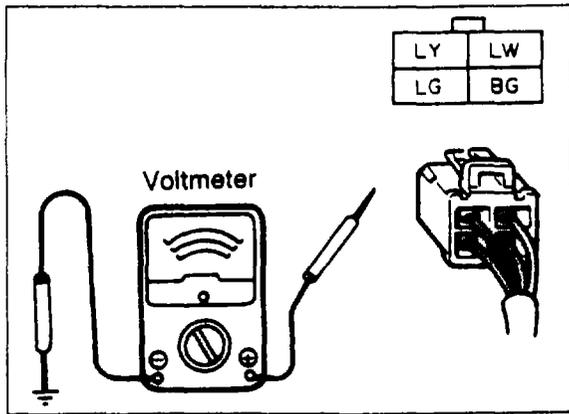


67U15X-167

On-vehicle Inspection

If the antenna will not raise or lower, make the following checks:

1. Check the radio and antenna fuse (10A).
2. Disconnect the power antenna connector, and measure the harness side connector terminal voltage.

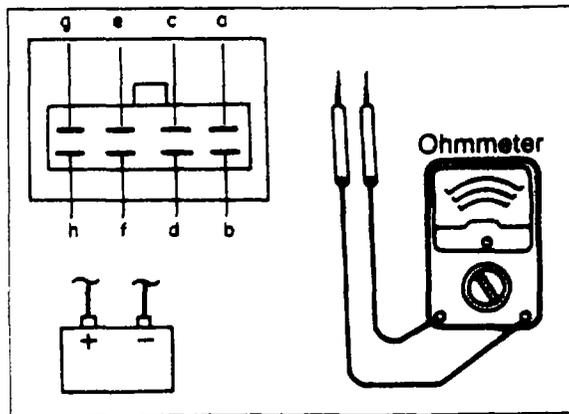


67U15X-168

3. Measure the voltage between the terminals and a body ground.

Terminal	Voltage
LG	12V
BG	12V (Ignition switch ON)
LW	12V (Ignition switch ACC)
LY	0V (Radio power switch ON, Ignition switch ACC)

If the voltage is not correct, check the antenna relay.



67U15X-169

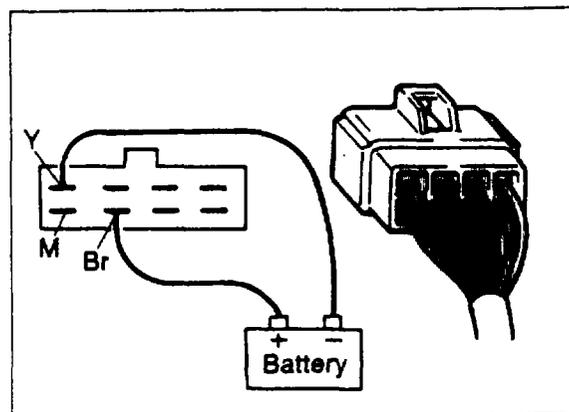
4. Check for continuity between the terminals of the power antenna relay. If there is no continuity, replace the relay.

Battery		Terminal							
Pos.	Neg.	a	b	c	d	e	f	g	h
		○		○					
			○					○	
g	e	○		○				○	
h	e	○		○				○	

○—○: Indicate continuity

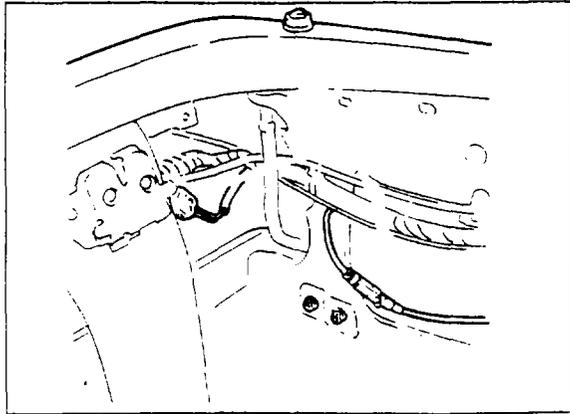
If the antenna does not function even though there is continuity, the problem may be either in the wiring harness or in the radio.

5. Apply battery voltage to the terminals and check the operation.



67U15X-170

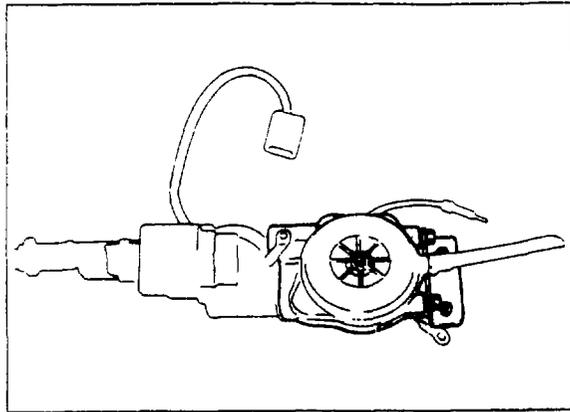
Battery		Function of antenna
Pos.	Neg.	
Br	Y	UP
Y	W	DOWN



67U15X-171

Removing Power Antenna

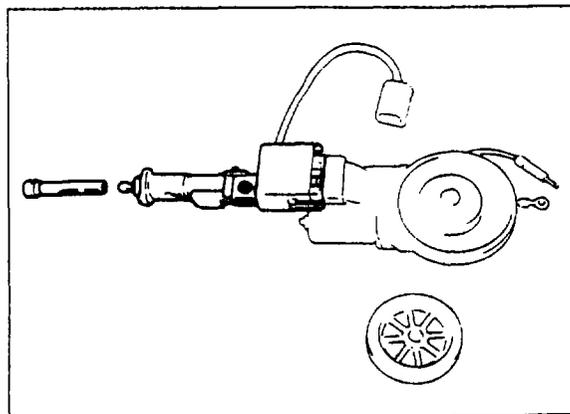
1. Remove the left rear trunk side trim.
2. Disconnect the antenna feeder and connector.
3. Remove the attaching nuts and remove the power antenna assembly.



67U15X-172

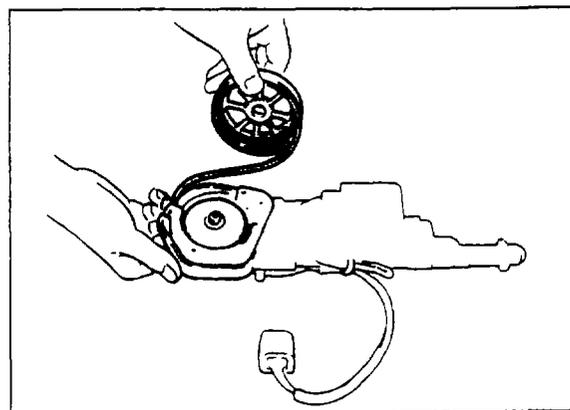
Disassembling Power Antenna

1. Remove the bracket.
2. Remove the drive mechanism cover.



67U15X-173

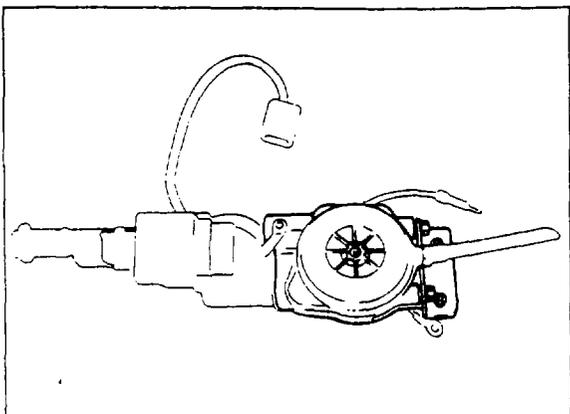
3. Remove the rod insulator.
4. Remove the rod assembly.



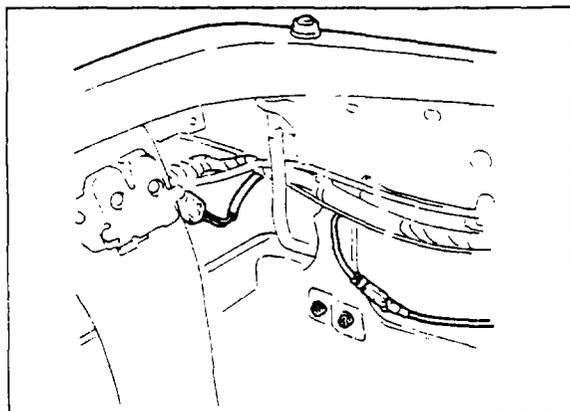
67U15X-174

Assembling Power Antenna

1. Insert the rod assembly into the mast assembly.
2. Roll the cable into the case and place the case in position.
3. Insert the rod insulator into the mast assembly.



67U15X-175

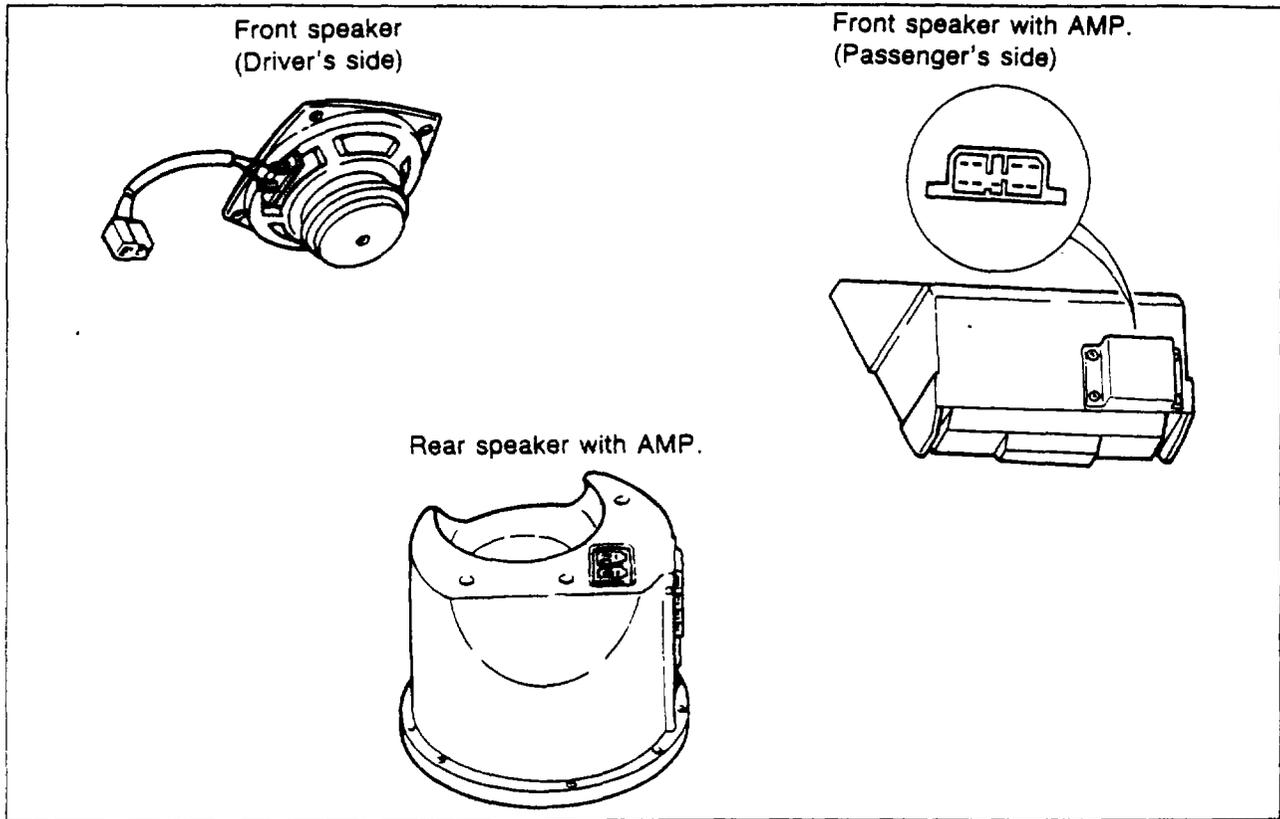


67U15X-176

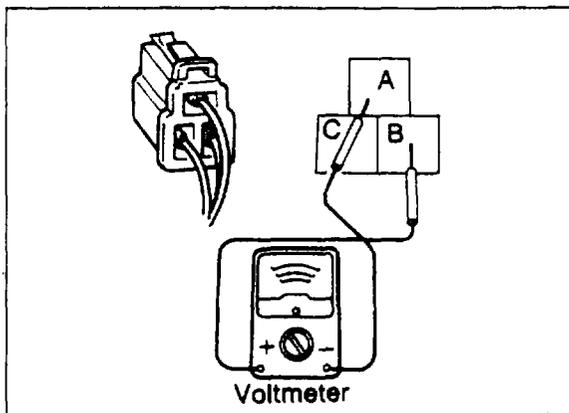
4. Install the drive mechanism cover and bracket.

5. Attach the power antenna assembly to the vehicle and connect the antenna feeder and connector.
6. Check the operation of the power antenna and install the left rear trunk side trim.

SPEAKER



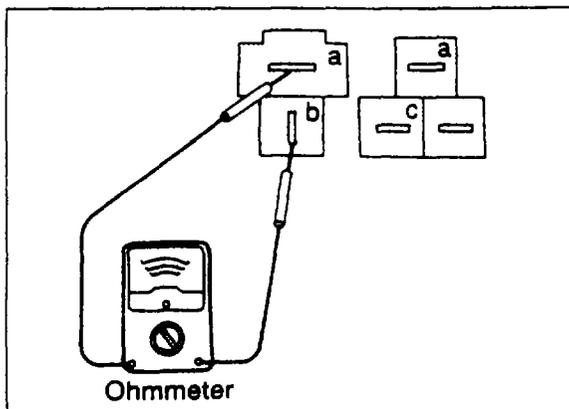
67U15X-177



67U15X-178

Rear speaker with amp Checking circuit

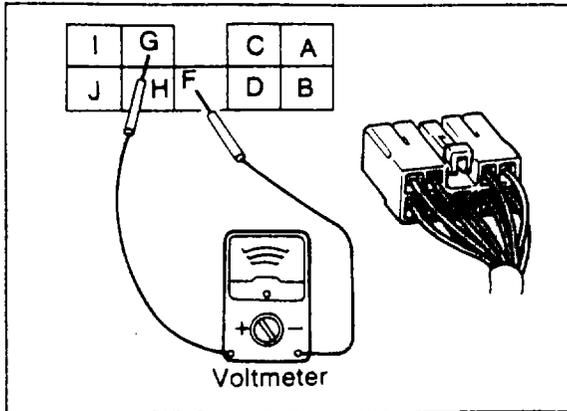
1. Check the audio fuse (20A).
2. Disconnect the 3 Pin connector at the rear speaker.
3. Turn the ignition switch to ACC.
4. Using a voltmeter, measure the voltage between (A) and (B) at harness side of connector.
.....12V
5. If the voltage is not as specified, check the harness.



67U15X-179

Checking rear speaker

1. Disconnect the 2 Pin connector at the rear speaker.
2. Using an ohmmeter, measure the resistance between (a) and (b).
.....Approx. 100 Ω
3. If the resistance is not as specified, replace rear speaker.

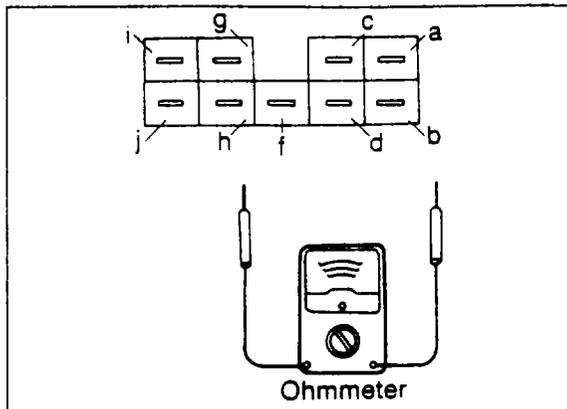


67U15X-180

Front speaker with amp

Checking circuit (Passenger's side)

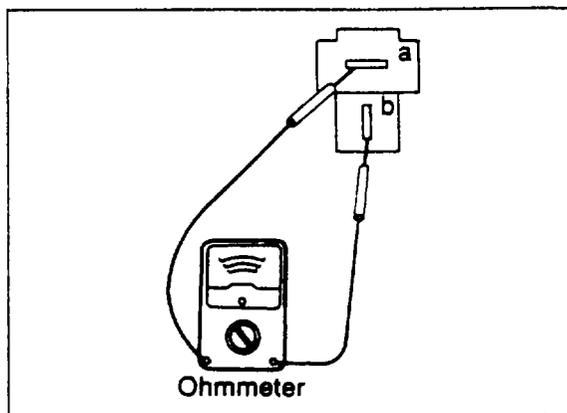
1. Check the audio fuse (20A).
2. Disconnect the 9 Pin connector of front speaker.
3. Turn the ignition switch to ACC.
4. Using a voltmeter, measure the voltage between \textcircled{F} and \textcircled{G} .
.....12V
5. If the voltage is not as specified, check the harness.



67U15X-181

Checking front speaker (Passenger's side)

1. Disconnect the 9 Pin connector of front speaker.
2. Using an ohmmeter, measure the resistance between \textcircled{a} and \textcircled{b} , \textcircled{c} and \textcircled{d} .
.....approx. 100 Ω
3. If the resistance is not as specified, replace the speaker.



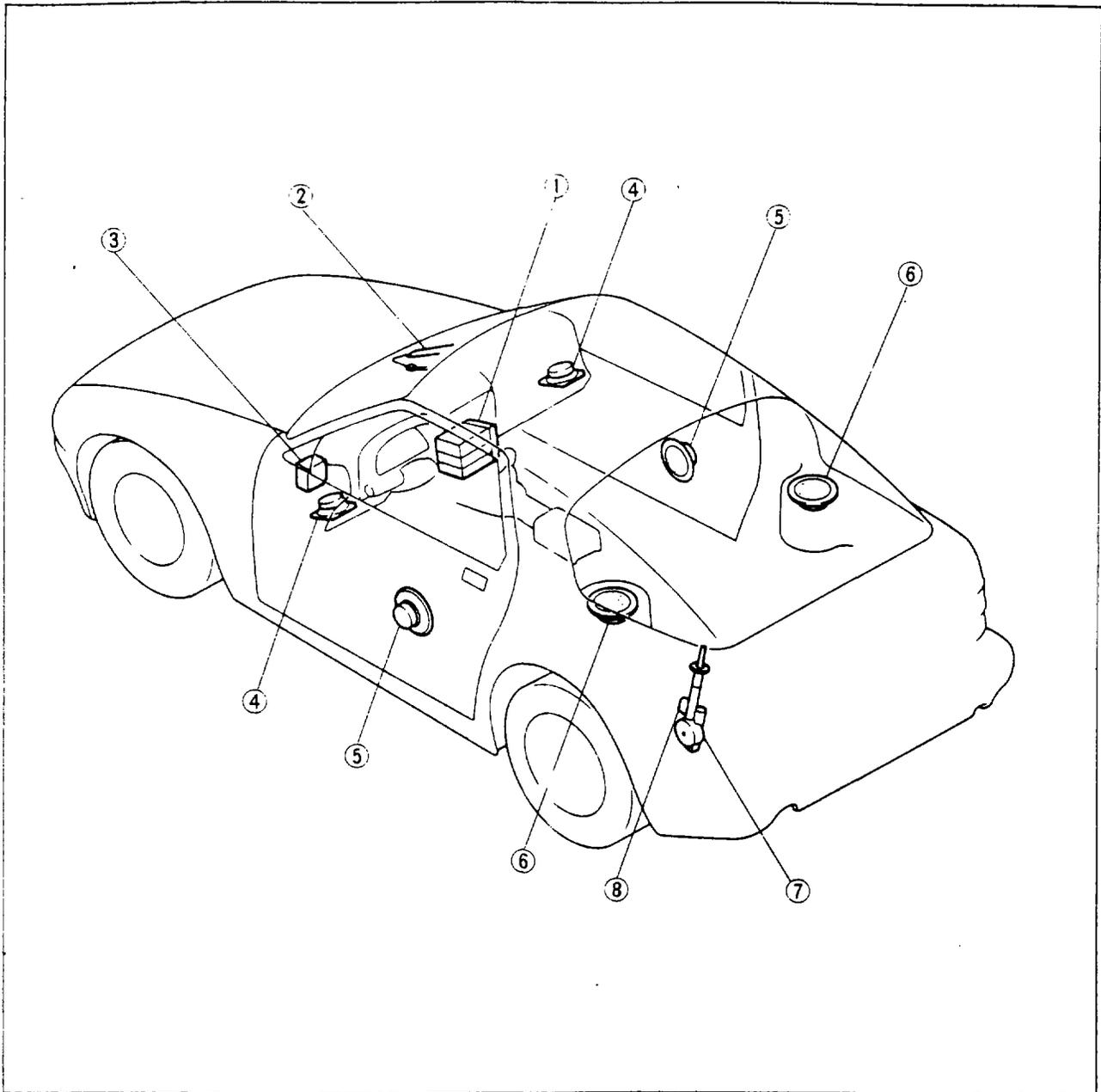
67U15X-182

Checking front speaker (Driver's side)

1. Disconnect the 2 Pin connector of front speaker.
2. Using an ohmmeter, measure the resistance between \textcircled{a} and \textcircled{b} .
.....approx. 4 Ω
3. If the resistance is not as specified, replace the speaker.

15 AUDIO SYSTEM

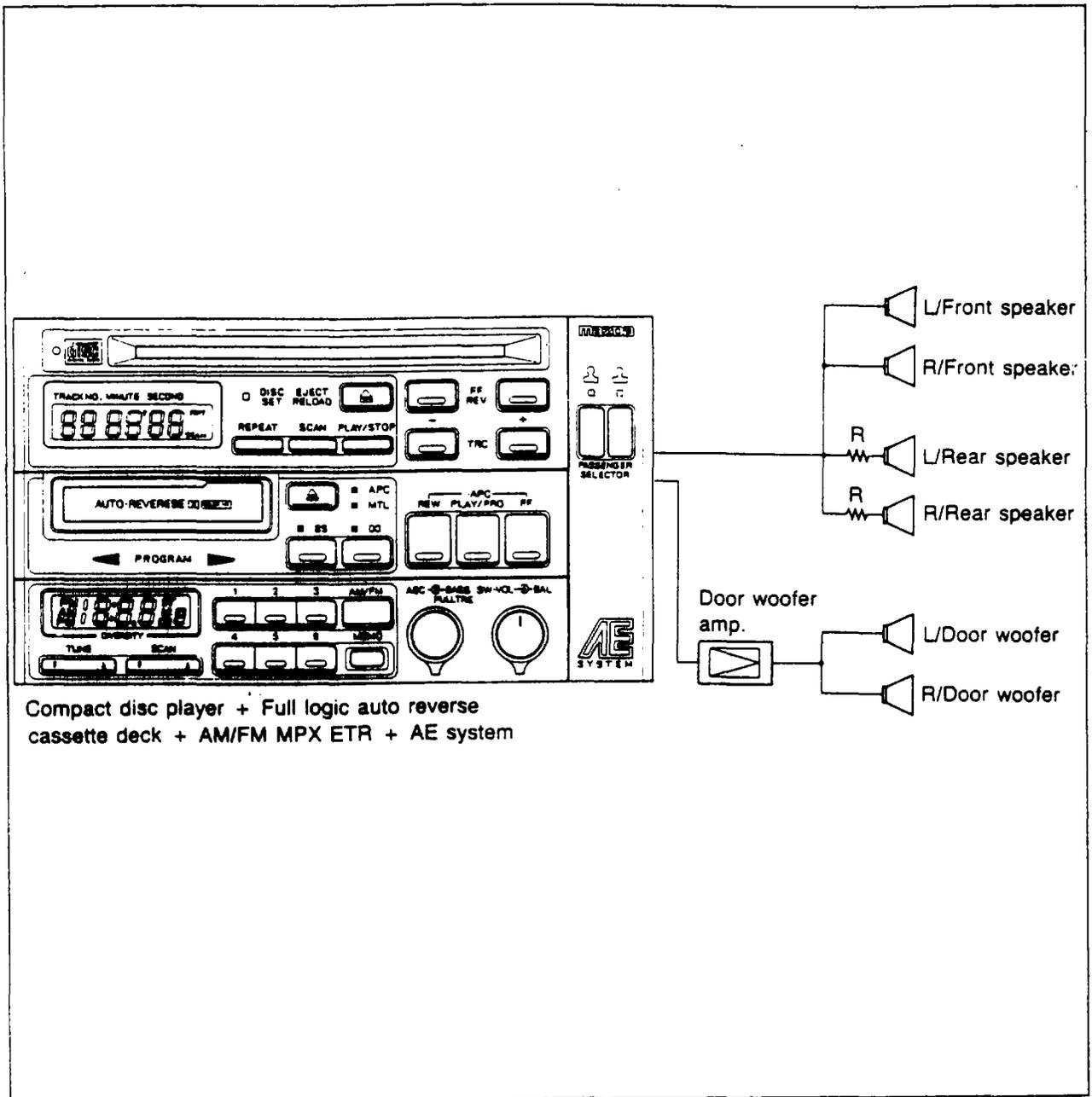
STRUCTURAL VIEW (For Compact Disc)



77U15X-120

- | | |
|---------------------------------------|-------------------------|
| 1. Compact disc player | 4. Front speakers |
| Full logic auto reverse cassette deck | 5. Door woofer speakers |
| AM/FM MPX ETR | 6. Rear speakers |
| Acoustic Equilibration (AE) system | 7. Power antenna |
| 2. Front windshield antenna | 8. Power antenna relay |
| 3. Door woofer amplifier | |

OUTLINE OF AUDIO



77U15X-121

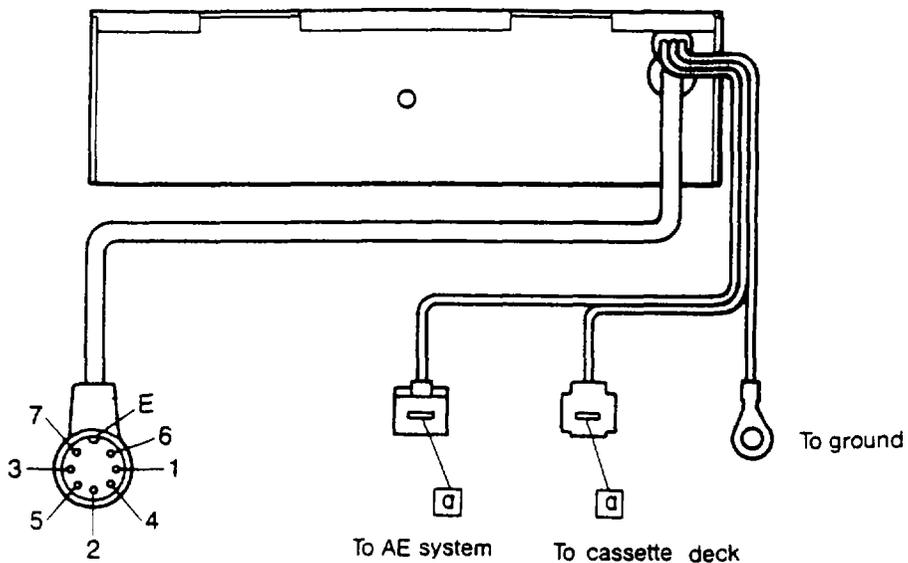
15 AUDIO SYSTEM

CONNECTOR OF AUDIO COMPONENT

COMPACT DISC PLAYER

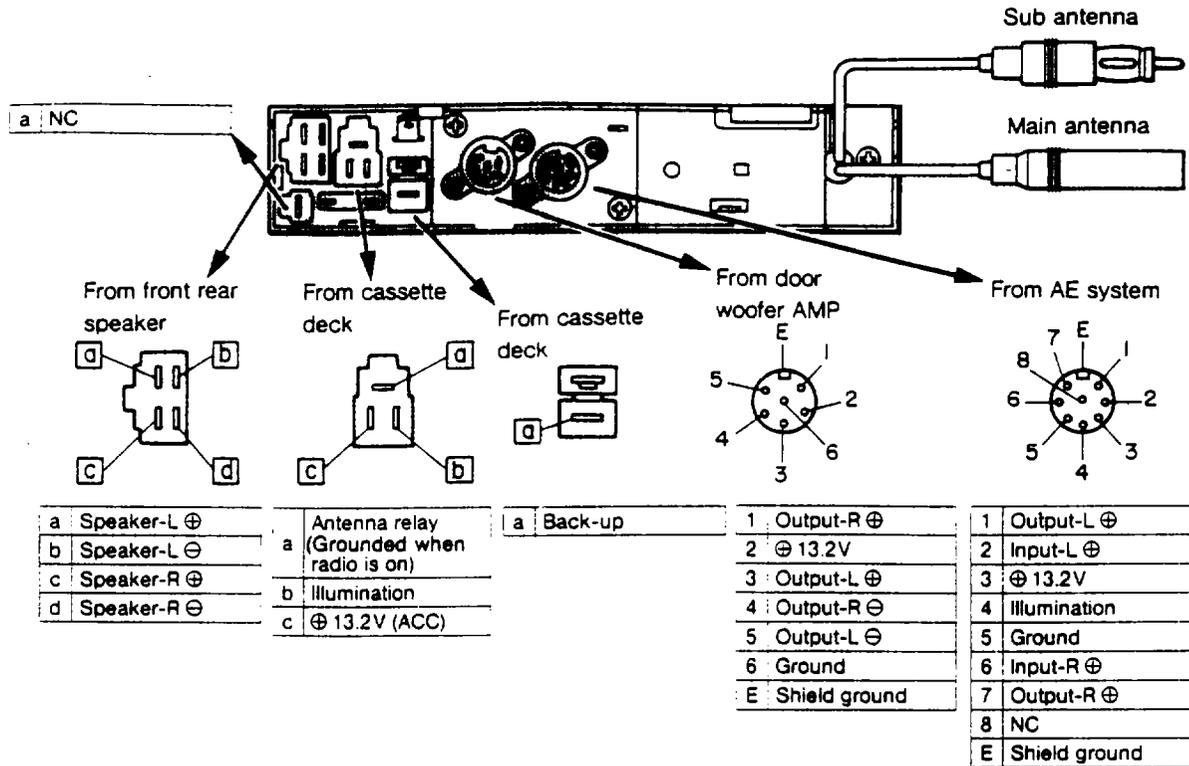
To AE system

1	AUX + B
2	Input-L ⊕
3	Ground
4	NC
5	Input-R ⊕
6	NC
7	Illumination
E	Shield ground

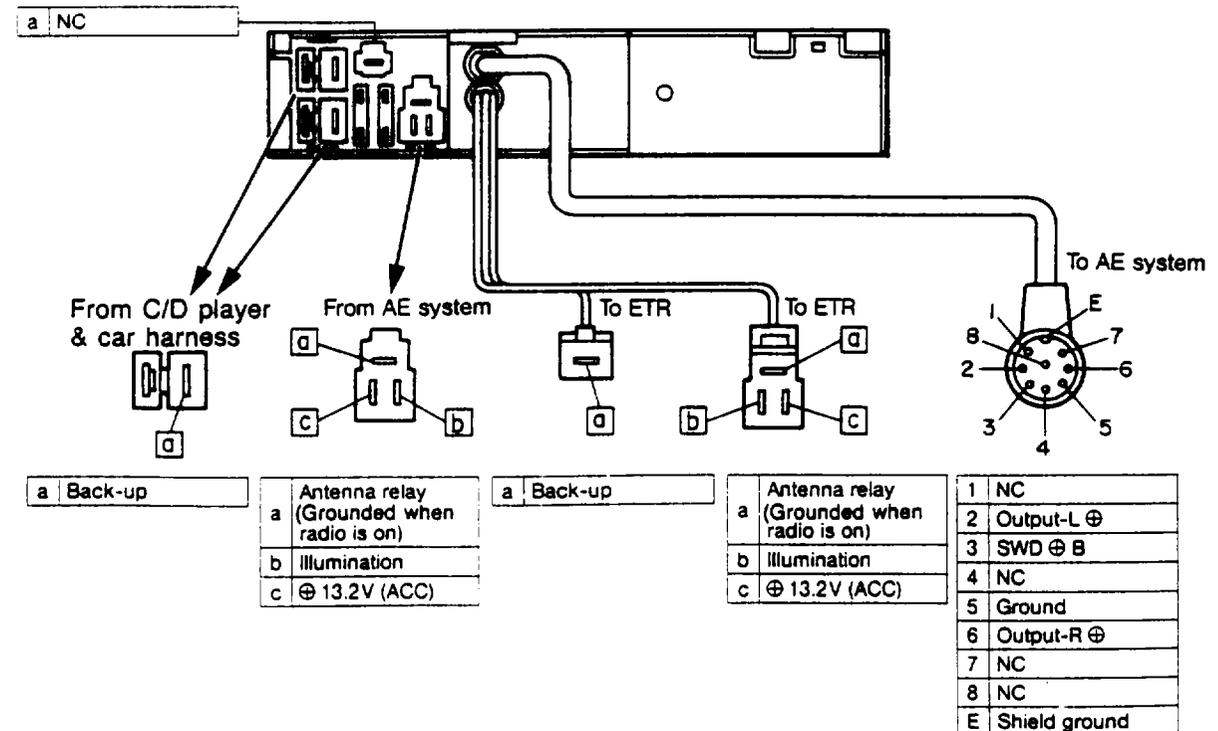


a	⊕ 13.2V (ACC)	Back-up
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AM/FM MULTIPLEX RADIO (ETR)

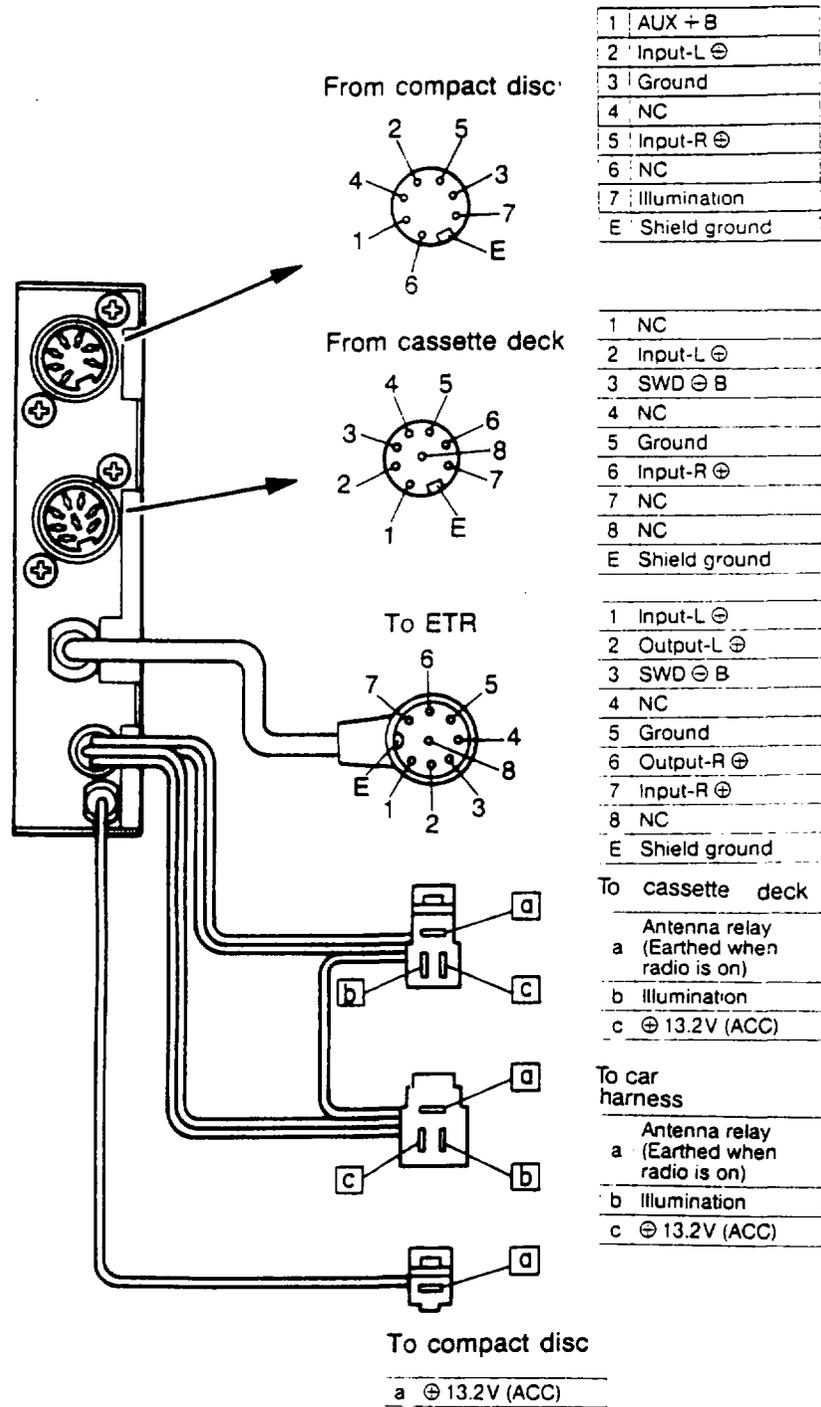


FULL LOGIC CONTROL CASSETTE DECK

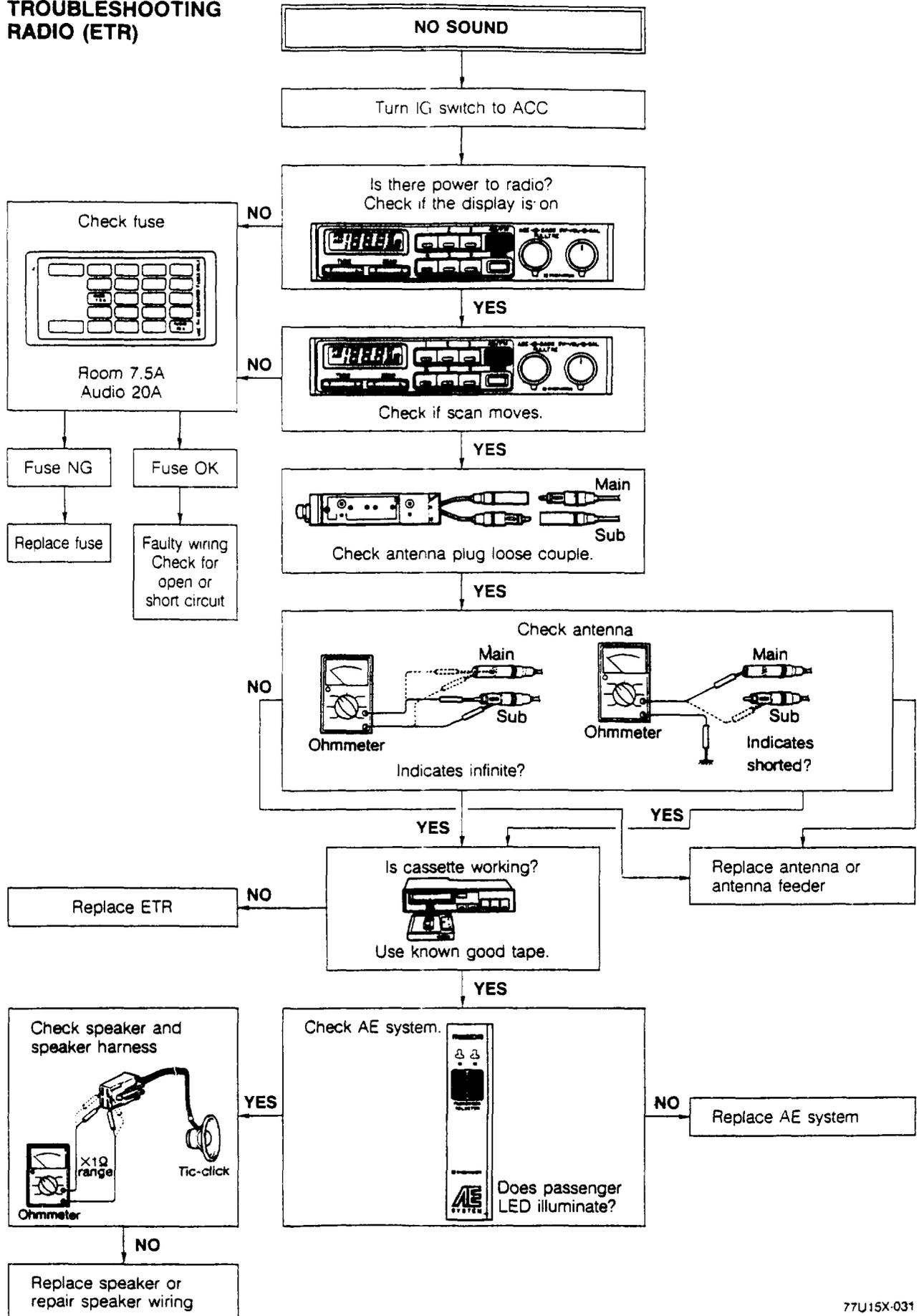


15 AUDIO SYSTEM

AE SYSTEM

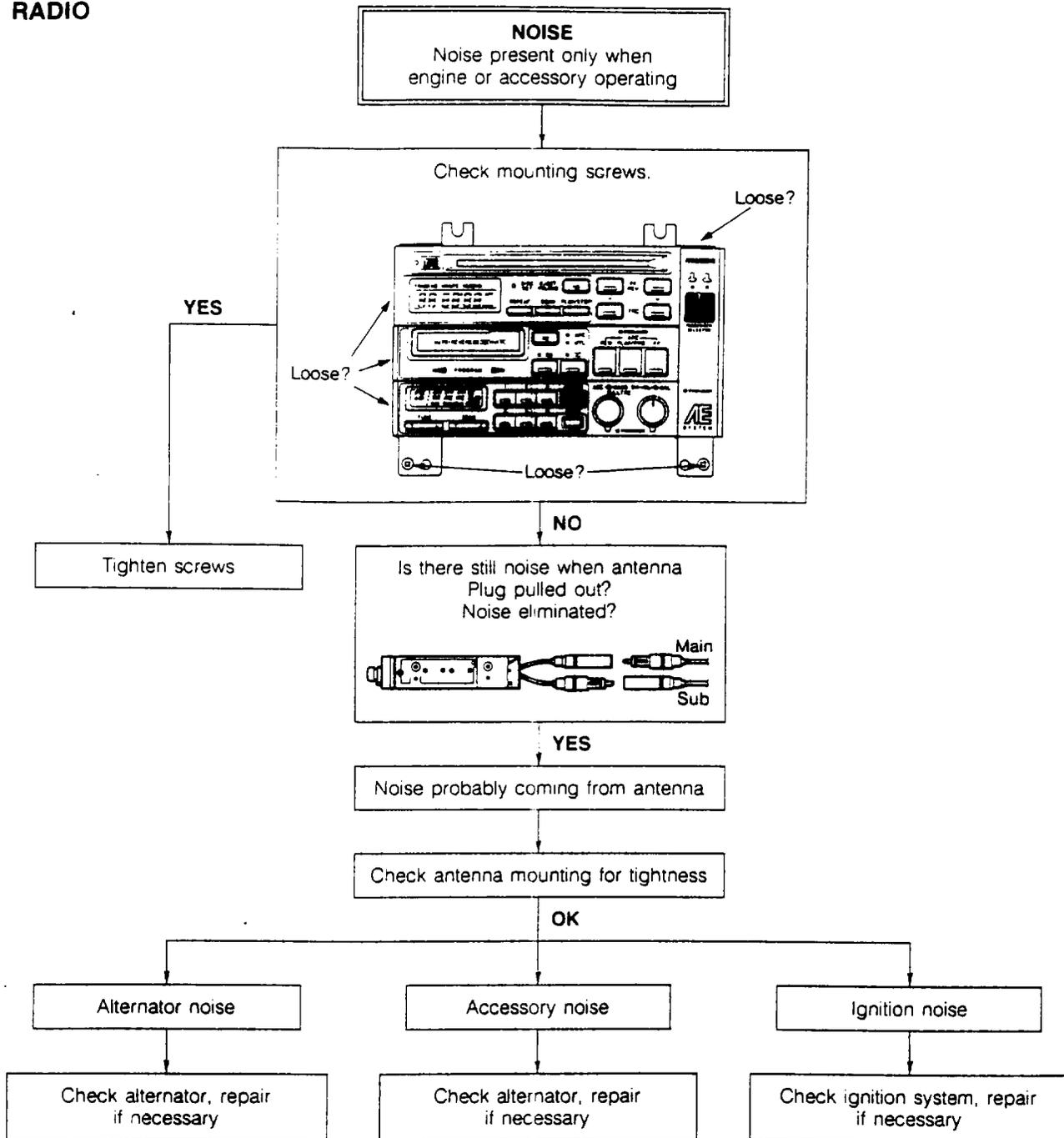


TROUBLESHOOTING RADIO (ETR)



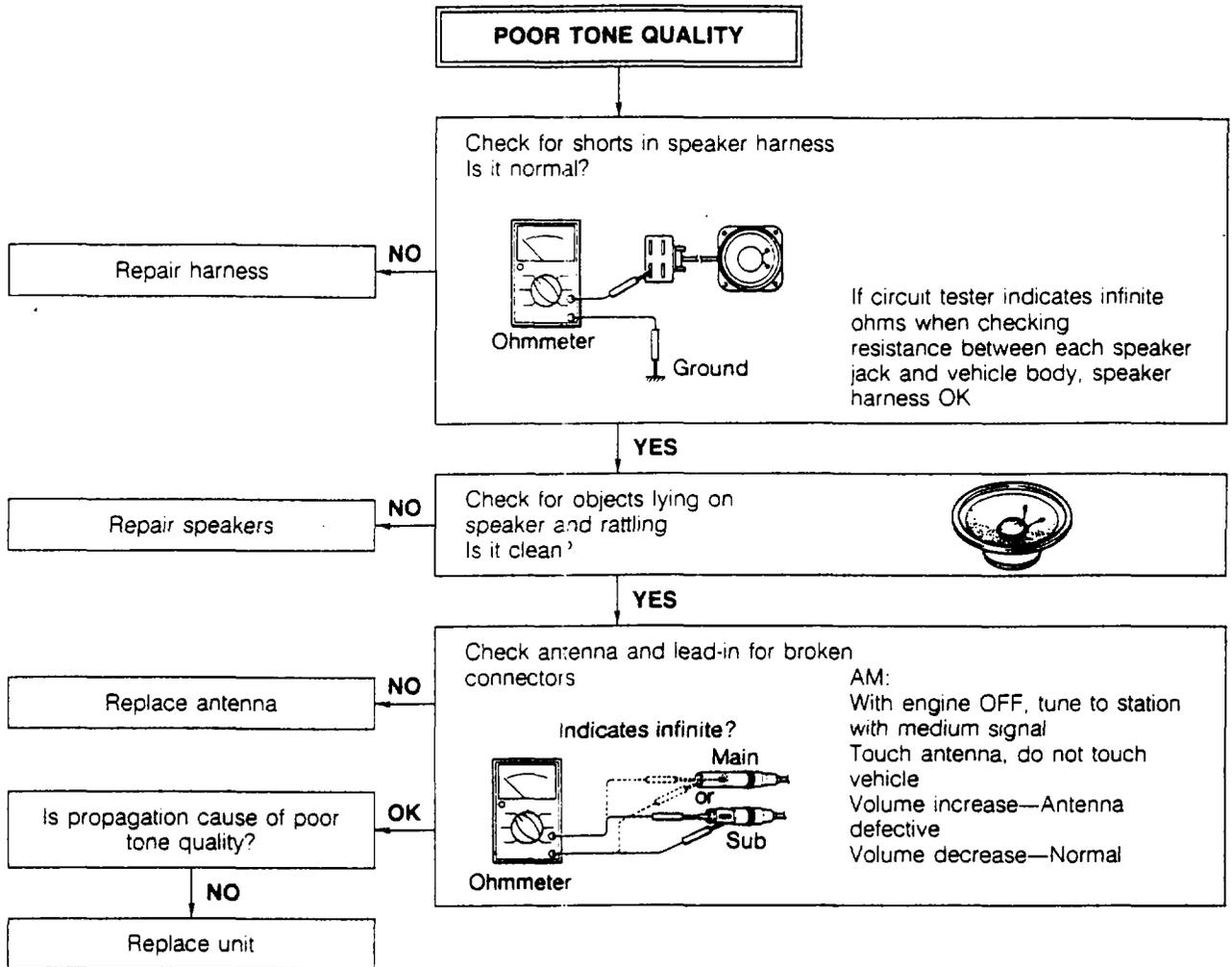
15 AUDIO SYSTEM

RADIO



77U15X-032

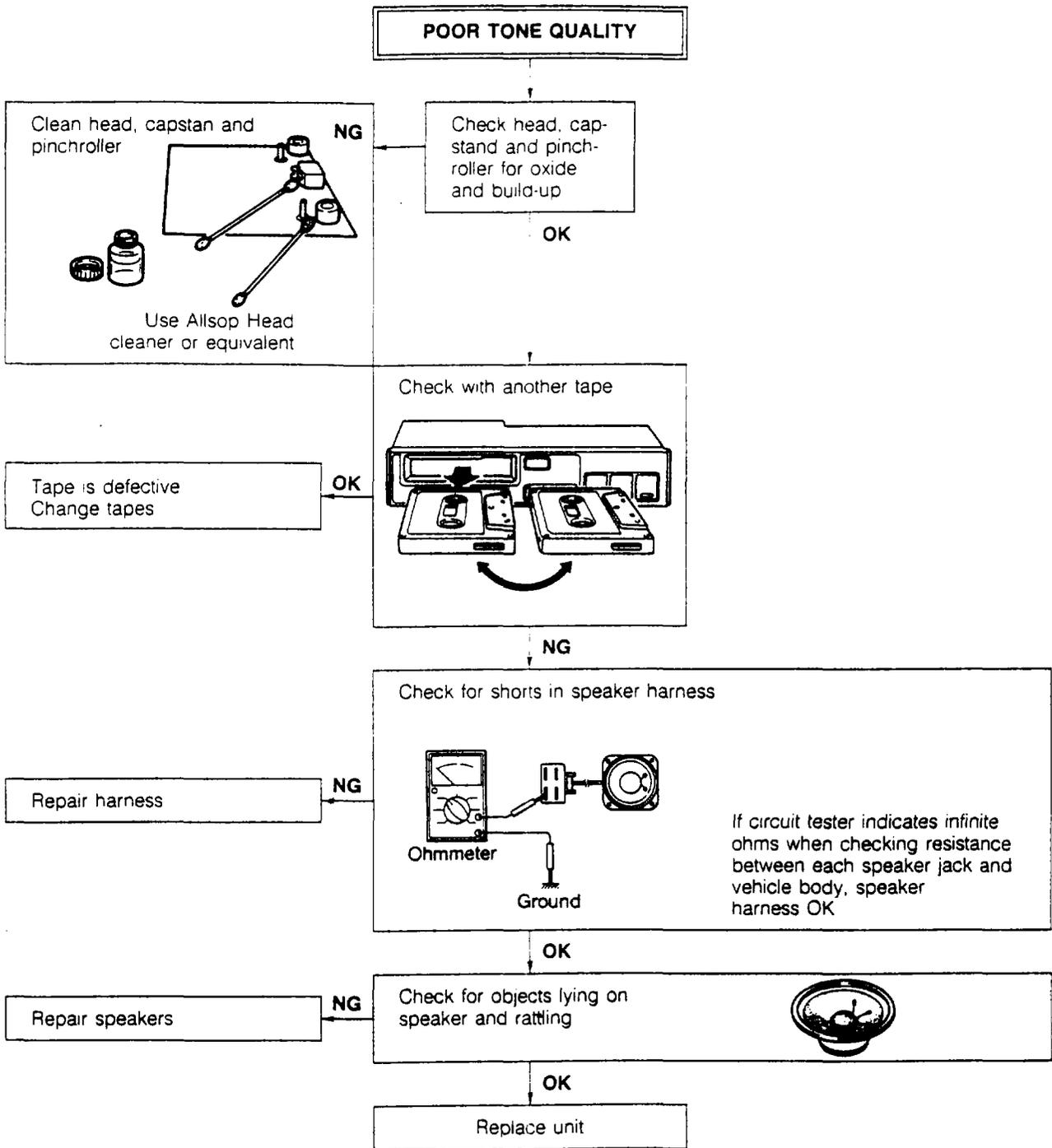
RADIO



77U15X-033

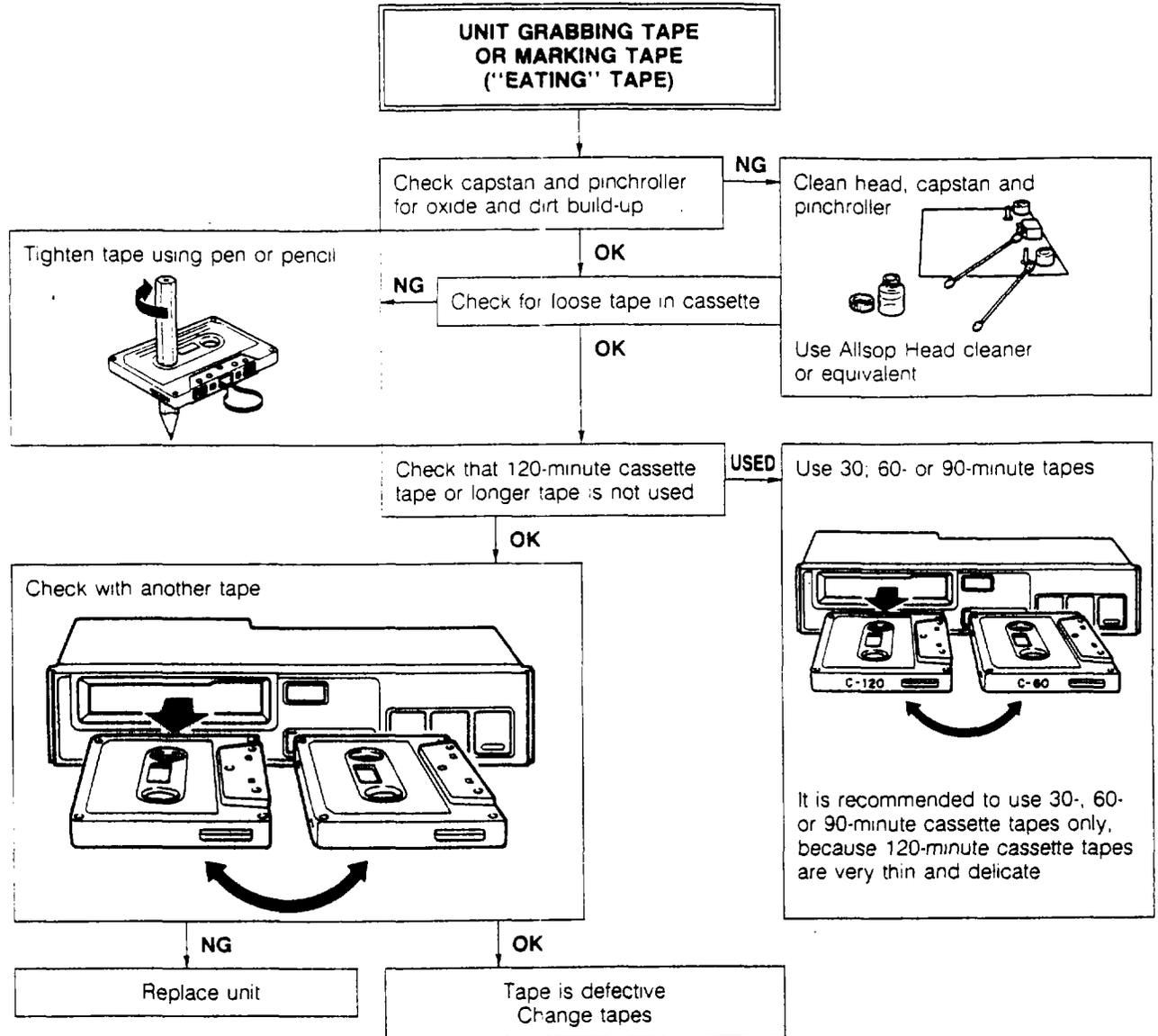
15 AUDIO SYSTEM

CASSETTE TAPE PLAYER



77U15X-034

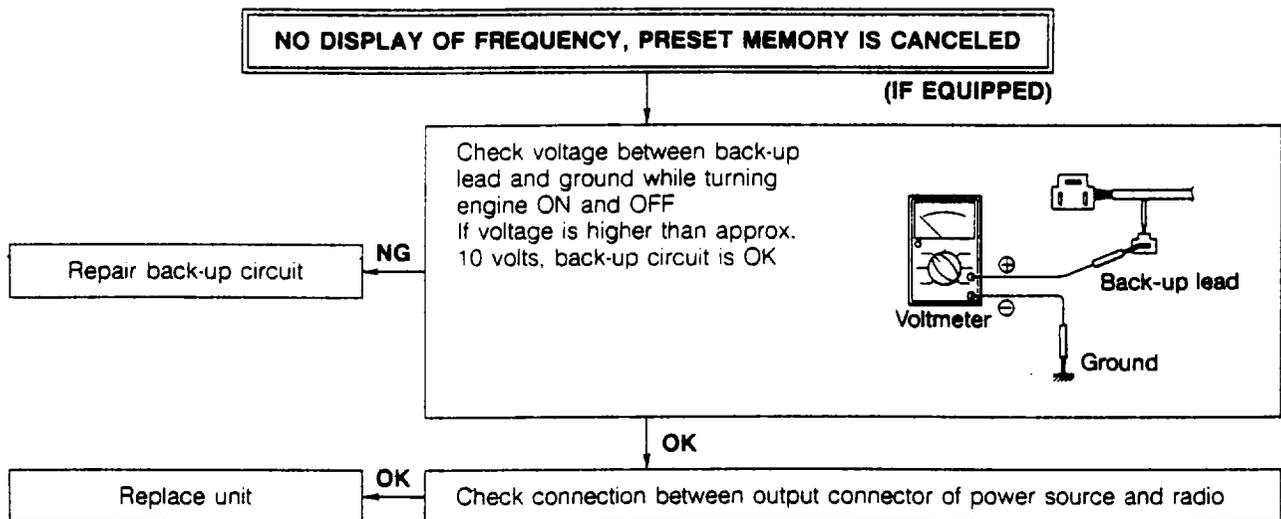
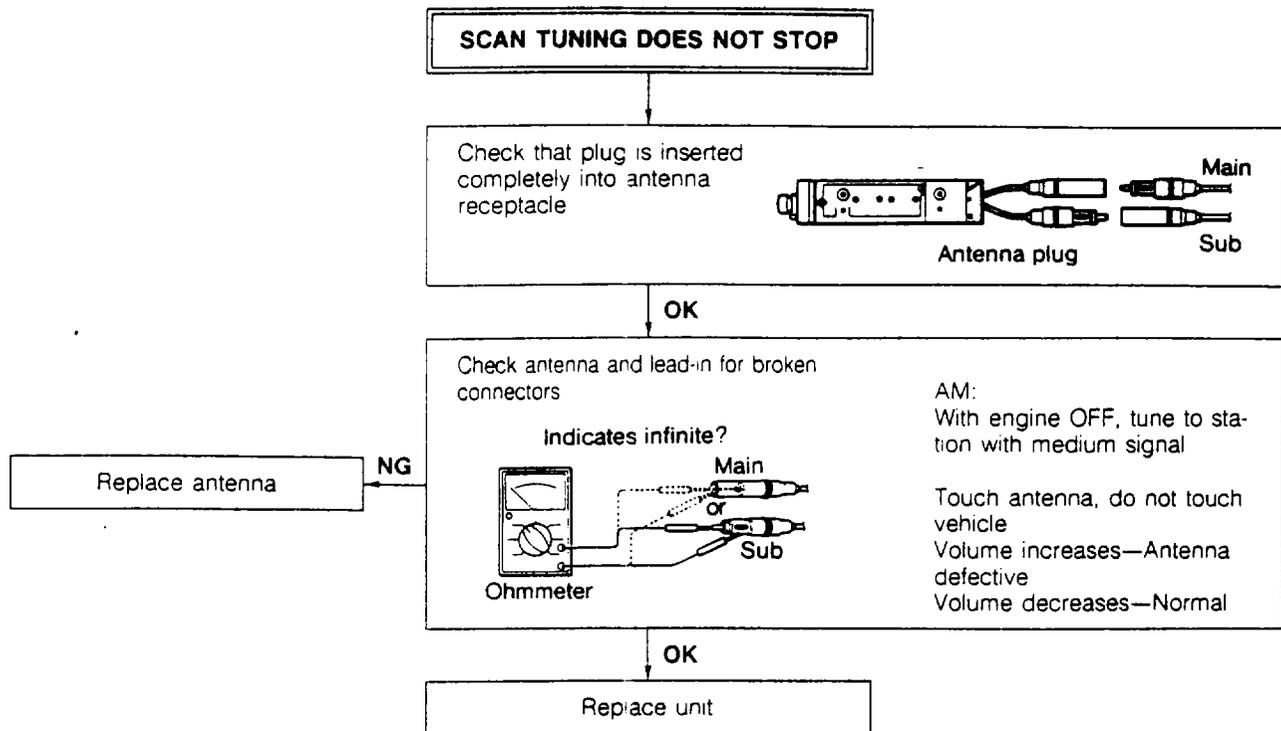
CASSETTE TAPE PLAYER



77U15X-035

15 AUDIO SYSTEM

RADIO

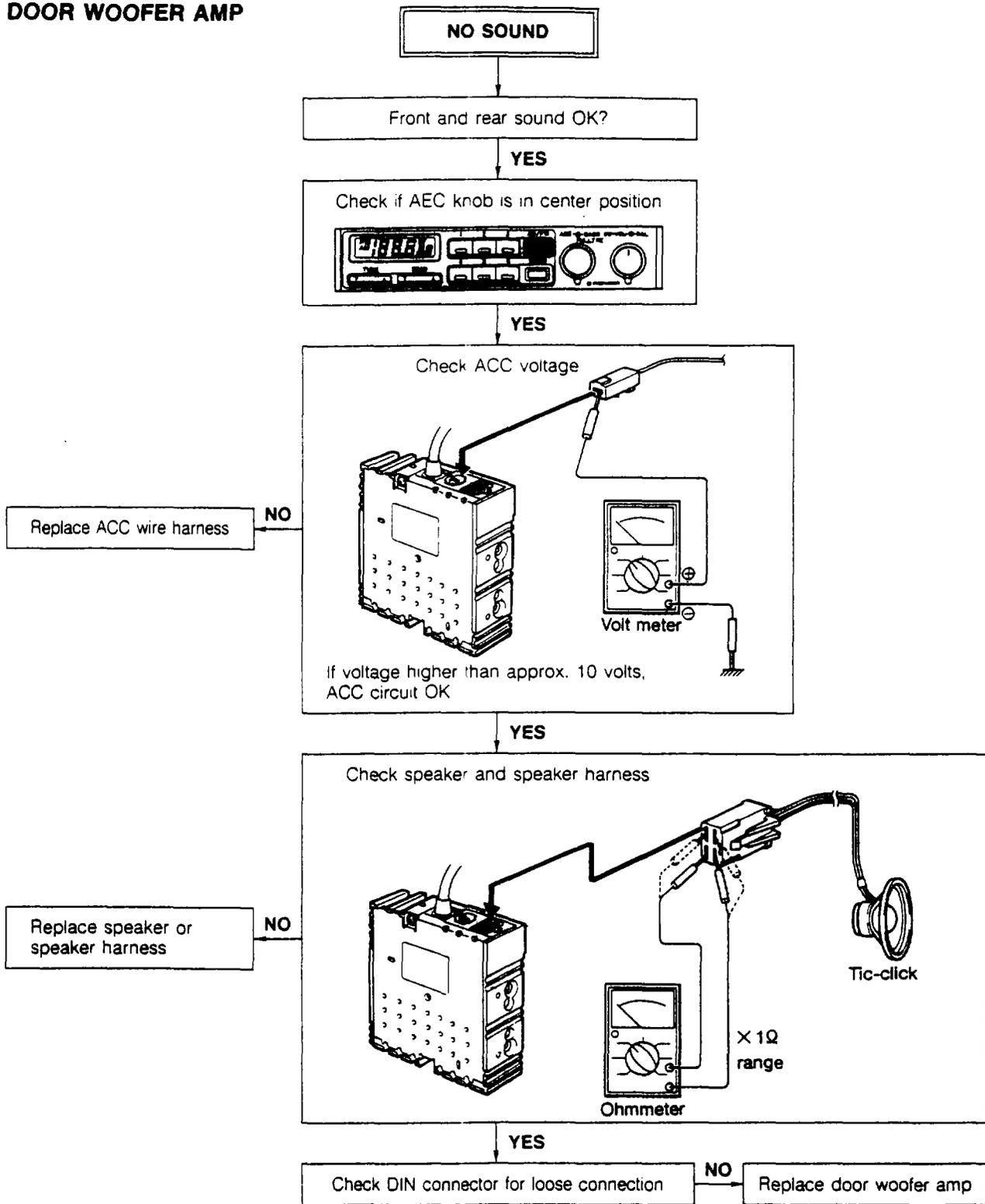


77U15X-036

Note

When battery is dead or radio is disconnected from battery for repair, all memory is canceled. The stations must be preset again.

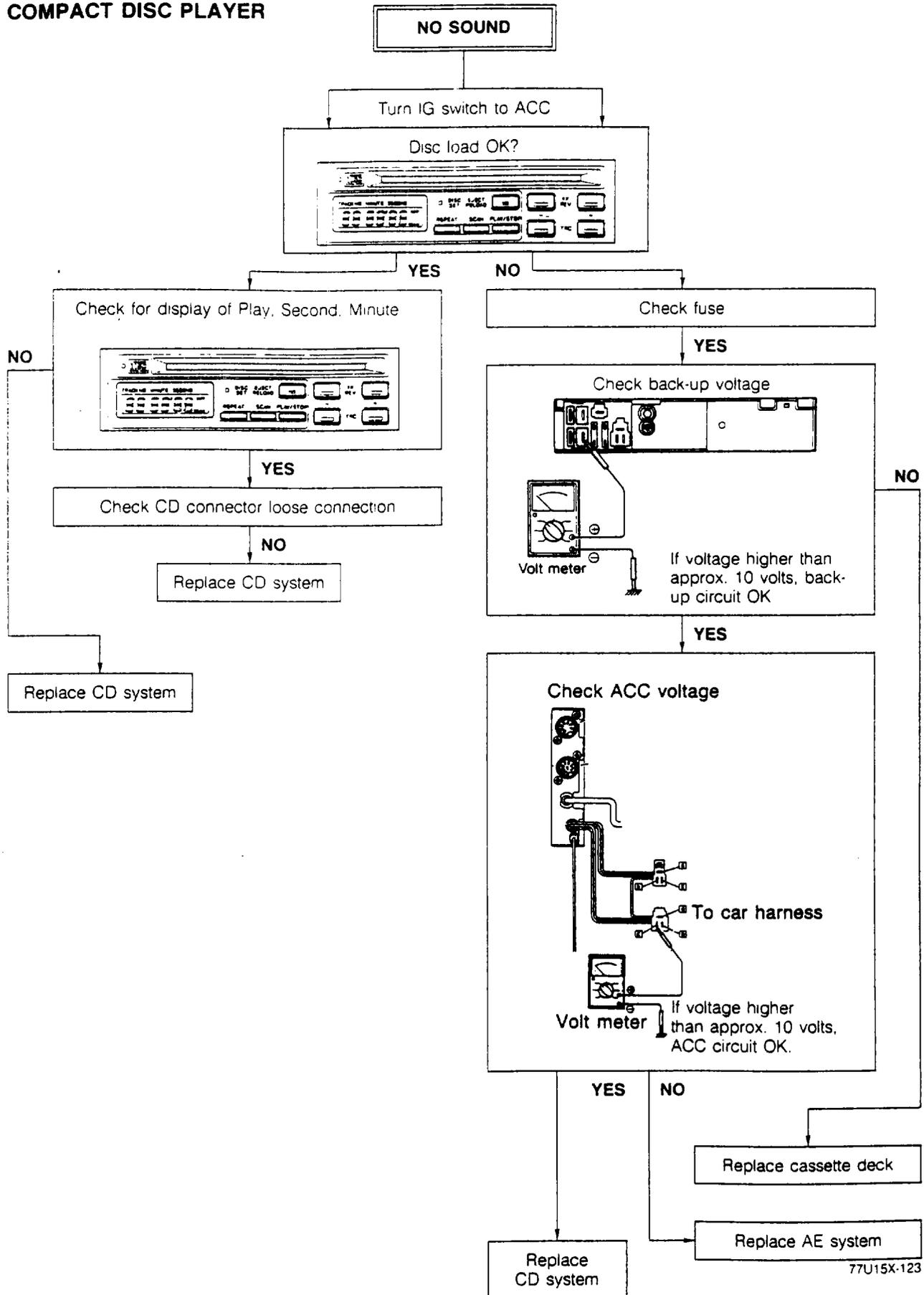
DOOR WOOFER AMP



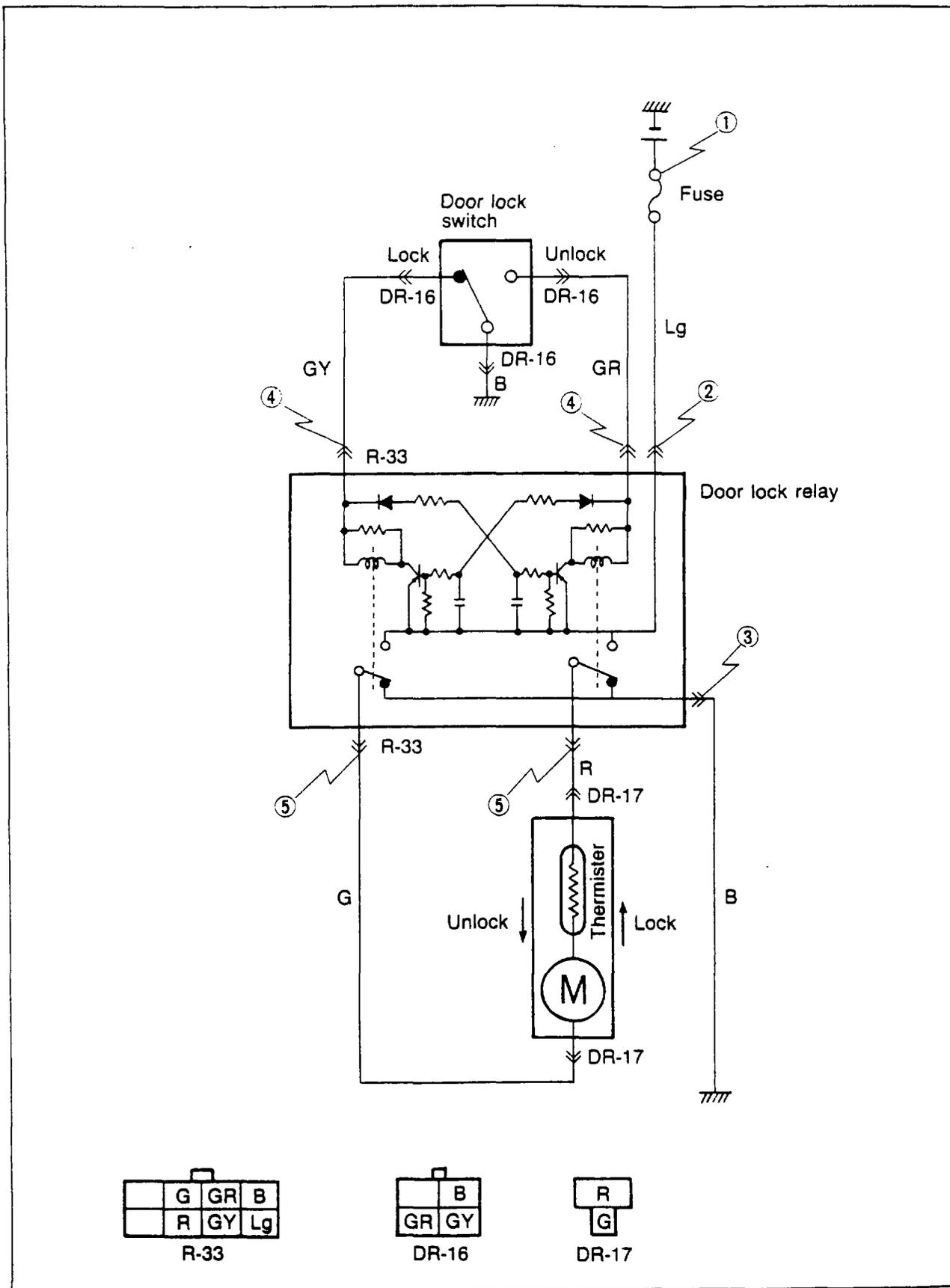
77U15X-039

15 AUDIO SYSTEM

COMPACT DISC PLAYER



POWER DOOR LOCK
CIRCUIT DIAGRAM



	G	GR	B
	R	GY	Lg

R-33

	B
	GR

DR-16

	R
	G

DR-17

15 TROUBLE SHOOTING

Power door lock inoperative

No.	Procedure	Result	Action															
1	Check fuse for fusing.	No fusing.	Repair harness before replacing fuse.															
2	Check voltage. <table border="1" style="margin: 5px auto;"> <tr><th colspan="2">R-33 connector</th></tr> <tr><td>Ground</td><td>Lg</td></tr> </table>	R-33 connector		Ground	Lg	12V	Repair harness. (Fuse - Door lock relay)											
R-33 connector																		
Ground	Lg																	
3	Check voltage. <table border="1" style="margin: 5px auto;"> <tr><th colspan="2">R-33 connector</th></tr> <tr><td>Ground</td><td>B</td></tr> </table>	R-33 connector		Ground	B	0V	Repair harness. (Ground circuit)											
R-33 connector																		
Ground	B																	
4	Remove R-33 connector. Check door lock switch continuity. <table border="1" style="margin: 5px auto;"> <tr><th rowspan="2">Condition</th><th colspan="3">R-33 connector</th></tr> <tr><th>B</th><th>GY</th><th>GR</th></tr> <tr><td>Lock</td><td>○—○</td><td></td><td></td></tr> <tr><td>Unlock</td><td>○—</td><td></td><td>○</td></tr> </table>	Condition	R-33 connector			B	GY	GR	Lock	○—○			Unlock	○—		○	○—○ indicates continuity.	Repair harness (Door lock switch - Door lock relay) or replace door lock switch.
Condition	R-33 connector																	
	B	GY	GR															
Lock	○—○																	
Unlock	○—		○															
5	Check motor operation by applying voltage to motor. <table border="1" style="margin: 5px auto;"> <tr><th colspan="2">DR-17 connector</th></tr> <tr><td>12V</td><td>0V</td></tr> <tr><td>G</td><td>R</td></tr> <tr><td>R</td><td>G</td></tr> </table>	DR-17 connector		12V	0V	G	R	R	G	→ Lock → Unlock	Repair harness (Motor - Relay) or replace motor.							
DR-17 connector																		
12V	0V																	
G	R																	
R	G																	

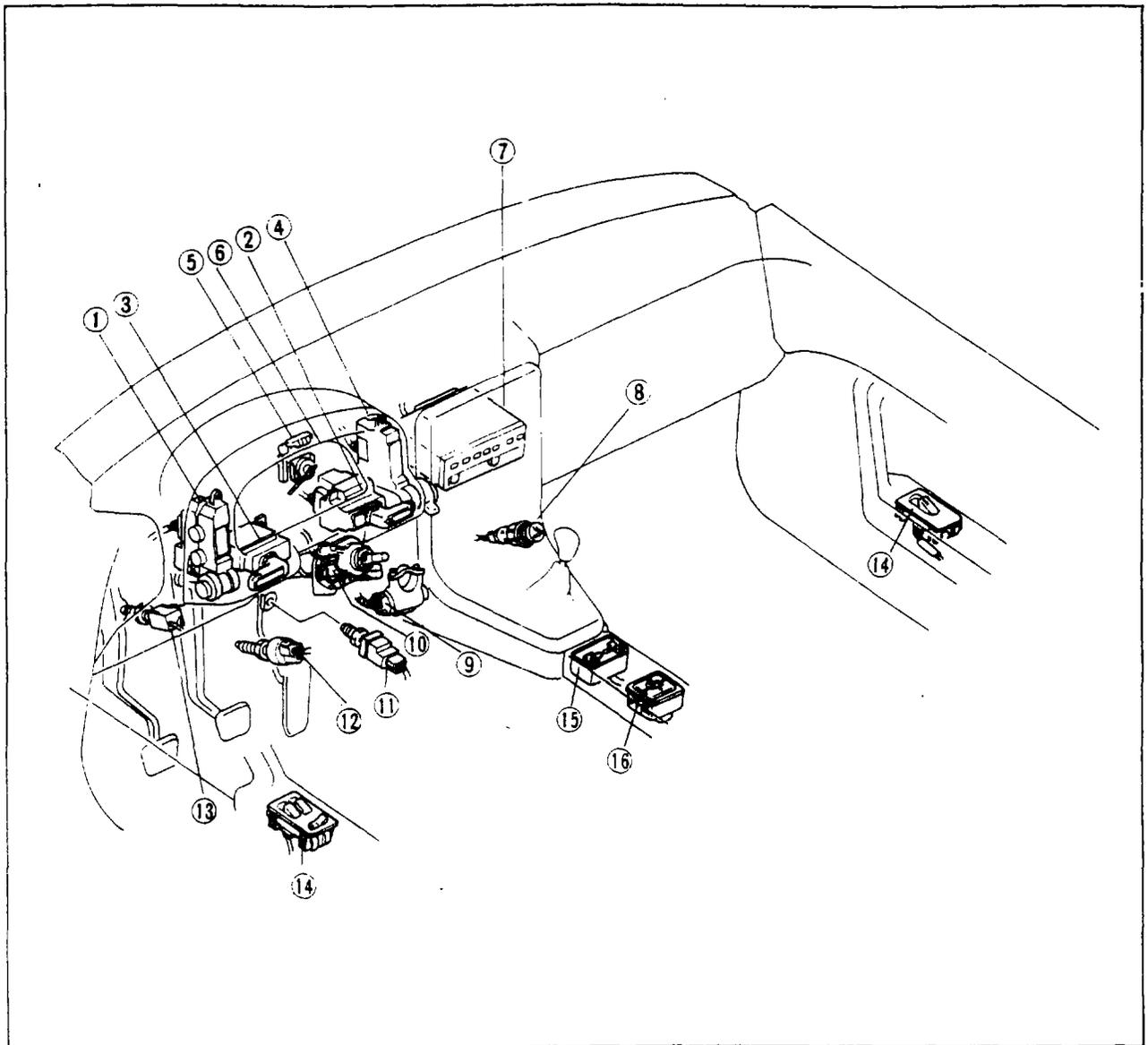
Replace door lock relay.

87U15X-041

BODY ELECTRICAL SYSTEM FOR CONVERTIBLE TOP

OUTLINE

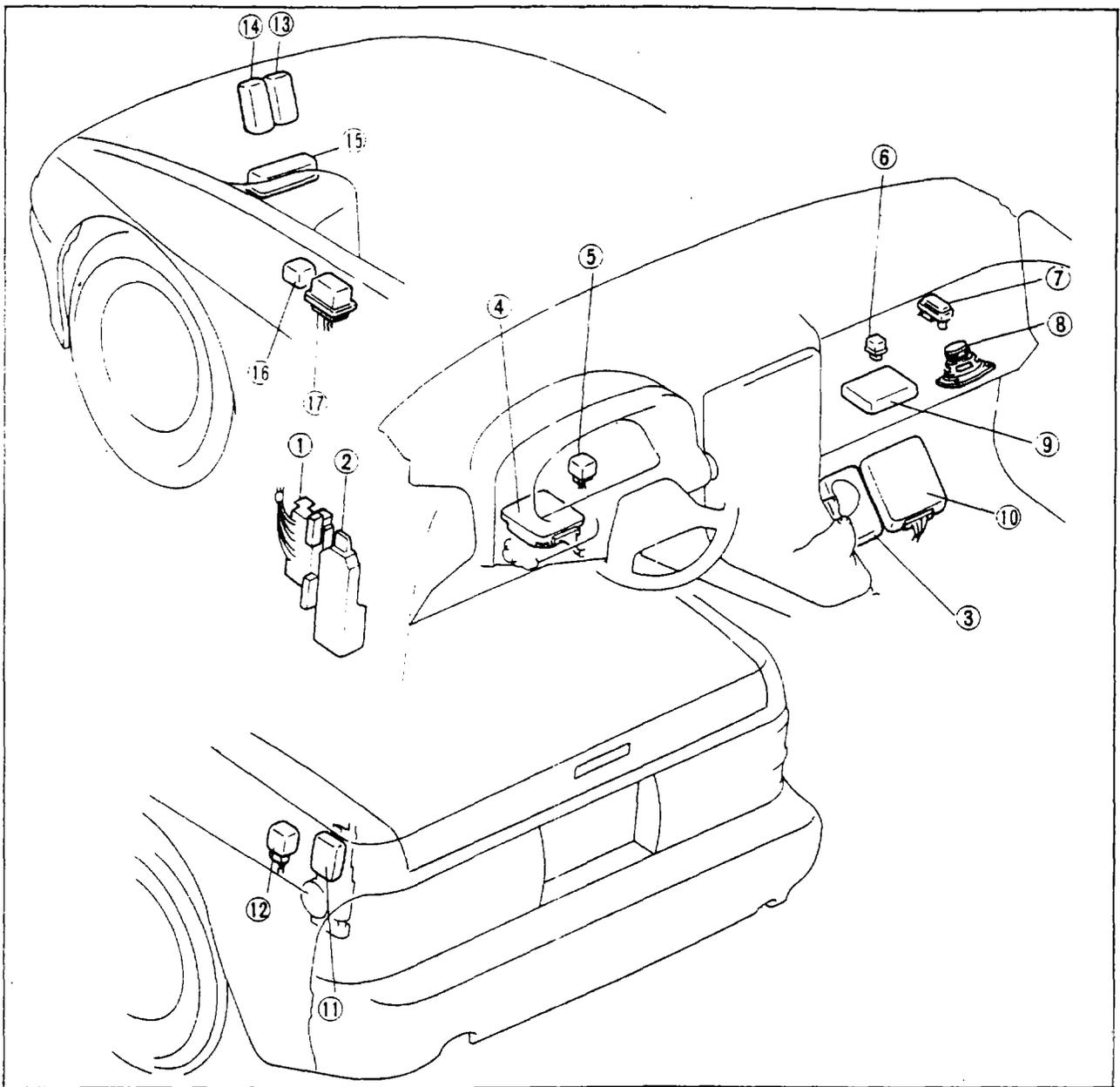
LOCATION OF SWITCHES



87U15X-042

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Cluster switch
(Rear defroster, retractable headlight and headlight cleaner, panel light control, headlight) 2. Cluster switch (Cruise control) 3. Cluster switch
(Turn signal, dimmer and passing) 4. Cluster switch
(Hazard, convertible control switch, front wiper and washer) 5. 20,000 miles switch (in meter) 6. Speed sensor (in meter) | <ol style="list-style-type: none"> 7. Logicon switch 8. Cigarette lighter 9. Ignition switch 10. Turn cancel and angle sensor 11. Accelerator switch 12. Stop light switch 13. Clutch switch 14. Power window switch (Main) 15. Headrest speaker switch 16. Remote control mirror switch |
|---|--|

LOCATION OF RELAYS AND UNITS



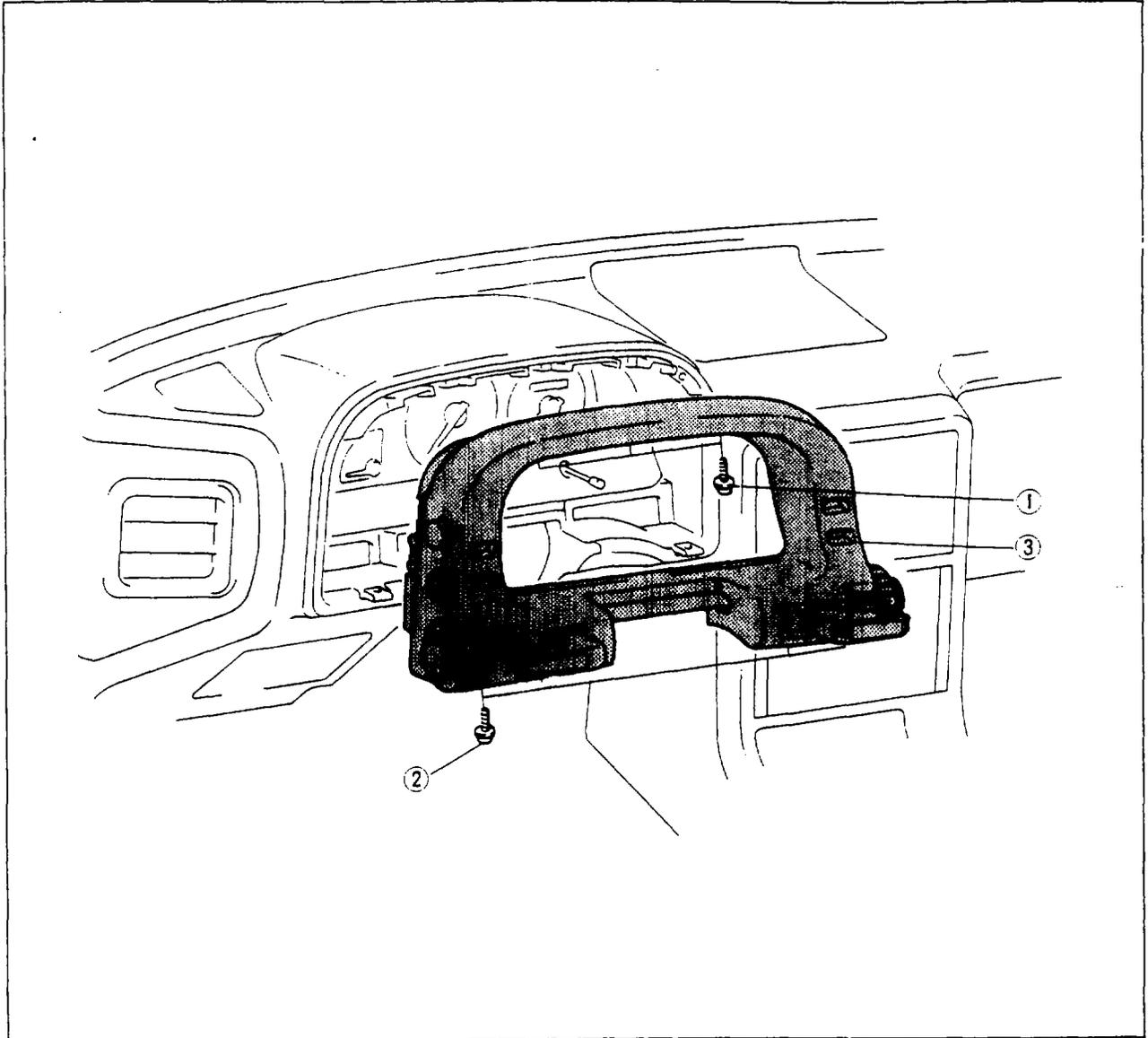
87U15X-043

- | | |
|---|---------------------------------|
| 1. Fuse box | 8. Speaker |
| 2. Central processing unit
(Turn and hazard, lights off reminder buzzer,
key illumination timer, horn relay, seat belt
timer, buzzer, ALT warning light relay, stop
light warning relay, key reminder buzzer) | 9. Theft-deterrent control unit |
| 3. Cruise control unit | 10. Emission control unit |
| 4. Power steering control unit | 11. Power antenna relay |
| 5. Circuit opening relay (for EGI) | 12. Rear defroster relay |
| 6. Heater relay | 13. Dimmer relay |
| 7. Atmospheric pressure sensor | 14. Headlight relay |
| | 15. Main fuse box |
| | 16. Starter cut relay |
| | 17. Main relay (for EGI) |

CLUSTER SWITCH

REMOVAL AND INSTALLATION

1. Disconnect the negative battery cable. Remove in the sequence shown in the figure.
2. Install in the reverse order of removal.



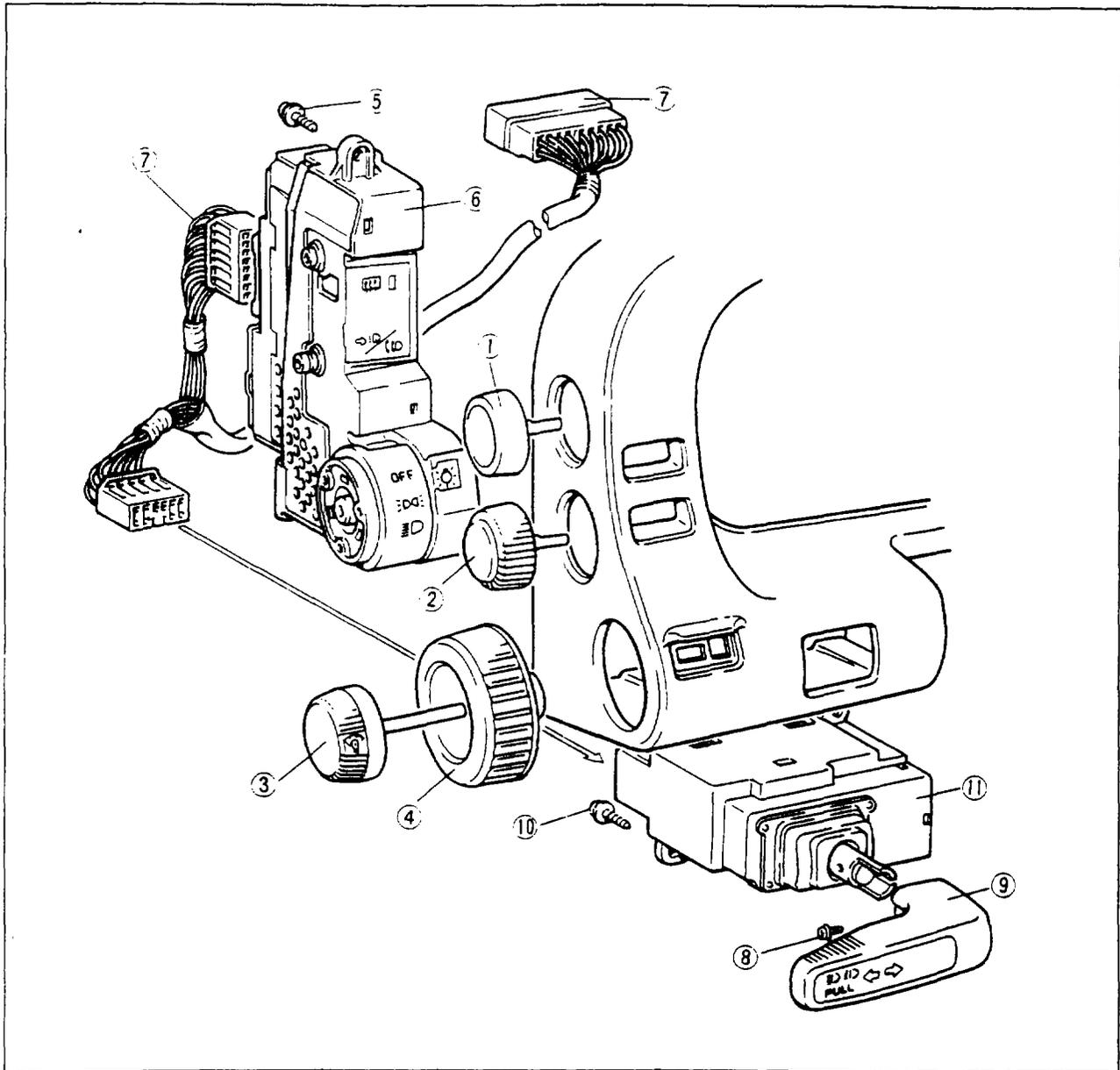
77U15X-058

1. Tapping screws
2. Tapping screws
3. Cluster switch

15 CLUSTER SWITCH

DISASSEMBLY AND ASSEMBLY (LEFT SIDE)

1. Disassemble in the sequence shown in the figure.
2. Assemble in the reverse order of disassembly

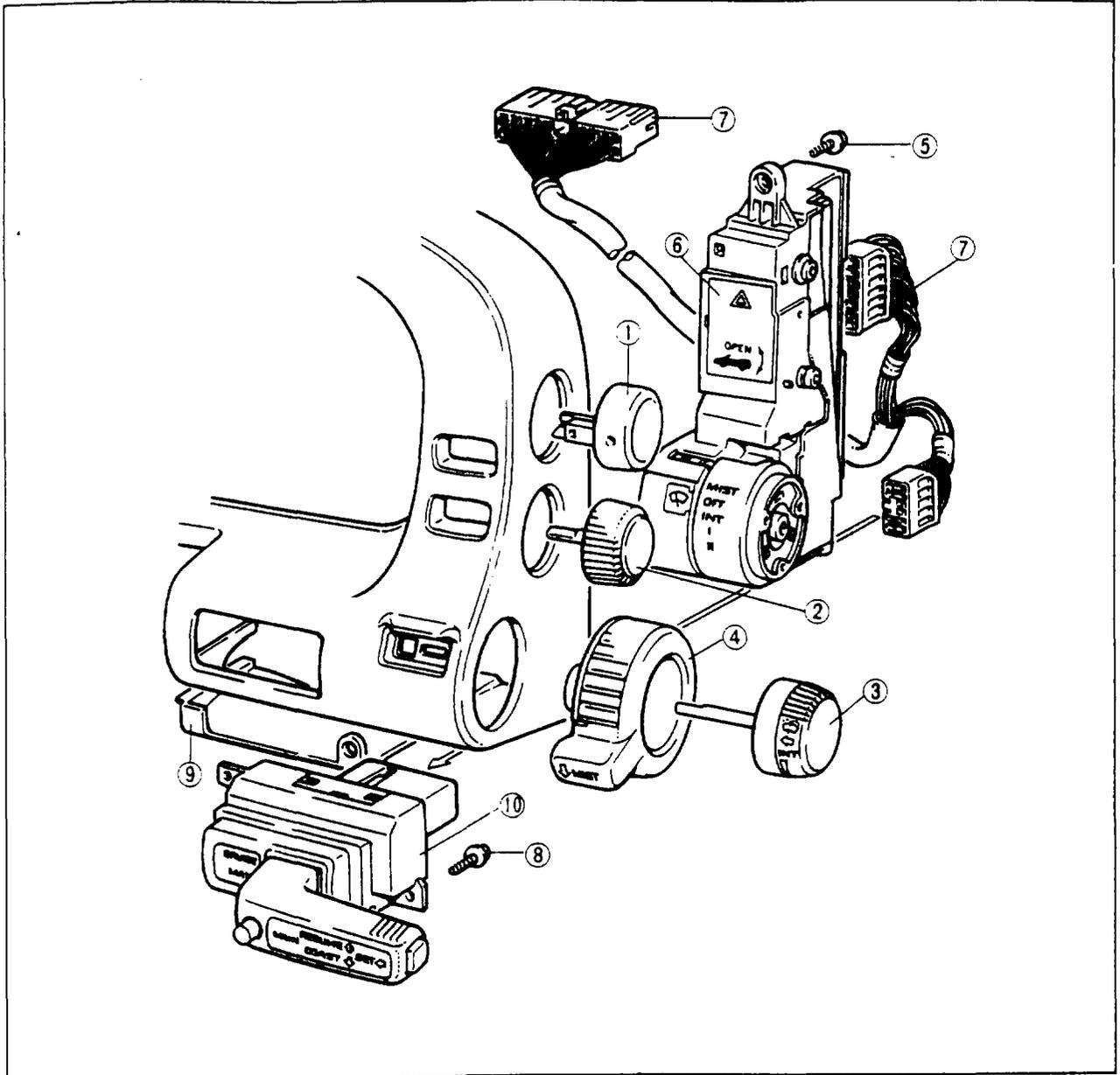


77U15X-059

- | | |
|--|---|
| 1. Knob (Rear defroster switch) | 7. Harness (Cluster switch L.H.) |
| 2. Knob (Retractable headlight and headlight cleaner switch) | 8. Screw and washer |
| 3. Knob (Panel light control) | 9. Knob (Turn signal, dimmer and passing switch) |
| 4. Knob (Headlight switch) | 10. Screw and washer |
| 5. Screw and washer | 11. Cluster switch (Turn signal, dimmer and passing switch) |
| 6. Cluster switch (Rear defroster, retractable headlight, headlight cleaner, panel light control and headlight switch) | |

DISASSEMBLY AND ASSEMBLY (RIGHT SIDE)

1. Disassemble in the sequence shown in the figure.
2. Assemble in the reverse order of disassembly.

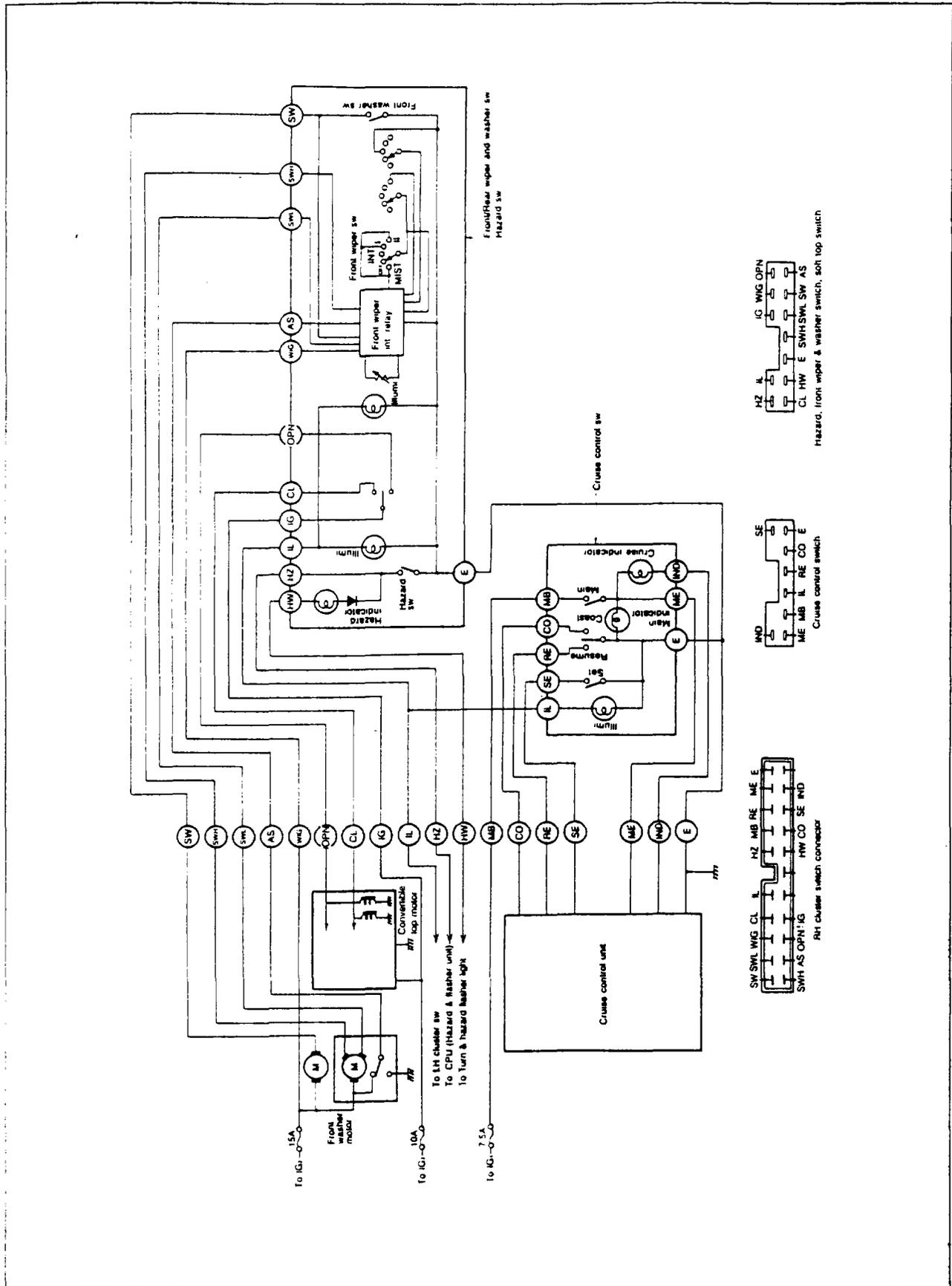


87U15X-044

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Knob (Hazard switch) 2. Knob (Convertible control switch) 3. Knob (Front washer switch) 4. Knob (Front wiper switch) 5. Screw and washer | <ol style="list-style-type: none"> 6. Cluster switch (Hazard, front wiper & washer switch, convertible control switch) 7. Harness (Cluster switch RH) 8. Screw and washer 9. Cover 10. Cluster switch (Cruise control switch) |
|---|--|

15 CLUSTER SWITCH

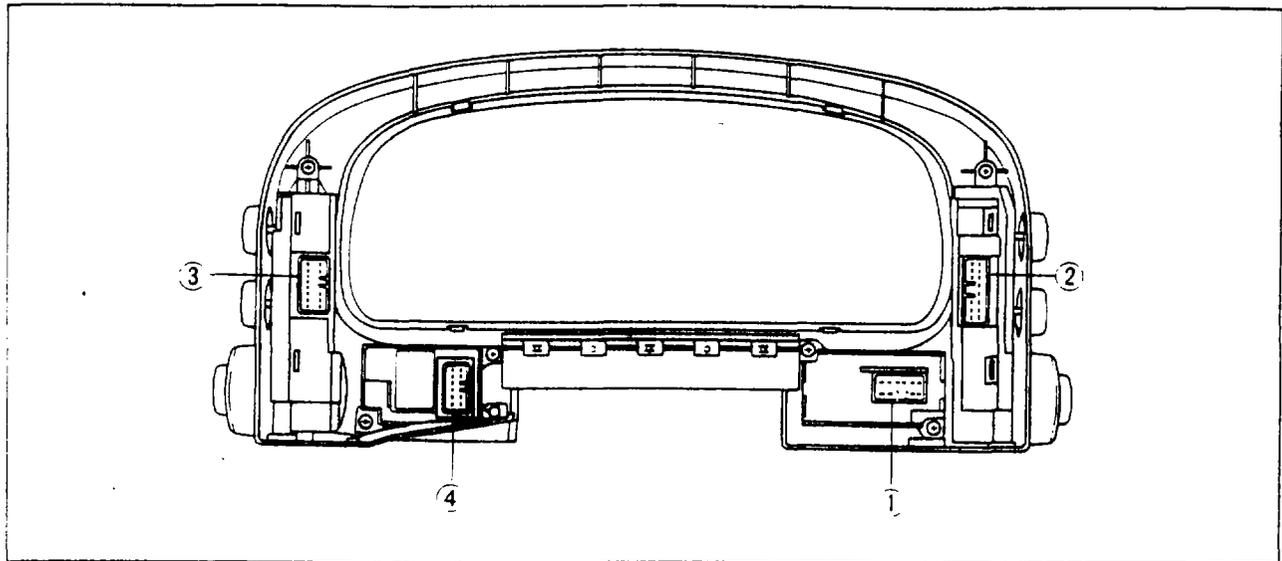
CIRCUIT DIAGRAM (CLUSTER SWITCH RIGHT SIDE)



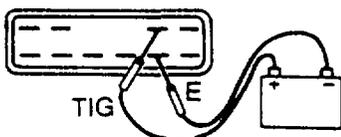
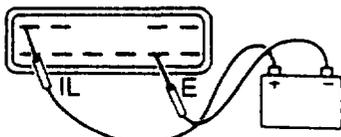
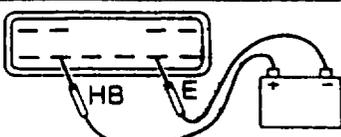
15 CLUSTER SWITCH

INSPECTION

Check the continuity or voltage between terminals using a circuit tester and battery.



Turn Signal, Dimmer and Passing Switch

Turn signal, dimmer and passing switch					○—○ : Indicates continuity	
Turn signal switch		TIG	SR	SL		Continuity
	Right	○—○				
	Left	○—○		○—○		
Turn cancel circuit						
	Action				Result	
	Tilt right and apply 12V to SC				Turn switch cancelled	
	Tilt left and apply 12V to SL				Turn switch cancelled	
Illumination light (Turn signal, dimmer and passing switch)						
	—————				ON	
Dimmer and passing switch						
Dimmer and passing switch		HR	E			Continuity
	OFF					
	ON	○—○	⊗	○—○		
		HB	DR		Light	
	Low Beam	○—○	⊗	○—○	OFF	
	High Beam	○—○	⊗	○—○	ON	

87U15X-045

②

**Rear Window Defroster Switch
Retractable Headlight and
Headlight Cleaner Switch
Headlight Switch
Panel Light Control**



○—○ Indicates continuity

Rear window defroster switch			
Rear window defroster switch		TIG E	Ohmmeter
OFF			Continuity
ON		○—○	
Rear window defroster timer circuit			
		DEF—E	Voltmeter
OFF		12V	
ON		0V	E — DEF
TIMER		10—20 min after switch turned on. 12V	
Retractable headlight and headlight cleaner switch			
Retractable headlight switch		BA RD RU	Ohmmeter
OFF		○—○	Continuity
ON		○—○	
Headlight cleaner switch		BA HC	Ohmmeter
OFF			Continuity
ON		○—○	
Headlight switch			
Headlight switch		BTN TNS HR E	Ohmmeter
OFF			Continuity
		○—○	
		○—○	
Retractable headlight control circuit			
		BA RU	Ohmmeter
		○—○	Continuity
Illumination light (Retractable headlight, headlight cleaner, and headlight switch)			
		—	ON
Panel light control			
		Illumination light	
		All illumination lights on and controlled by panel light control switch	
		Same as above	

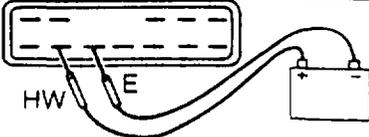
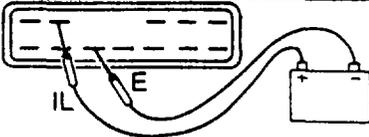
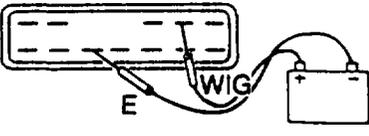
87U15X-046

15 CLUSTER SWITCH

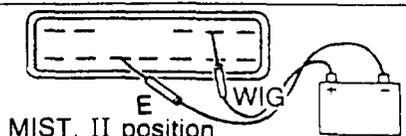
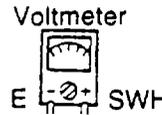
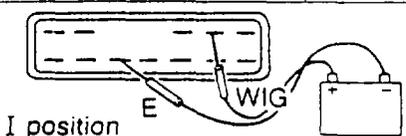
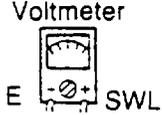
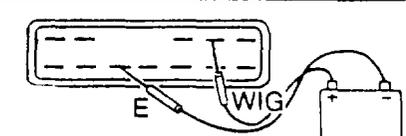
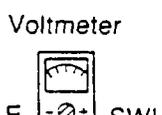
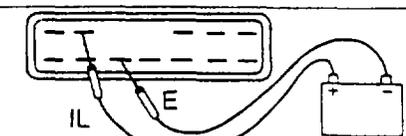
Hazard Switch
Convertible control switch
Front Wiper and Washer Switch



○—○ Indicates continuity

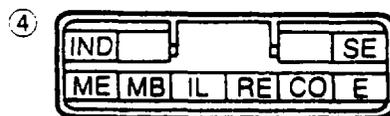
Hazard switch					
Hazard switch		HZ	E	Ohmmeter  Continuity	
	OFF				
	ON	○—○			
Hazard indicator light					
		Illumination light			
	OFF			OFF	
	ON			ON	
Convertible control switch					
Check terminals for continuity		IG	OPN	CL	Result
	OPEN	○—○			Continuity
	CLOSE	○—○	○—○		
Illumination light (Convertible control switch)					
				 ON	
Front washer switch					
Front washer switch		SW	E	Ohmmeter  Continuity	
	OFF				
	ON	○—○			
One-touch wiper circuit					
		SWH—E		Voltmeter  E — SWH	
	OFF	Approx. 12V			
	ON	When switch pressed— after 0.5 sec—0V			
	OFF	When switch released— after 3 sec—12V			

87U15X-047

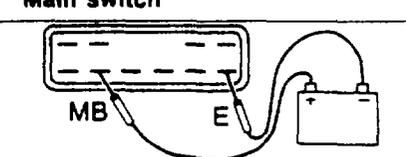
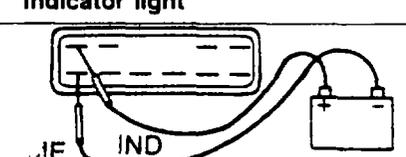
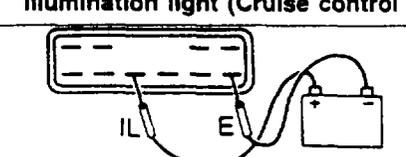
Front wiper switch											
 <p>MIST, II position</p>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 50%;"></td><td style="width: 50%;">SWH—E</td></tr> <tr><td>MIST</td><td>0V</td></tr> <tr><td>II</td><td>0V</td></tr> </table>		SWH—E	MIST	0V	II	0V	<p>Voltmeter</p> 		
	SWH—E										
MIST	0V										
II	0V										
 <p>I position</p>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 50%;"></td><td style="width: 50%;">SWL—E</td></tr> <tr><td>I</td><td>0V</td></tr> </table>		SWL—E	I	0V	<p>Voltmeter</p> 				
	SWL—E										
I	0V										
 <p>INT position</p>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 50%;"></td><td style="width: 50%;">SWL—E</td></tr> <tr><td>AS—⊕</td><td>0V</td></tr> <tr><td>AS—⊖</td><td>0V</td></tr> <tr><td>AS—⊕</td><td>Approx —12V After few sec—0V</td></tr> </table>		SWL—E	AS—⊕	0V	AS—⊖	0V	AS—⊕	Approx —12V After few sec—0V	<p>Voltmeter</p> 
	SWL—E										
AS—⊕	0V										
AS—⊖	0V										
AS—⊕	Approx —12V After few sec—0V										
Illumination light (Front wiper switch)											
			ON								

77U15X-064

Cruise Control Switch



○—○ Indicates continuity

Cruise control switch																																													
<p>Cruise control switch</p>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 50%;"></td><td style="width: 50%;">MB</td><td style="width: 50%;">ME</td><td style="width: 50%;">SE</td><td style="width: 50%;">RE</td><td style="width: 50%;">CO</td><td style="width: 50%;">E</td></tr> <tr><td>OFF</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>MAIN</td><td>○—○</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SET</td><td></td><td></td><td>○—○</td><td></td><td></td><td></td></tr> <tr><td>RESUME</td><td></td><td></td><td></td><td>○—○</td><td></td><td></td></tr> <tr><td>COAST</td><td></td><td></td><td></td><td></td><td>○—○</td><td></td></tr> </table>		MB	ME	SE	RE	CO	E	OFF							MAIN	○—○						SET			○—○				RESUME				○—○			COAST					○—○		<p>Ohmmeter</p>  <p style="text-align: right;">Continuity</p>
	MB	ME	SE	RE	CO	E																																							
OFF																																													
MAIN	○—○																																												
SET			○—○																																										
RESUME				○—○																																									
COAST					○—○																																								
Main switch																																													
			MAIN indicator ON																																										
Indicator light																																													
			CRUISE indicator ON																																										
Illumination light (Cruise control switch)																																													
			ON																																										

77U15X-065

TROUBLESHOOTING GUIDE

Problem	Possible Cause	Remedy	Page
Speedometer does not work	Defective speedometer cable Defective speedometer	Replace Replace	15—160
Speedometer fluctuation	Defective speedometer cable Defective speedometer	Replace Replace	15—160
Tachometer does not work	METER fuse blown Defective tachometer Faulty wiring	Replace Check Repair	15—160
Fuel gauge does not work	METER fuse blown Defective fuel gauge Defective fuel tank unit Ground or wiring	Replace Check Check Repair	15—161 162
Water temperature gauge does not work	METER fuse blown Defective water temperature gauge Defective water temperature gauge unit Faulty wiring	Replace Check Check Repair	15—163

87U15X-048

Standard indication (km/h)	Allowable range (km/h)
20	20— 22.7
40	40— 42.9
60	60— 63.5
80	80— 84.1
100	100—105.0
120	120—126.0
140	140—147.0
160	160—168.0
180	180—189.0

Standard indication (mph)	Allowable range (mph)
10	10—11.4
30	30—31.8
60	60—63.0
90	90—94.5

77U15X-015

Standard indication (rpm)	Allowable range (rpm)
1000	880—1,060
2000	1,970—2,150
3000	2,964—3,216
4000	3,976—4,264
5000	4,988—5,312
6000	6,000—6,360
7000	6,965—7,455

at 20°C (68°F)

87U15X-021

ON-VEHICLE INSPECTION

Speedometer

- Using a chassis dynamo, test the speedometer for allowable indication error, and check the operation of the odometer.
- Check the speedometer for fluctuation and/or abnormal noise.

Caution

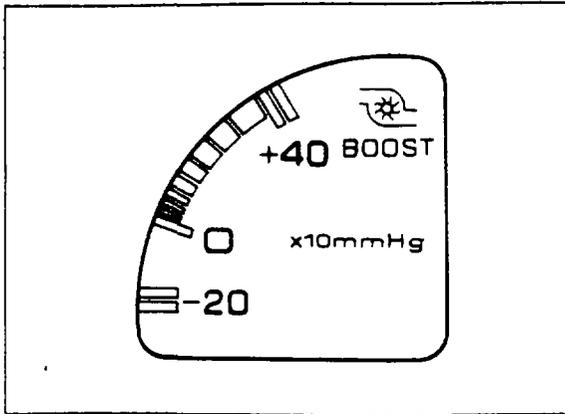
- If significant fluctuation occurs or the speedometer does not move at all, remove and check the speedometer cable; if normal, replace the speedometer assembly.
- Tire wear and improper inflation increases speedometer error.

Tachometer

Compare a tester's rpm reading with the tachometer's indications. If there is significant error, replace the tachometer.

Caution

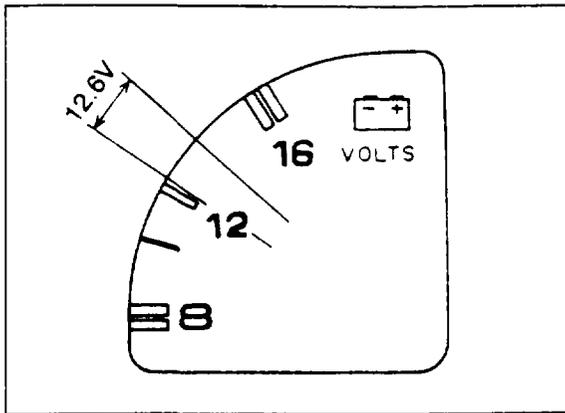
When removing or installing the tachometer, be careful not to drop it or subject it to sharp impact.



77U15X-016

Boost Meter (For turbo model)

1. Check that the boost meter pointer shows "0" position when the ignition switch is turned ON, and the pointer indicates "-200 mmHg" position when the engine is idling.
2. Check that the pointer moves to a higher than "0" position when the pressure in the intake manifold increases, or the turbo charger is operating.



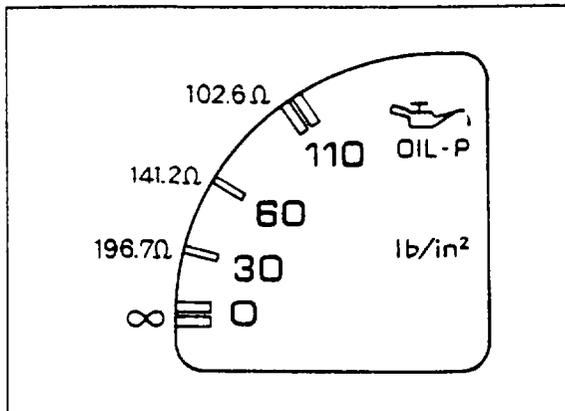
77U15X-071

Voltmeter (For non-turbo model)

1. Connect a voltmeter to the battery terminals and then start the engine.
2. Compare the voltmeter and vehicle voltmeter indications. If there is significant error, replace the vehicle voltmeter.

Note

The allowable indication error is twice the width of the needle.



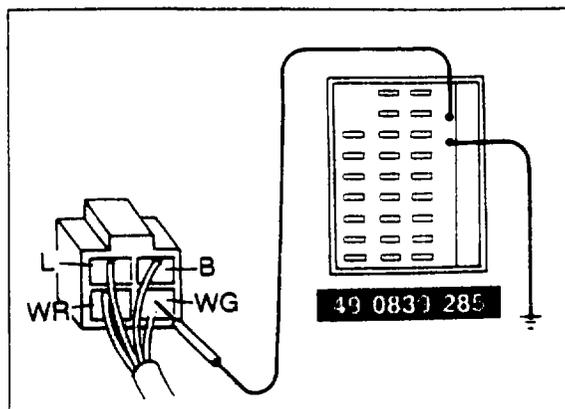
87U15X-049

Oil Pressure Gauge

1. Remove the connector from the gauge unit.
2. Connect the red lead wire of the **checker** (49 0839 285) to the connector, and the black lead wire to a body ground.
3. Turn ON the ignition switch and check that the needle indicator displays the correct values.

Note

- a) Continue the above inspections for at least two minutes each to correctly judge the condition.
- b) The allowable indication error is twice the width of the needle.
- c) Oil pressure becomes low when engine is cold because eccentric shaft bypass valve operates.

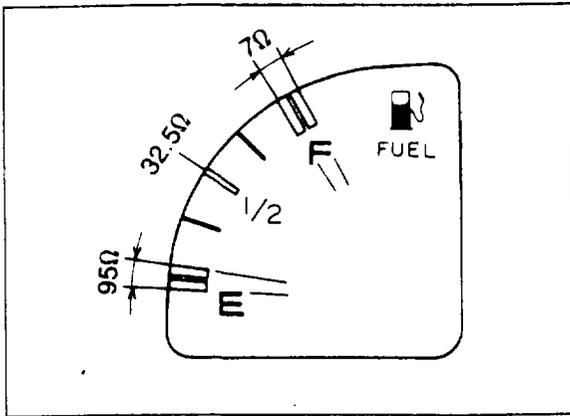


67U15X-023

Fuel Gauge

1. Disconnect the connector from the fuel tank unit.
2. Connect the red lead wire of the **checker** (49 0839 285) to the connector, and the black lead wire to a body ground.

15 METERS

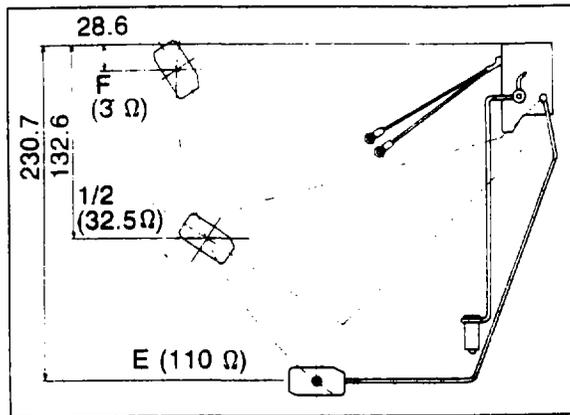


67U15X-024

3. Set the checker to the resistance values shown in the figure.
4. Turn ON the ignition switch and check that the needle indicator displays the correct values. If the needle displays the correct values, the fault is in the gauge unit; if not, the fault is in the meter.

Caution

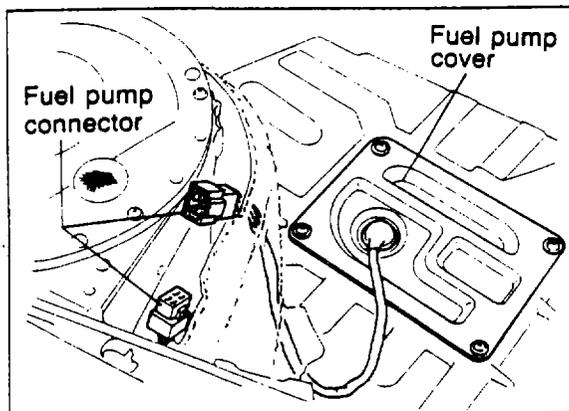
- a) Continue the above inspections for at least two minutes each to correctly determine the condition.
- b) The allowable indication error is twice the width of the needle.



67U15X-025

Fuel Tank Unit

1. Connect an ohmmeter to the tank unit.
2. Move the unit arm slowly from point (E) to point (F) and read the resistance value. If this value is not as specified, replace the unit.



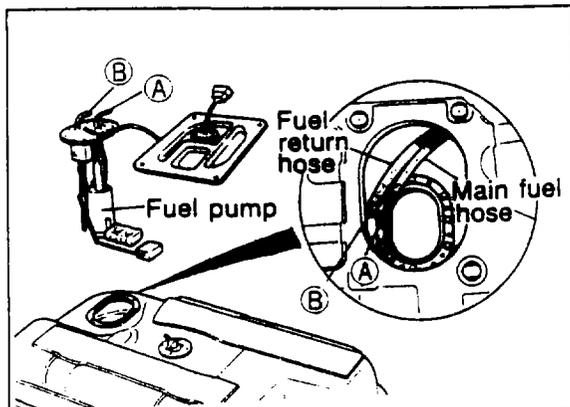
77U04A-229

Removal

Warning

Before performing the following procedures, release the fuel pressure from fuel line to eliminate possibly causing injury or a fire.

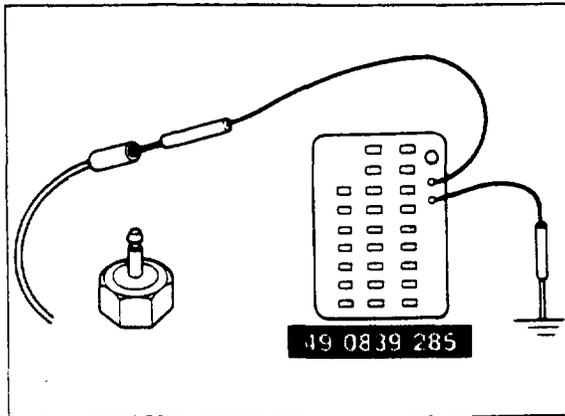
1. Lift up the rear mat.
2. Remove fuel pump cover.
3. Disconnect the fuel pump connector.
4. Disconnect the fuel main hose and the return fuel hose.
5. Remove the fuel pump screws.
6. Remove the fuel pump from the fuel tank.



77U04A-230

Installation

Install in the reverse order of removal.



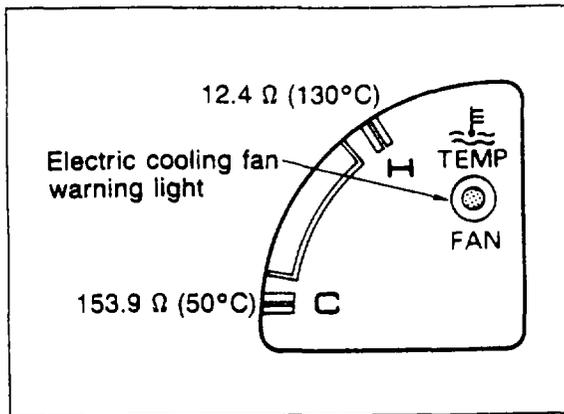
67U15X-028

Water Temperature Gauge

1. Remove the connector from the gauge unit.
2. Connect the red lead wire of the **checker** (49 0839 285) to the connector, and the black lead wire to a body ground.
3. Set the **checker** to the resistance values shown in the figure.
4. Turn ON the ignition switch and check that the needle indicator displays the correct values. If the needle displays the correct values, the fault is in the gauge unit; if not, the fault is in the meter.

Note

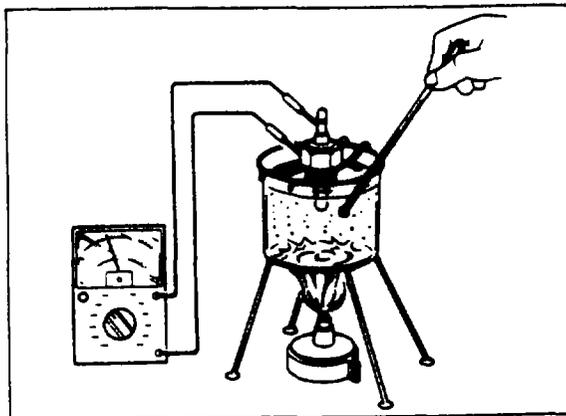
- a) Continue the above inspections for at least two minutes each to correctly judge the condition.
- b) The allowable indication error is twice the width of the needle.



77U15X-072

Cooling Fan Warning Light (with ABS model)

1. Disconnect the connector from the electrical cooling fan unit.
2. Connect (BR) terminal wire to a body ground.
3. Start the engine, check that the cooling fan warning light illuminates.
4. If there is no illumination, check the fuse, bulb and wiring harness.

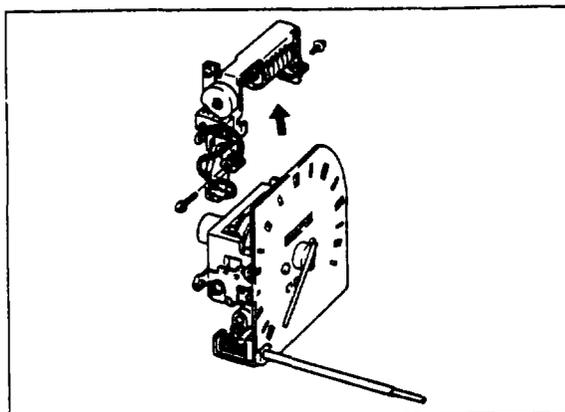


67U15X-030

Water Temperature Gauge Unit

1. Remove the gauge unit.
2. Place the gauge unit in a container of water, and heat the water to **80°C (176°F)**.
3. Use an ohmmeter to measure the resistance.

Resistance: 57.7—49.3 Ω

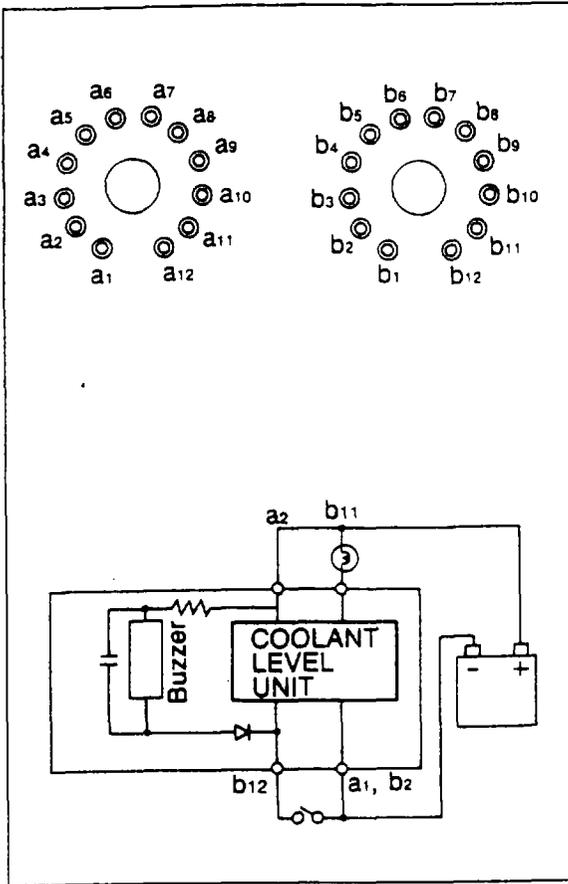


67U15X-032

20,000 mile Switch

Caution

When replacing the speedometer within 20,000 miles, continue to use the same 20,000 mile switch by transferring to the new speedometer.



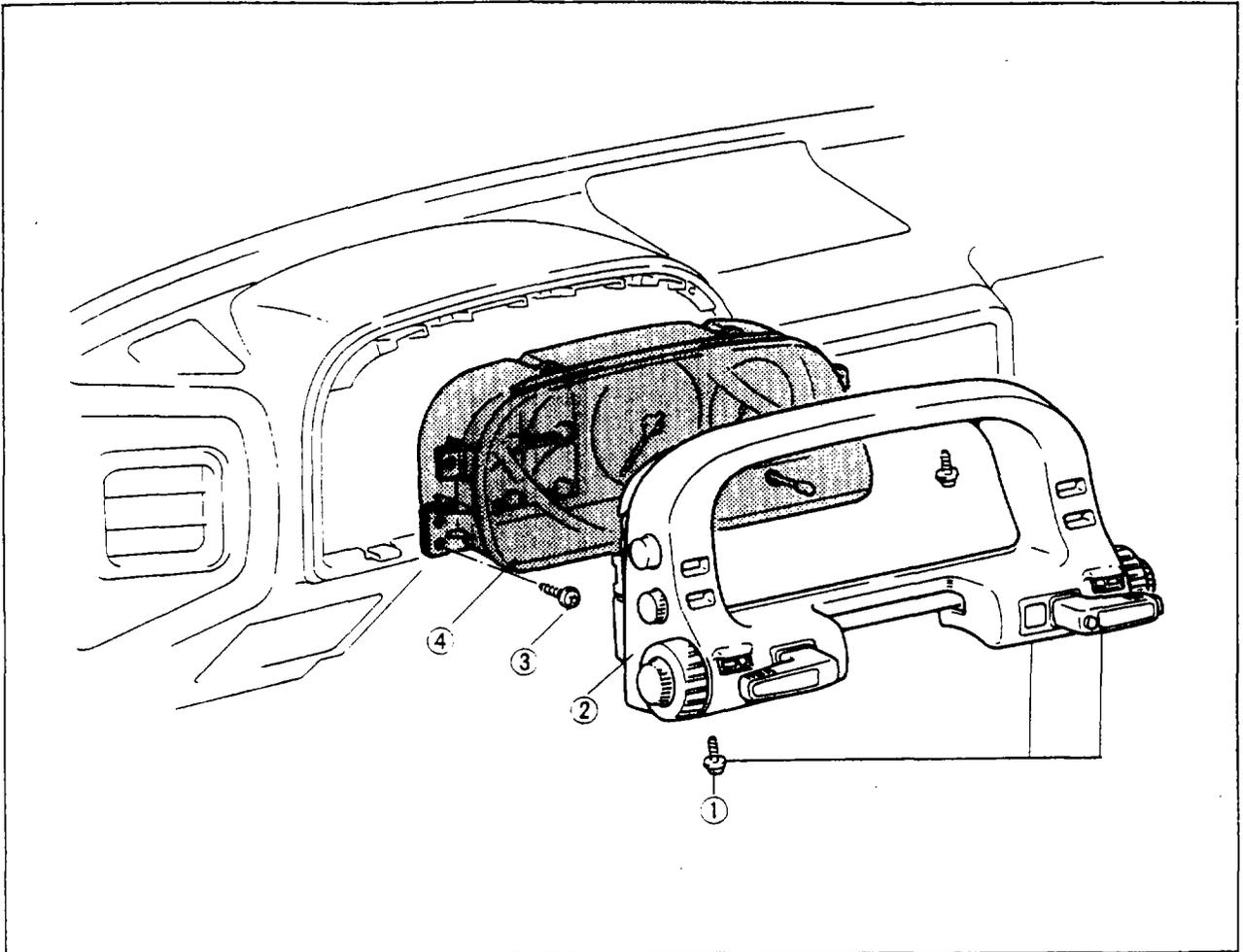
67U15X-031

Coolant Level Sensor Unit

1. Remove the meters from the instrument panel.
2. Make connections between the unit and the battery as shown in the figure.
3. The unit is normal if the test bulb does not illuminate when the switch is closed, and if it does illuminate 9 to 16 seconds after the switch is opened.
4. Replace the meters if there is a malfunction.

REMOVAL AND INSTALLATION

1. Disconnect the negative battery cable. Remove in the sequence shown in the figure.
2. Assemble in the reverse order of disassembly.



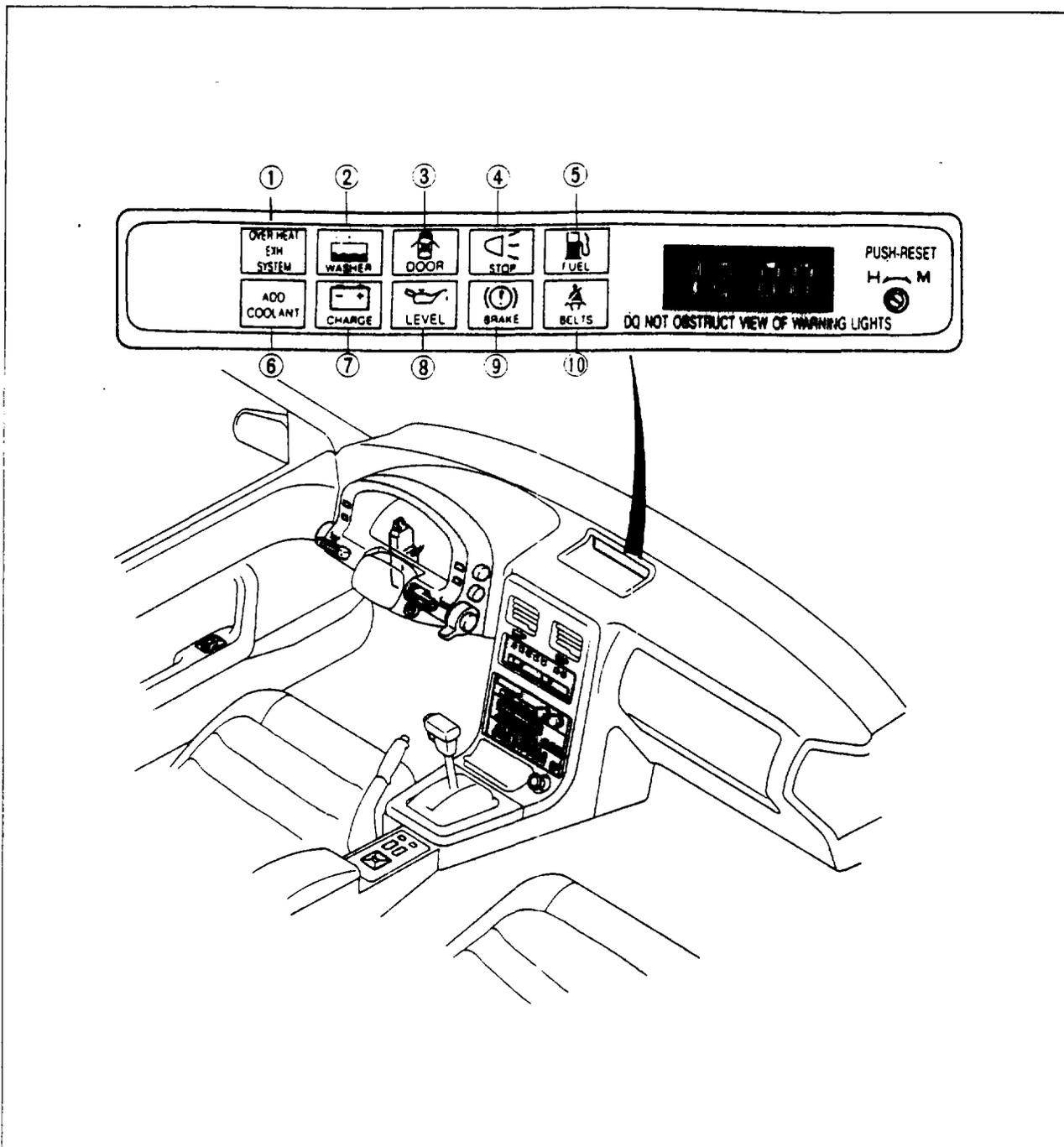
77U15X-011

1. Tapping screws
2. Cluster switch
3. Tapping screws
4. Meter

15 WARNING AND CLOCK UNIT

WARNING AND CLOCK UNIT

STRUCTURAL VIEW



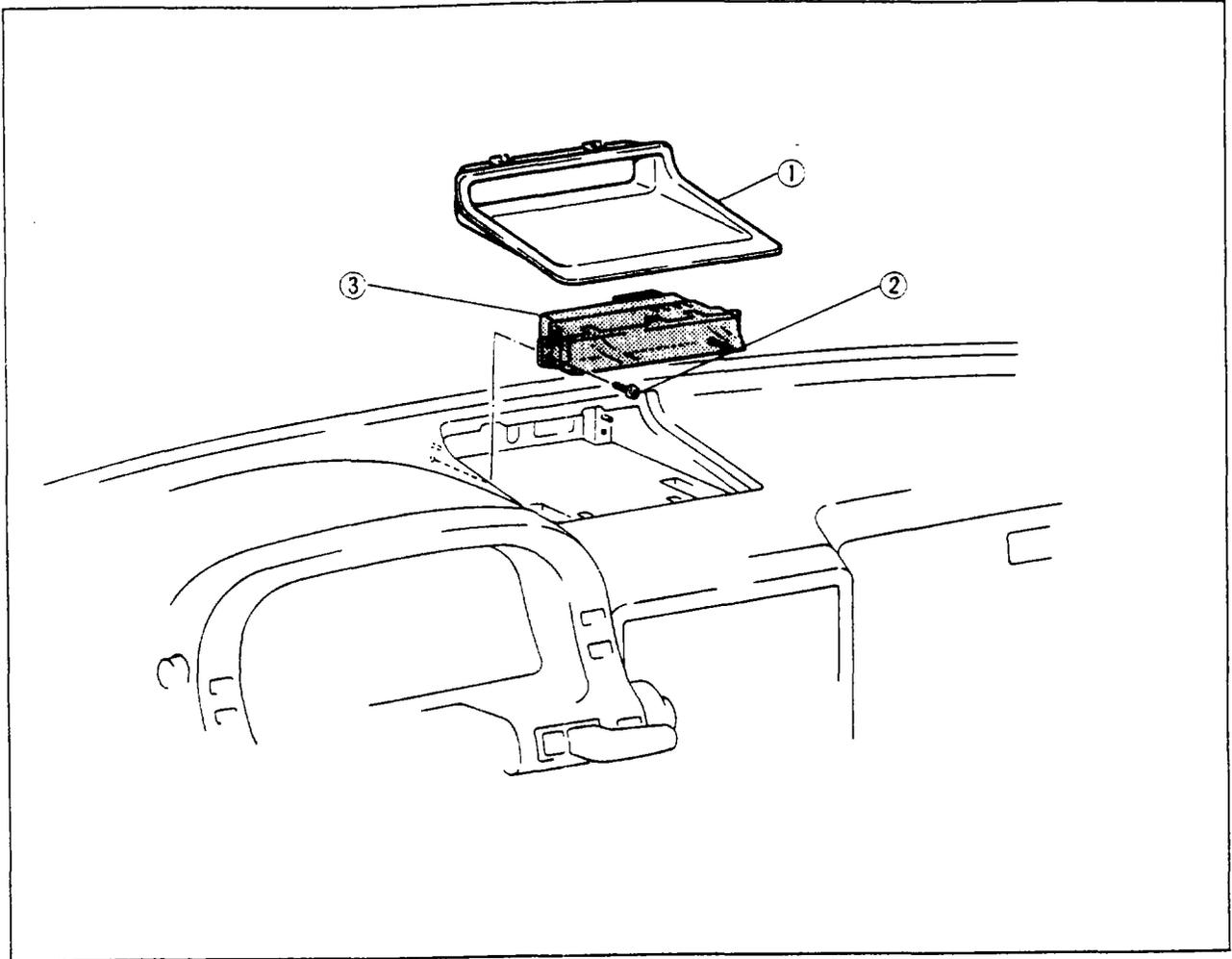
87U15X-050

1. Over heat exhaust system warning light
2. Washer fluid low-level warning light
3. Door ajar warning light
4. Stop light malfunction warning light
5. Low-fuel level warning light

6. Coolant level warning light
7. Alternator warning light
8. Engine oil level warning light
9. Brake fluid level warning light
10. Seat belt warning light

REMOVAL AND INSTALLATION

1. Disconnect the negative battery cable, remove in the sequence shown in the figure.
2. Install in the reverse order of removal.

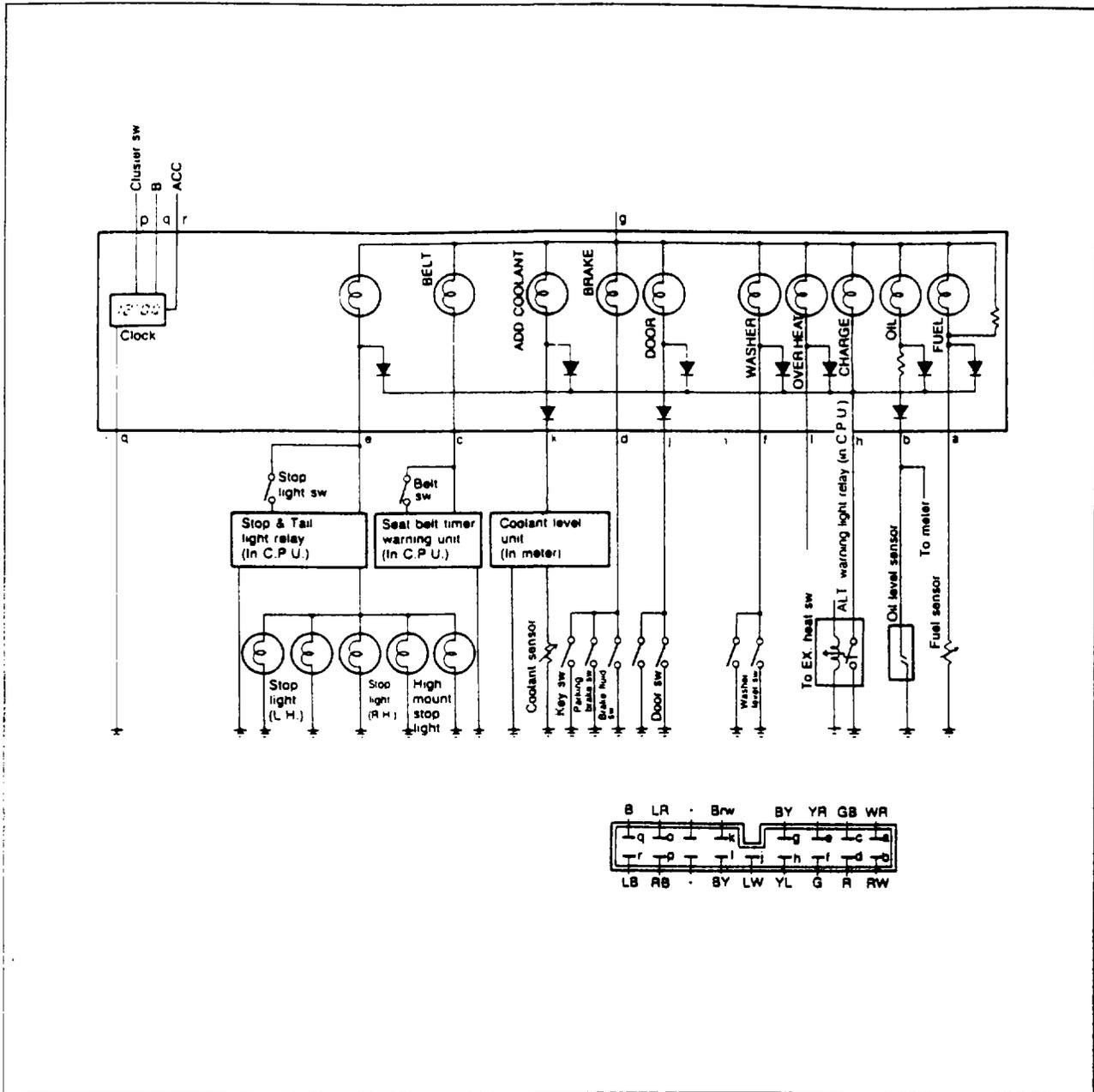


67U15X-277

1. Clock bezel assembly
2. Tapping screw
3. Warning and clock unit

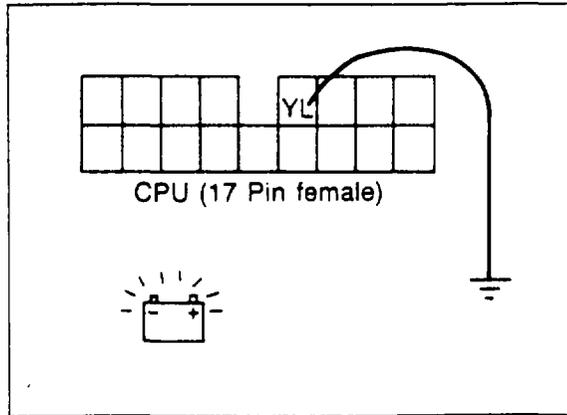
15 WARNING AND CLOCK UNIT

CIRCUIT DIAGRAM (WITHOUT ABS MODEL)



87U15X-051

No.	Connections	No.	Connections
a	Fuel tank unit	k	Meters
b	Oil level sensor	l	Emission control unit
c	Seat belt timer & buzzer (in CPU)	o	Fuse box (battery)
d	Brake fluid level switch	p	Cluster switch
e	Stop light warning relay (in CPU)	q	Ground
f	Washer fluid level sensor	r	Fuse box (accessory)
g	Ignition switch		
h	ALT warning light relay (in CPU)		
j	Door switch		

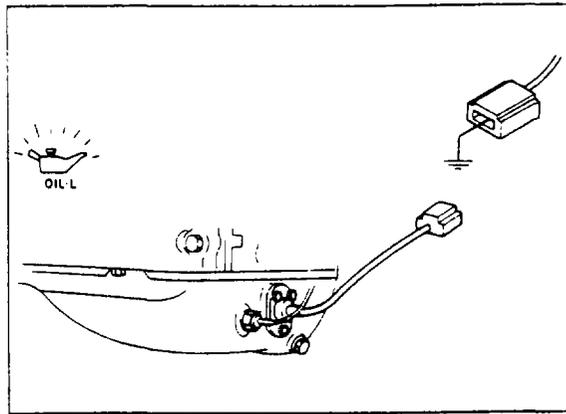


67U15X-036

INSPECTION OF CIRCUIT AND PARTS

Alternator Warning Light

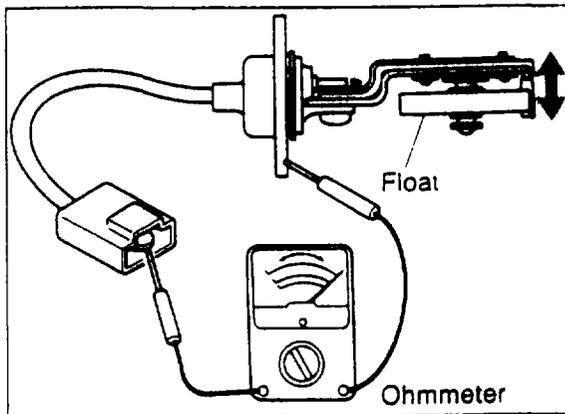
1. Disconnect the connector (17 pin) from the central processing unit.
2. Connect the (YL) terminal wire to a body ground.
3. Start the engine and check that the CHARGE warning light illuminates.



77U15X-077

Oil Level Warning Light

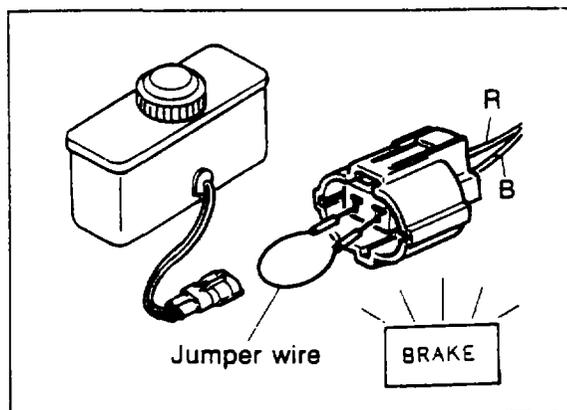
1. Disconnect the connector from the oil level sensor.
2. Connect the (RW) terminal wire to a body ground.
3. Start the engine and check that the OIL-L warning light illuminates.
4. If there is no illumination, check the fuse, bulb, and wiring harness.



67U15X-037

Oil Level Sensor

Connect an ohmmeter to the level sensor and check the continuity by moving the float up and down. When the float is in the upper position the ohmmeter should not show continuity, and when moved to the lower position it should show continuity. Replace the oil level sensor if it is not operating correctly.



67U15X-038

Brake System Warning Light

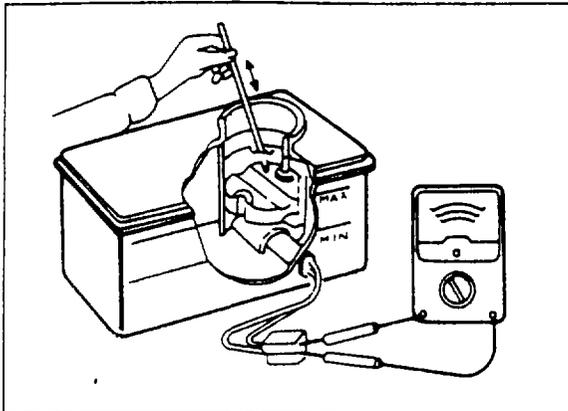
1. Disconnect the connector from the brake fluid level sensor.
2. Connect a jumper wire between the (R) and (B) terminal wire.
3. Start the engine and check that the BRAKE warning light illuminates.

Note

Check that the parking brake is fully released before checking.

4. If there is no illumination, check the fuse, bulb and wiring harness.

15 WARNING AND CLOCK UNIT



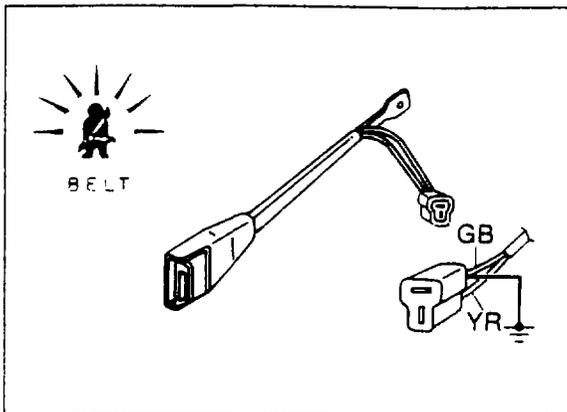
67U15X-038

Brake Fluid Level Sensor

Connect an ohmmeter to the terminals of the brake fluid level sensor connector.

Check for continuity when the float is moved up and down. The sensor is operating properly if there is continuity when the float is below the "MIN" mark, and if there is no continuity when the float is above the "MAX" mark.

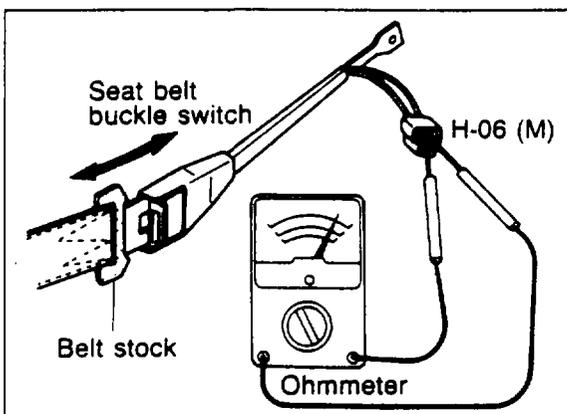
If the sensor does not pass this test, replace it.



67U15X-039

Seat Belt Warning Light

1. Disconnect the connector from the seat belt buckle switch (Driver's side).
2. Connect the (GB) connector terminal wire to a body ground.
3. Start the engine and check that the BELT warning light illuminates.
4. If there is no illumination, check the fuse, bulb, central processing unit, and wiring harness.

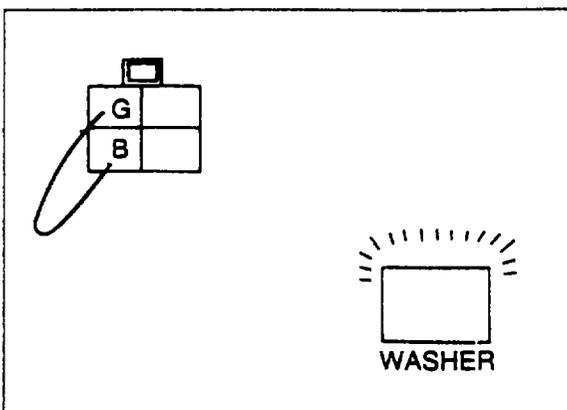


47U15X-041

Buckle Switch (Driver's Belt)

Insert the seat belt stock into the buckle, and use an ohmmeter to check for continuity of the switch.

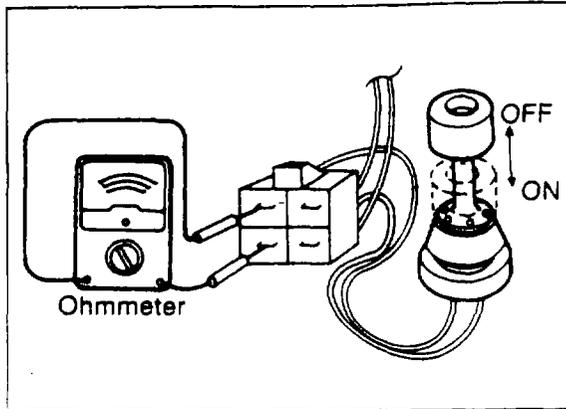
Belt inserted.....no continuity
Belt not inserted.....continuity



67U15X-040

Washer Fluid Level Warning Light

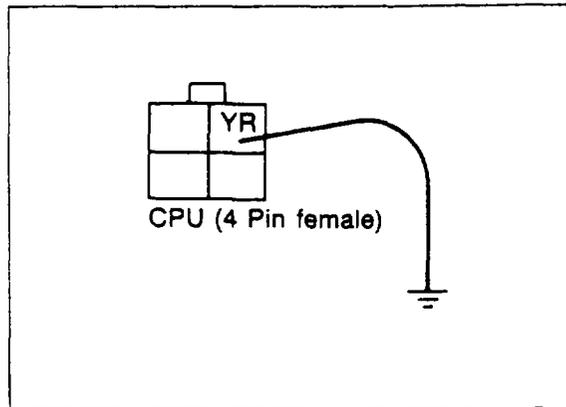
1. Disconnect the connector from the washer fluid level sensor.
2. Connect a jumper wire between the (G) and (B) terminal wire.
3. Start the engine and check that the WASHER warning light illuminates.
4. If there is no illumination, check the fuse, bulb and wiring harness.



67U15X-041

Washer Fluid Level Sensor

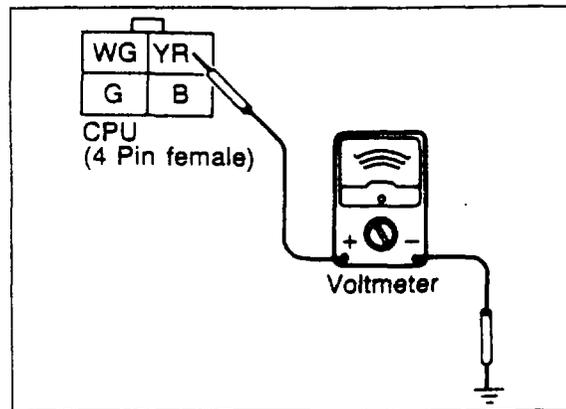
1. Connect the sensor connector to a tester.
2. Move the sensor float up and down.
3. Check that there is continuity when the float is at the lowest point.



67U15X-042

Stop Light Malfunction Warning Light

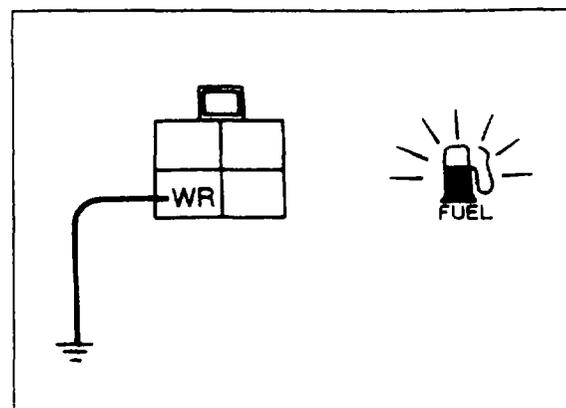
1. Disconnect the connector (4 pin) of the central processing unit.
2. Connect the (YR) terminal wire to a body ground.
3. Start the engine and check that the STOP LIGHT warning light illuminates.



67U15X-043

Stop Light Checker

1. Start the engine and check that there is voltage in the (YR) terminal wire of the connector (4 pin) of the central processing unit, and check that there is voltage in the (WG) terminal wire when the brake pedal is depressed.
2. Using an ohmmeter, check for continuity between the (B) terminal wire and a body ground.
3. After checking 1 and 2 above, check whether the stop light malfunction light illuminates or not when either the left or right 6-pin connector of the rear combination lights is disconnected. If it does not illuminate, replace the stop light checker.

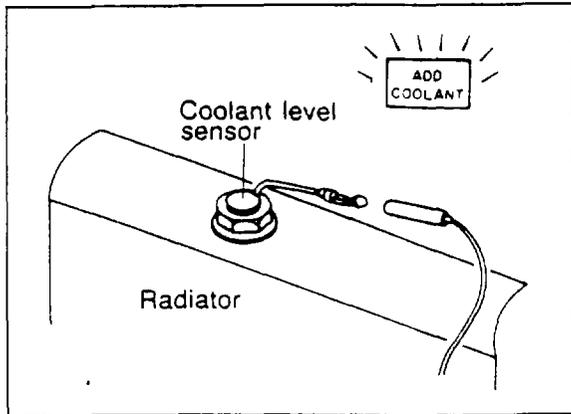


67U15X-044

Low Fuel Level Warning Light

1. Disconnect the connector from the fuel tank unit.
2. Connect the (WR) terminal wire to a body ground.
3. Start the engine and check that the FUEL warning light illuminates.
4. If there is no illumination, check the fuse, warning light and wiring harness.

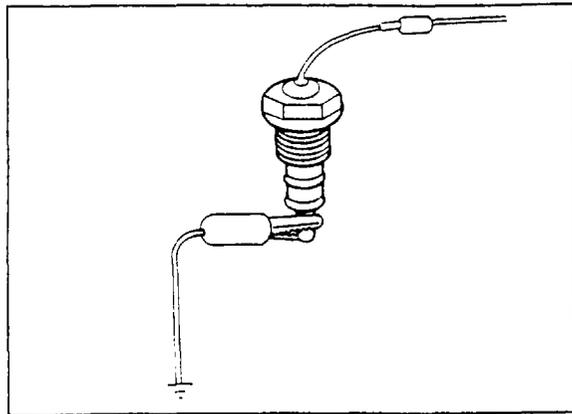
15 WARNING AND CLOCK UNIT



67U15X-046

Coolant Level Warning Light

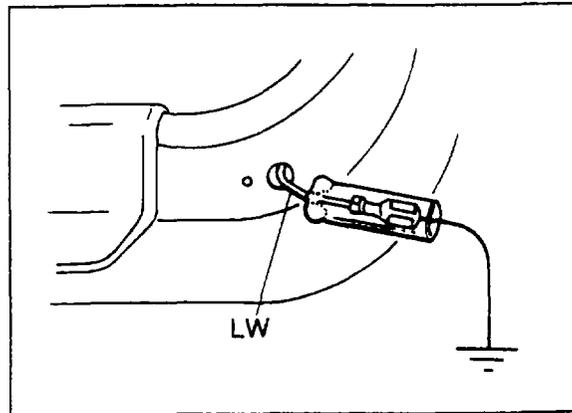
1. Disconnect the connector from the coolant level sensor.
2. Start the engine and check that the coolant warning light illuminates 9 ~ 16 seconds after starting the engine.
3. If there is no illumination, check the fuse, bulb, coolant level sensor unit, and wiring harness.



67U15X-047

Coolant Level Sensor

1. Remove the level sensor and connect the connector.
2. With the sensor not grounded to the body, start the engine.
3. After checking that the warning light illuminates, ground the threaded part of the sensor.
4. If the warning light remains illuminated, the sensor is normal. If it does not, the sensor is faulty and should be replaced.



87U15X-052

Door Ajar Warning Light

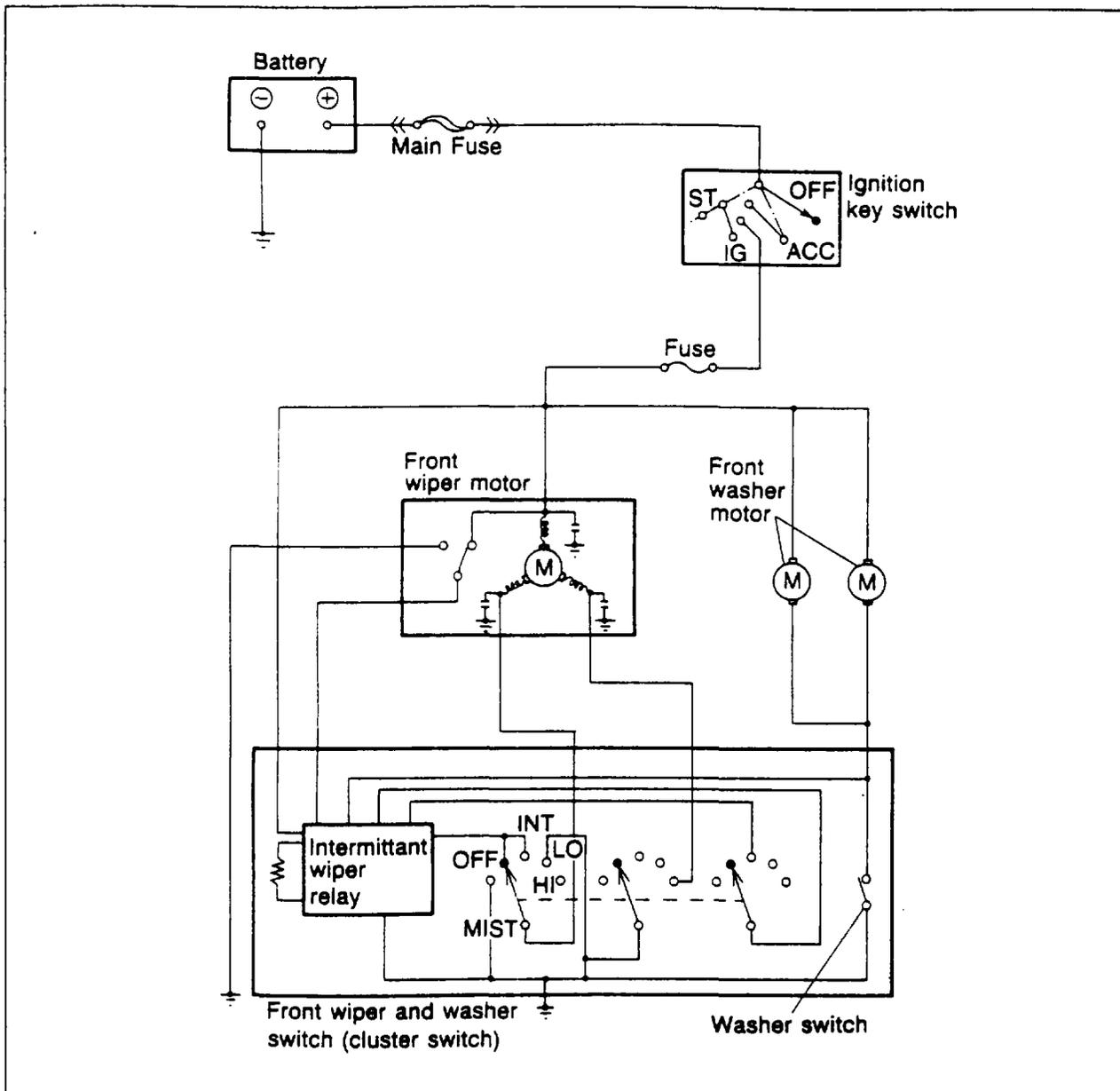
1. Disconnect the connector from the door switch.
2. Connect (LW) terminal wire to a body ground.
3. Start the engine, check that the door ajar warning light illuminates.

Overheat Exhaust System Warning Light

See section 4A or 4B.

WINDSHIELD WIPERS

CIRCUIT DIAGRAM

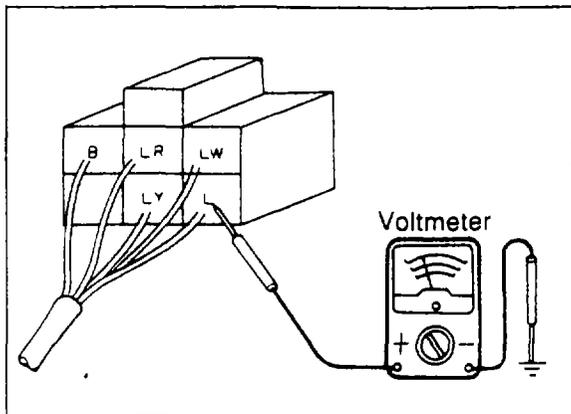


TROUBLESHOOTING GUIDE

Problem	Possible Cause	Remedy	Page
Wipers do not work	WIPER fuse blown	Replace fuse and check	15-174
	Defective wiper motor	Check	15-174
	Defective cluster switch (wiper switch)	Check	15-158
	Defective wiring or ground	Repair	
Washers do not work	WIPER fuse blown	Replace fuse and check	15-174
	Defective washer motor	Check or replace	15-174
	Defective cluster switch (wiper and washer switch)	Check	15-158
	Defective wiring	Repair	

87U15X-053

15 WINDSHIELD WIPERS

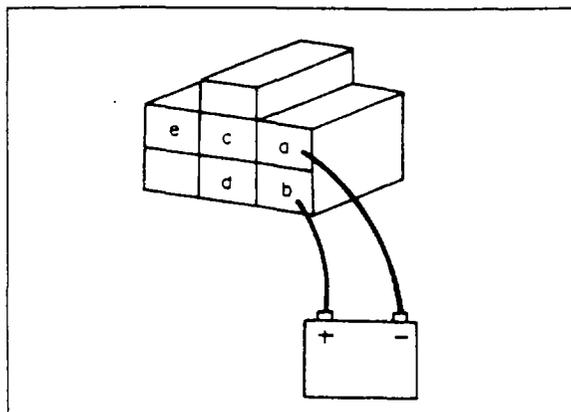


67U15X-088

WINDSHIELD WIPER MOTOR

Checking Circuit

1. Disconnect the connector from the wiper motor.
2. Using a voltmeter, measure the voltage between the (L) terminal wire and a body ground with the ignition switch ON.
3. If there is no-voltage, check the fuse or repair the wiring harness.
4. Using an ohmmeter, check for continuity between (B) terminal wire and a body ground.

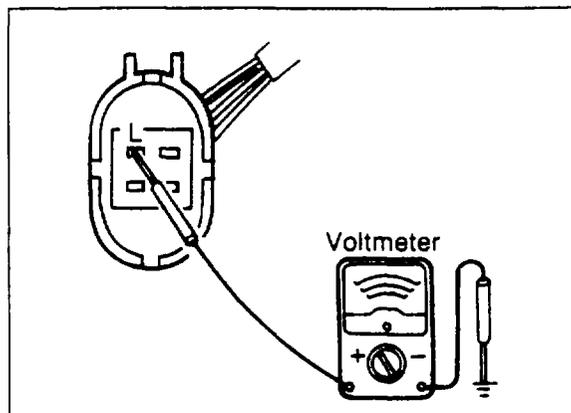


87U15X-054

Checking Wiper Motor

1. Connect the positive lead from the battery to (b) terminal wire of the motor connector.
2. Connect the negative lead to (a) terminal wire of the motor connector.
3. Check that motor turns at low speed.
4. Connect the negative lead to (c) of the motor connector.
5. Check that motor turns at high speed.

FRONT WIPER & WASHER SWITCH (Refer to page 15—158 and 152)



77U15X-087

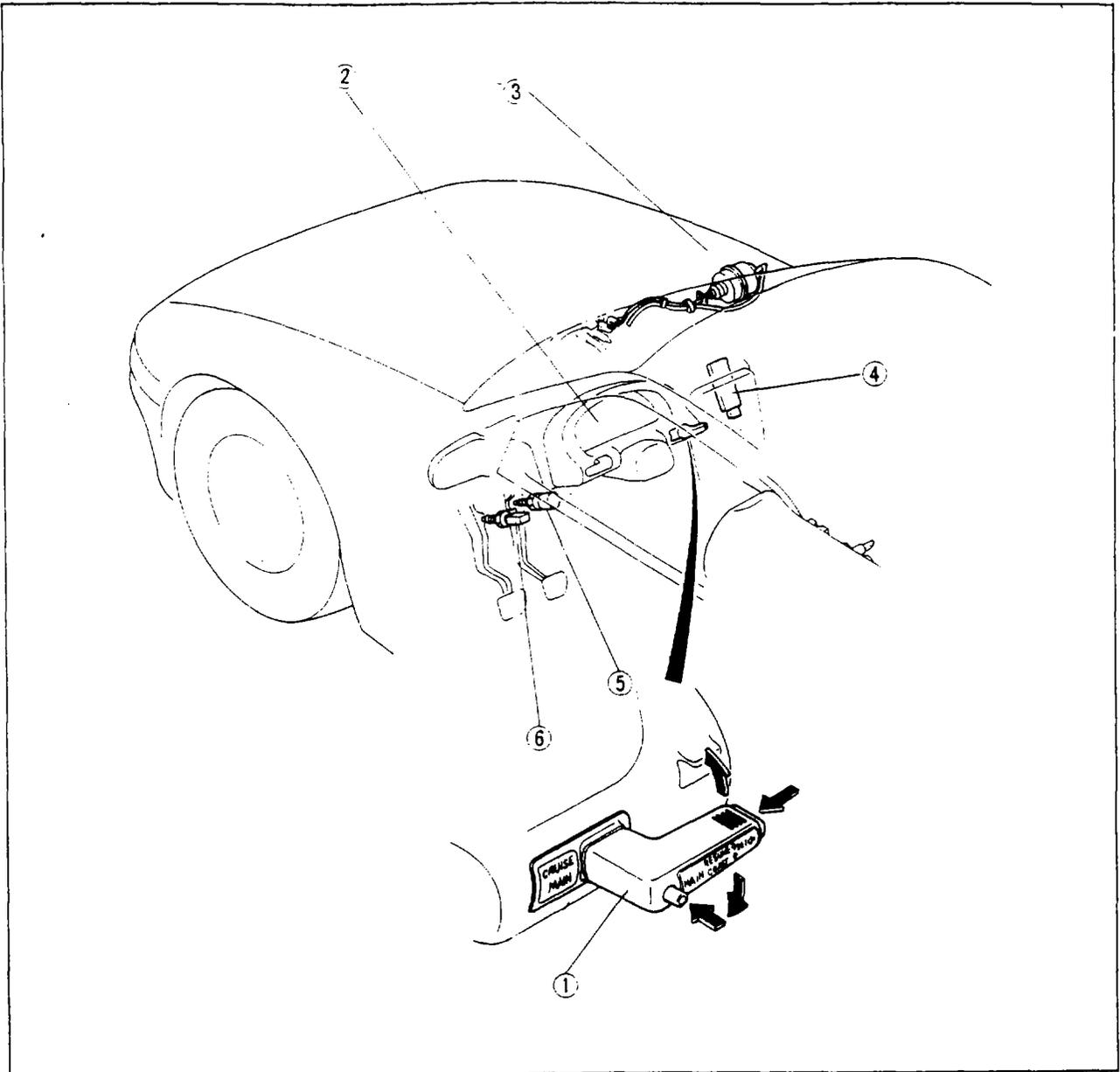
FRONT WINDOW WASHER

Checking Washer Motor

1. Using a voltmeter, measure the voltage between the (L) terminal wire and body ground with the ignition switch ON.
2. If there is no voltage, check the fuse or repair the wiring harness.
3. If the (L) terminal voltage is normal, apply 12V to (a) terminal of washer motor and ground (b) terminal.
4. If the washer motor does not operate, replace the washer motor.

CRUISE CONTROL SYSTEM

STRUCTURAL VIEW



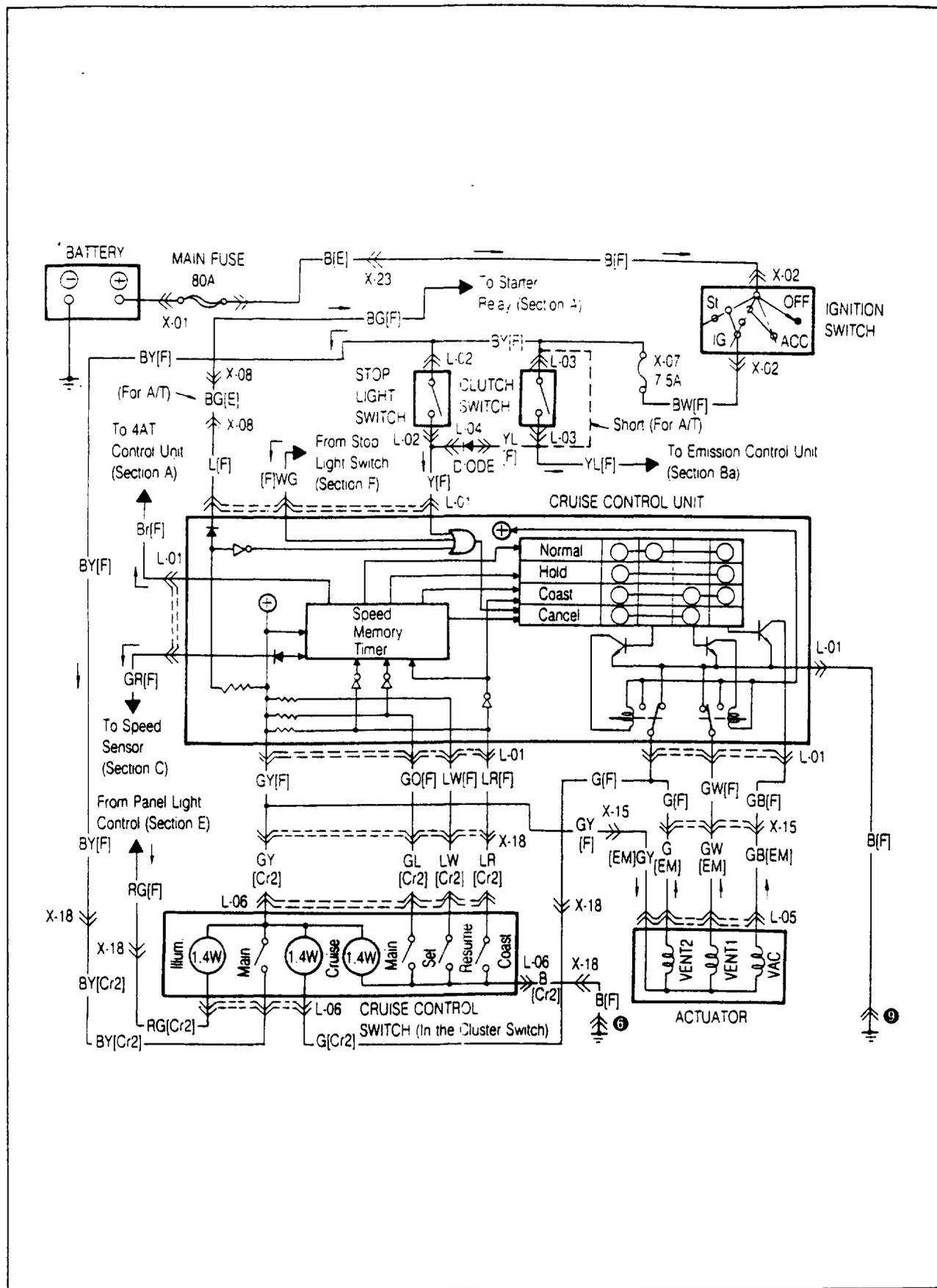
87U15X-055

- 1. Cruise control switch
- 2. Speed sensor (in the meter)
- 3. Actuator
- 4. Cruise control unit

- 5. Stop light switch
- 6. Clutch switch

15 CRUISE CONTROL SYSTEM

CIRCUIT DIAGRAM



87U15X-056

TROUBLESHOOTING GUIDE

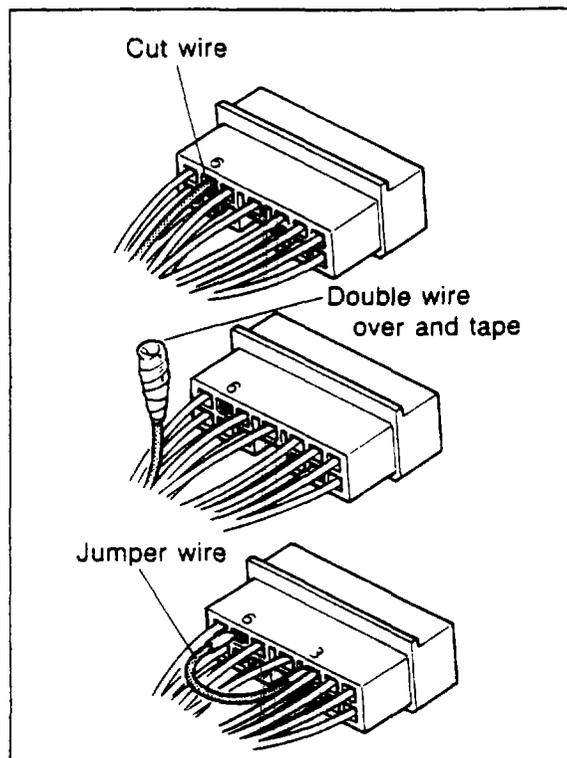
Problem	Possible	Remedy	Page
Cruise control system does not work	METER fuse blown	Replace	15—176
	Defective main switch	Check	15—180
	Defective cruise control unit	Check	
	Defective actuator	Check	15—182
	Defective cruise control switch	Check	15—180
	Defective speed sensor	Check	15—181
	Defective clutch switch (M/T model only)	Adjust	15—180
	Defective stop switch	Adjust	15—180
	Defective inhibitor switch (A/T model only)	Adjust	15—180
	Defective wiring or ground	Repair	15—180
Speed setting cannot be cancelled	Defective cruise control unit	Check	
	Defective clutch switch (M/T model only)	Adjust	15—180
	Defective stop switch	Adjust	15—180
	Defective inhibitor switch (A/T model only)	Adjust	15—180
Set speed is not held	Defective actuator	Check	15—182
	Defective actuator control cable	Adjust	15—179
	Defective cruise control unit	Check	
	Defective speed sensor	Check	15—181
Cruise control system does not function immediately	Defective actuator	Check	15—180
	Defective actuator control cable	Adjust	15—179
	Defective cruise control switch	Check	15—180
	Defective cruise control unit	Check	

87U15X-057

ON-VEHICLE INSPECTION (USING ACC CHECKER 49 9200 010)

Note

1. The ACC Checker can not be used for checking the acutator on turbo models.
2. When checking the actuator on '86 and '87 models with **AUTOMATIC TRANSMISSION** using this checker, the checker should be modified as shown below in order to avoid damage of the 4 A/T control unit.



77U15X-121

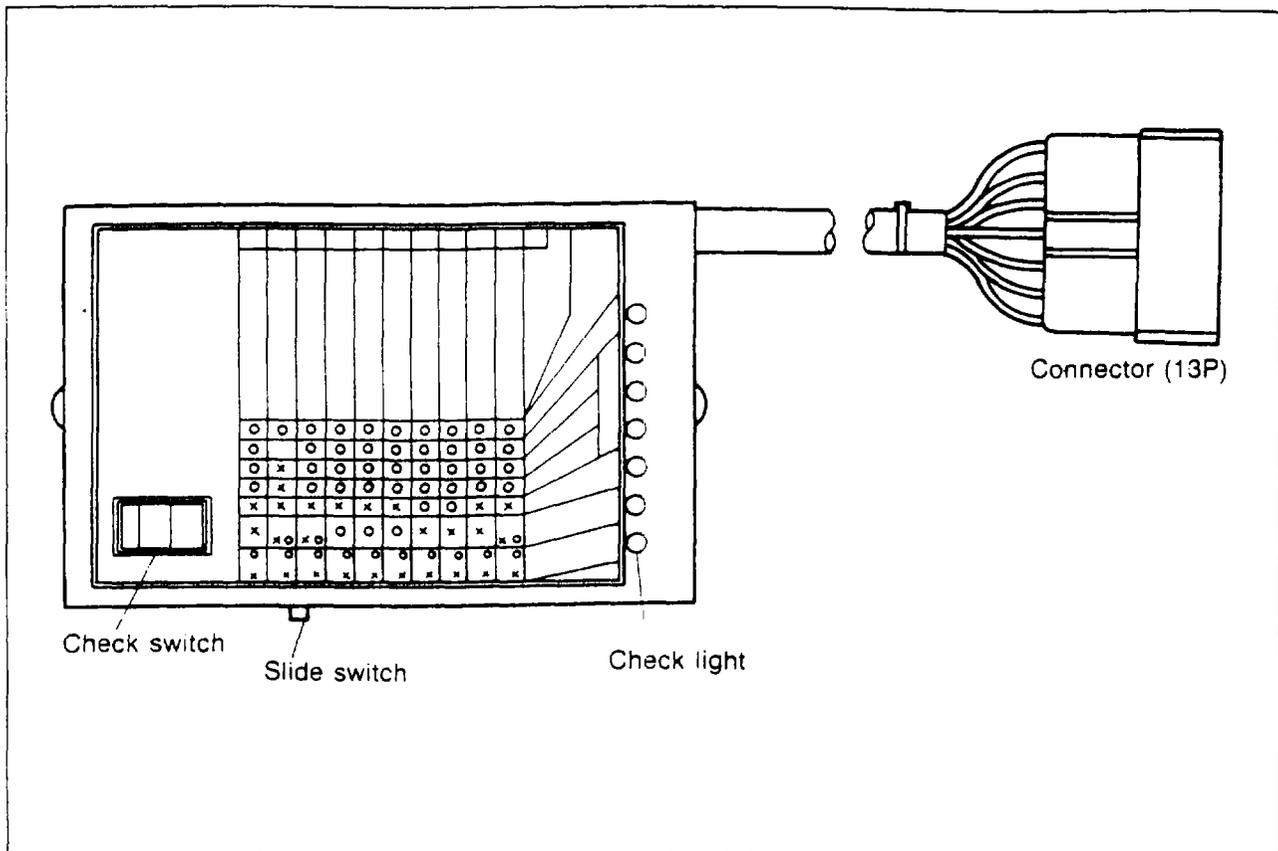
Modification Procedure

1. "CUT" the lead wire at terminal no.6 indicated on ACC Checker connector.
2. Tape exposed end of wire cut in step 1 as shown.

This modification does not affect the usage of the ACC checker except when used on the '81 RX-7 and 626 models. When the modified ACC Checker is used on these models, use a jumper wire and jump across terminal no.6 to 3 indicated on ACC checker connector as shown.

15 CRUISE CONTROL SYSTEM

ACC Checker (49 9200 010)



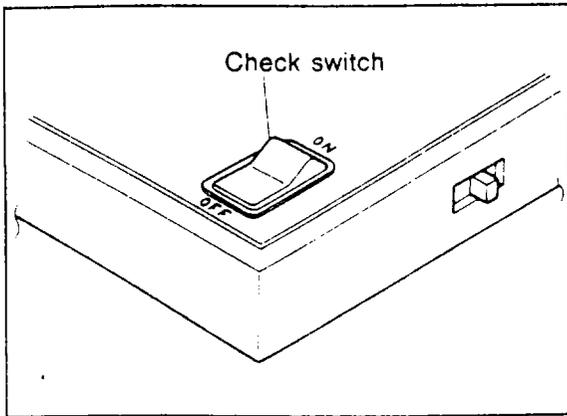
Function of the ACC CHECKER

A. Check lights

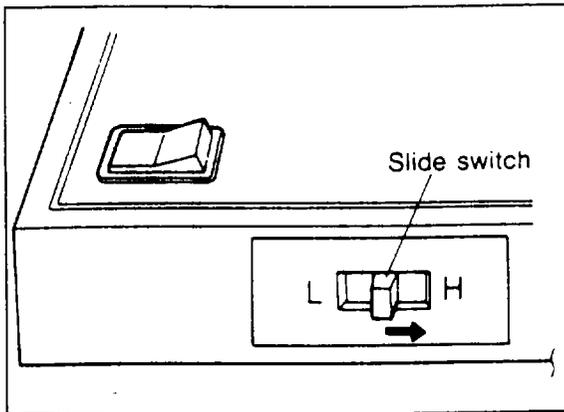
Each item is verified by a check light, as described below.

Check light	Check items
MAIN SW.	Ignition switch, fuse, main switch and associated wiring harness terminals and connectors
ACTUATOR—VAC	VAC coil continuity in the actuator and associated harness
ACTUATOR—VENT 2	VENT 2 coil continuity in the actuator and associated harness
ACTUATOR—VENT 1	VENT 1 coil continuity in the actuator and associated harness
CLUTCH/BRAKE SW.	Clutch switch (M/T vehicles only), brake switch and associated harness
COMBINATION	"SET", "COAST" and "RESUME" positions in the combination switch and associated harness
GENERATOR	Speed sensor output and associated harness

47U15X-102



67U15X-110



67U15X-111

B. Check switch

The check switch is equipped in the ACC Checker to check the actuator operation while the engine is running. When the check switch is held on after the engine is started, the engine speed increases to approximately 2,000 to 3,000 rpm and is maintained at that level. When the check switch is then released, the engine speed decreases to idle speed.

C. Slide switch

Set the slide switch in the H position before the check switch is used.

The engine rpm will increase to approximately 2,000 to 3,000 rpm, and will remain steady.

Note

If engine speed does not increase and remains in the 2,000 to 3,000 rpm range, adjust the freeplay of the actuator inner cable.

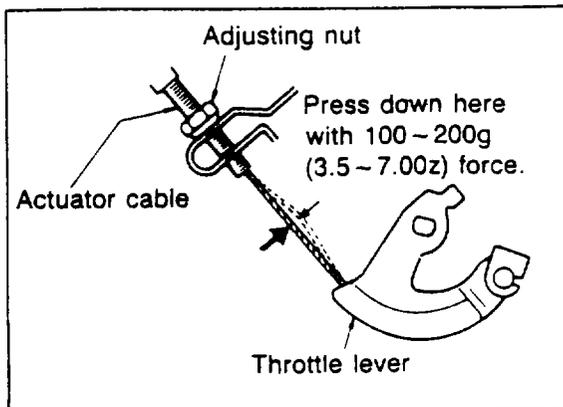
Preparation

1. Depress the lock hook of the harness connector.

Check that the ignition switch and main switch is off and remove the connector from the cruise control unit.

Connect the harness connector to the ACC Checker.

67U15X-112



67U15X-113

2. Checking freeplay of actuator inner cable

Remove the clip and adjust the nut so that the actuator control cable play is as follows when the cable is pressed lightly.

Free play of actuator inner cable:
1—3 mm (0.039—0.118 in)

15 CRUISE CONTROL SYSTEM

Checking the System

Check table

○ : Light ON
X : Light OFF

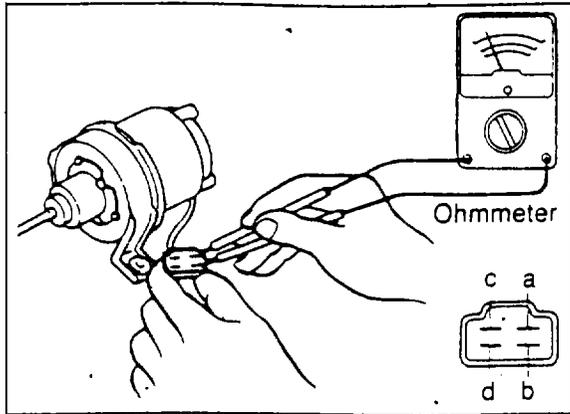
CHECK ITEMS AND CONDITIONS	CHECK LIGHTS (correct response)						TROUBLESHOOTING (INCORRECT RESPONSE)	
	MAIN SW.	ACTUATOR			CLUTCH/BRAKE SW.	COMBINATION/INH. SW.		GENERATOR
		VAC	VENT 2	VENT 1				
1. MAIN SW. CONTINUITY: • Ignition switch ON • Main switch ON	○	○	○	○	X	M/T X	○ or X	ALL LIGHTS OFF; Check ignition switch, main switch, fuse, and associated harness terminals and connectors
2. INHIBITOR SW. CONTINUITY: • Ignition and main switch ON • Shift lever in "D" (A/T) • Depress brake pedal	○	○	○	○	X	X	○ or X	COMBINATION/INH. SW. LIGHT ON; Check inhibitor switch and associated harness
3. BRAKE SW. CONTINUITY: • Ignition and main switch ON • Shift lever in "D" (A/T) • Depress brake pedal	○	○	○	○	○	X	○ or X	CLUTCH/BRAKE SW. LIGHT OFF; Check brake switch and associated harness
4. CLUTCH SW. CONTINUITY • Ignition switch ON • Main switch ON • Depress clutch pedal	○	○	○	○	○	X	○ or X	CLUTCH/BRAKE SW. LIGHT OFF; Check clutch switch and associated harness
5. "SET" POSITION OF COMBINATION SWITCH: • Ignition switch ON • Main switch ON • Shift lever in "D" (A/T) • Push to "SET" position of combination switch	○	○	○	○	X	○	○ or X	COMBINATION/INH. SW. LIGHT OFF; Check "SET" position of combination switch and associated harness
6. "COAST" POSITION OF COMBINATION SWITCH • Ignition switch ON • Main switch ON • Shift lever in "D" (A/T) • Turn to "COAST" position of combination switch	○	○	○	○	X	○	○ or X	COMBINATION/INH. SW. LIGHT OFF; Check "COAST" position in combination switch and associated harness
7. "RESUME" POSITION OF COMBINATION SWITCH • Ignition switch ON • Main switch ON • Shift lever in "D" (A/T) • Turn to "RESUME" position of combination switch	○	○	○	○	X	○	○ or X	COMBINATION/INH. SW. LIGHT OFF; Check "RESUME" position of combination switch and associated harness

67U15X-114

CHECK ITEMS AND CONDITIONS	CHECK LIGHTS (correct response)							TROUBLESHOOTING (INCORRECT RESPONSE)
	MAIN SW.	ACTUATOR			CLUTCH/BRAKE SW.	COMBINATION/INH. SW.	GENERATOR	
		VAC	VENT 2	VENT 1				
8. START ENGINE • Shift lever in "N" position (A/T)	○	○	○	○	X	M/T X	○ or X	—
9. ACTUATOR OPERATION: • After engine is started, set the slide switch to "H". Then turn check switch "ON" and hold in "ON" position Note Check that engine speed increases. If over 4,000 rpm, release the switch immediately.	○	X ↓ ○	X	X	X	M/T X	○ or X	If engine speed does not increase and remain in the 2,000 to 3,000 rpm range, fault may be with actuator and associated harness
10. SPEED SENSOR OUTPUT • Drive vehicle slowly with engine idling	○	○	○	○	X	X	○ ‡ X	IF GENERATOR LIGHT does not flash, fault may be with speed sensor and associated harness.

67U15X-115

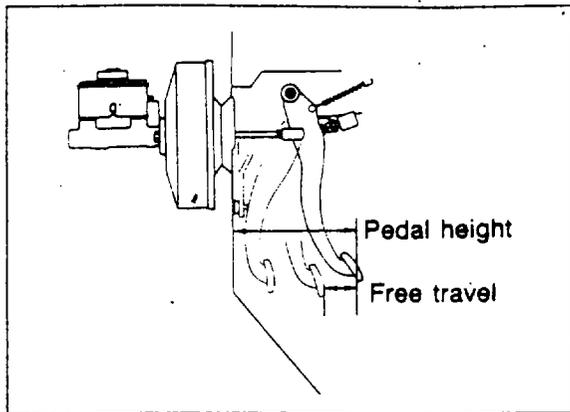
15 CRUISE CONTROL SYSTEM



Actuator

Measure the actuator solenoid resistance using an ohmmeter.

Check terminals	Resistance
c — a	Approx. 23 to 40 Ω
c — b	
c — d	



Clutch switch, Brake switch

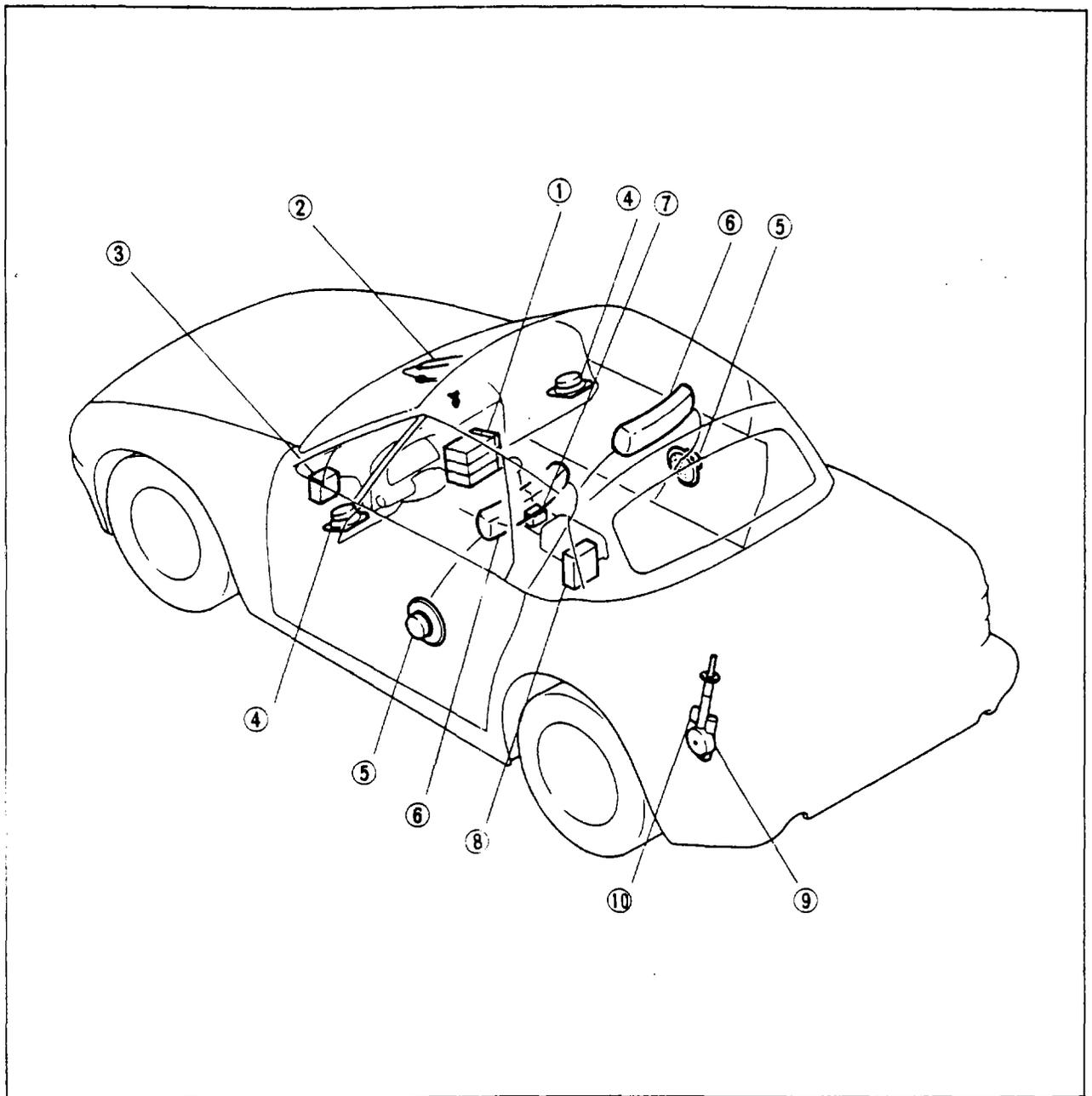
When servicing these switches, adjust them so that the corresponding pedal height is as specified.

Pedal height:

Clutch.....220—225 mm (8.661—8.858 in)

Brake.....205—210 mm (8.070—8.268 in)

STRUCTURAL VIEW

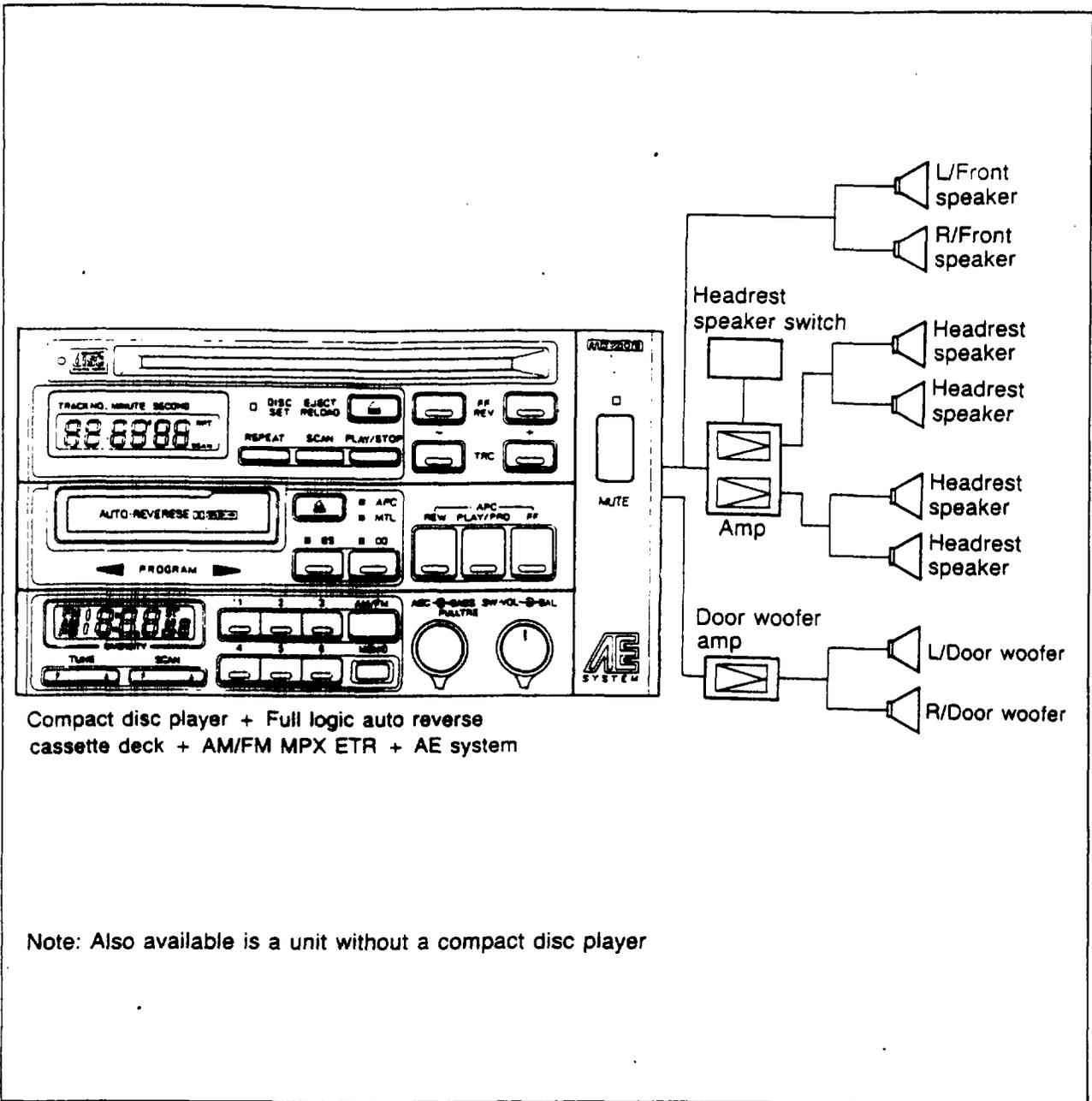


87U15X-059

- | | |
|--|--|
| <ul style="list-style-type: none"> 1. Compact disc player Full logic auto reverse cassette deck AM/FM MPX ETR Acoustic Equilibration (AE) system 2. Front windshield antenna 3. Door woofer amplifier 4. Front speakers | <ul style="list-style-type: none"> 5. Door woofer speakers 6. Headrest speaker 7. Headrest speaker switch 8. Headrest speaker AMP 9. Power antenna 10. Power antenna relay |
|--|--|

15 AUDIO SYSTEM

OUTLINE OF AUDIO



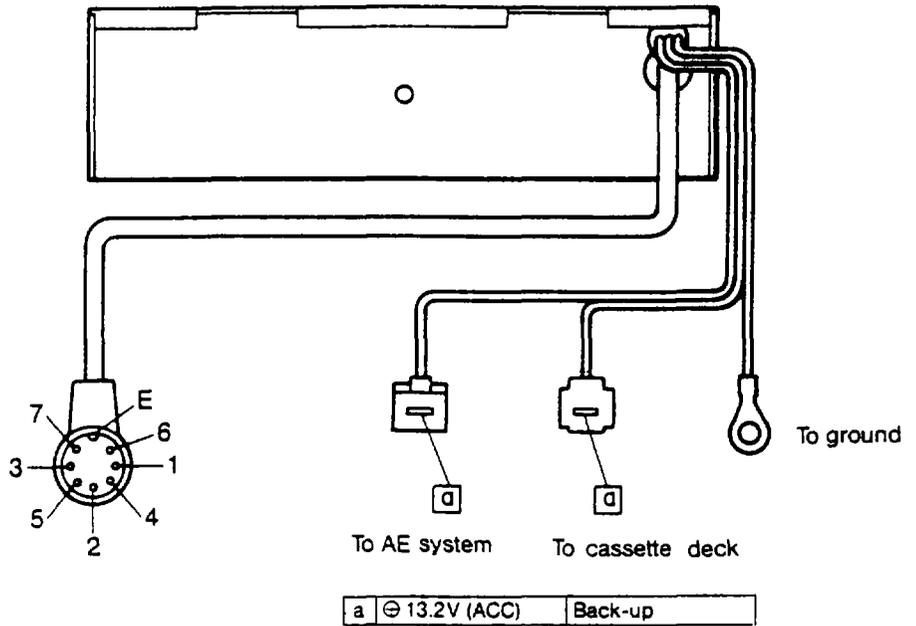
77U15X-121

CONNECTOR OF AUDIO COMPONENT

COMPACT DISC PLAYER

To AE system

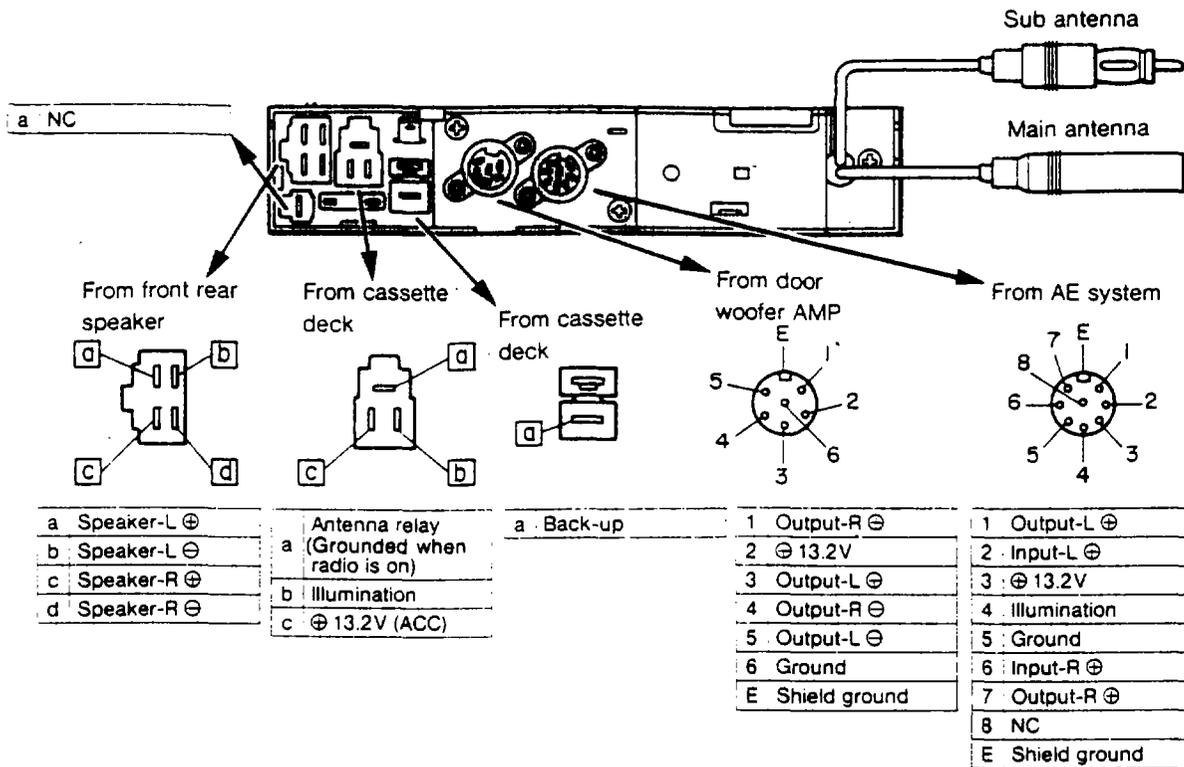
1	AUX + B
2	Input-L ⊕
3	Ground
4	NC
5	Input-R ⊖
6	NC
7	Illumination
E	Shield ground



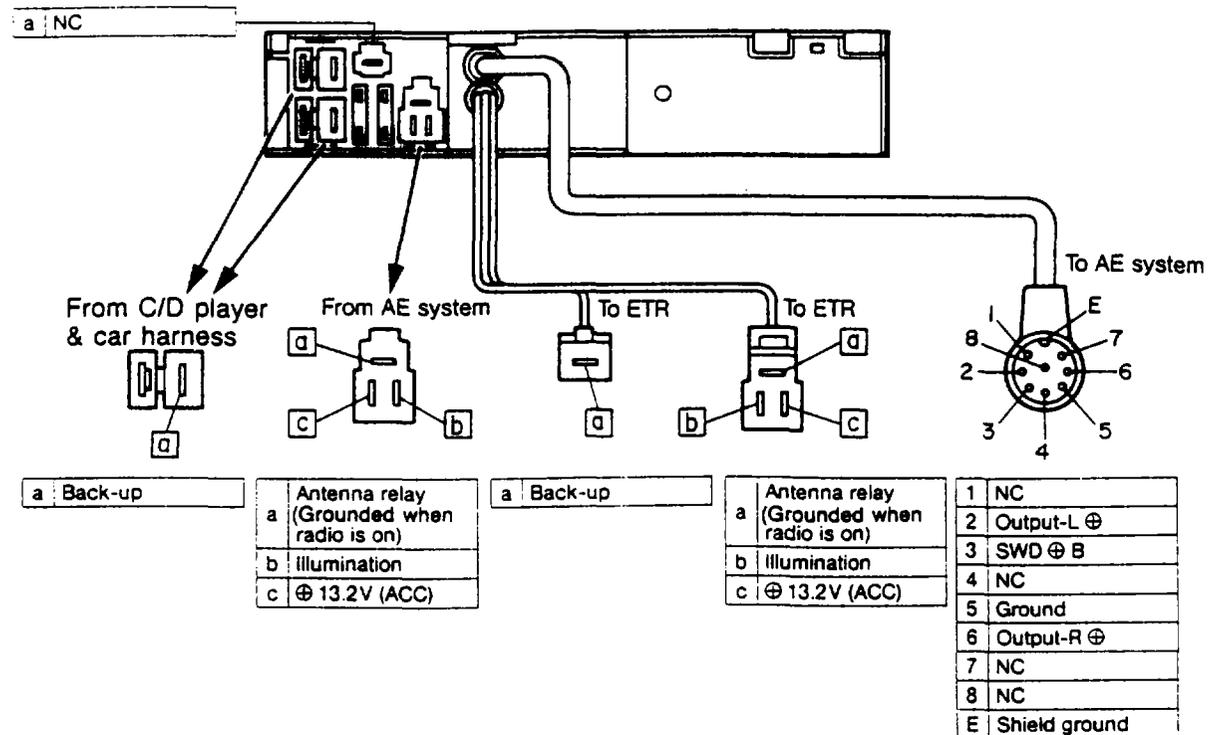
a	⊖ 13.2V (ACC)	Back-up
---	---------------	---------

15 AUDIO SYSTEM

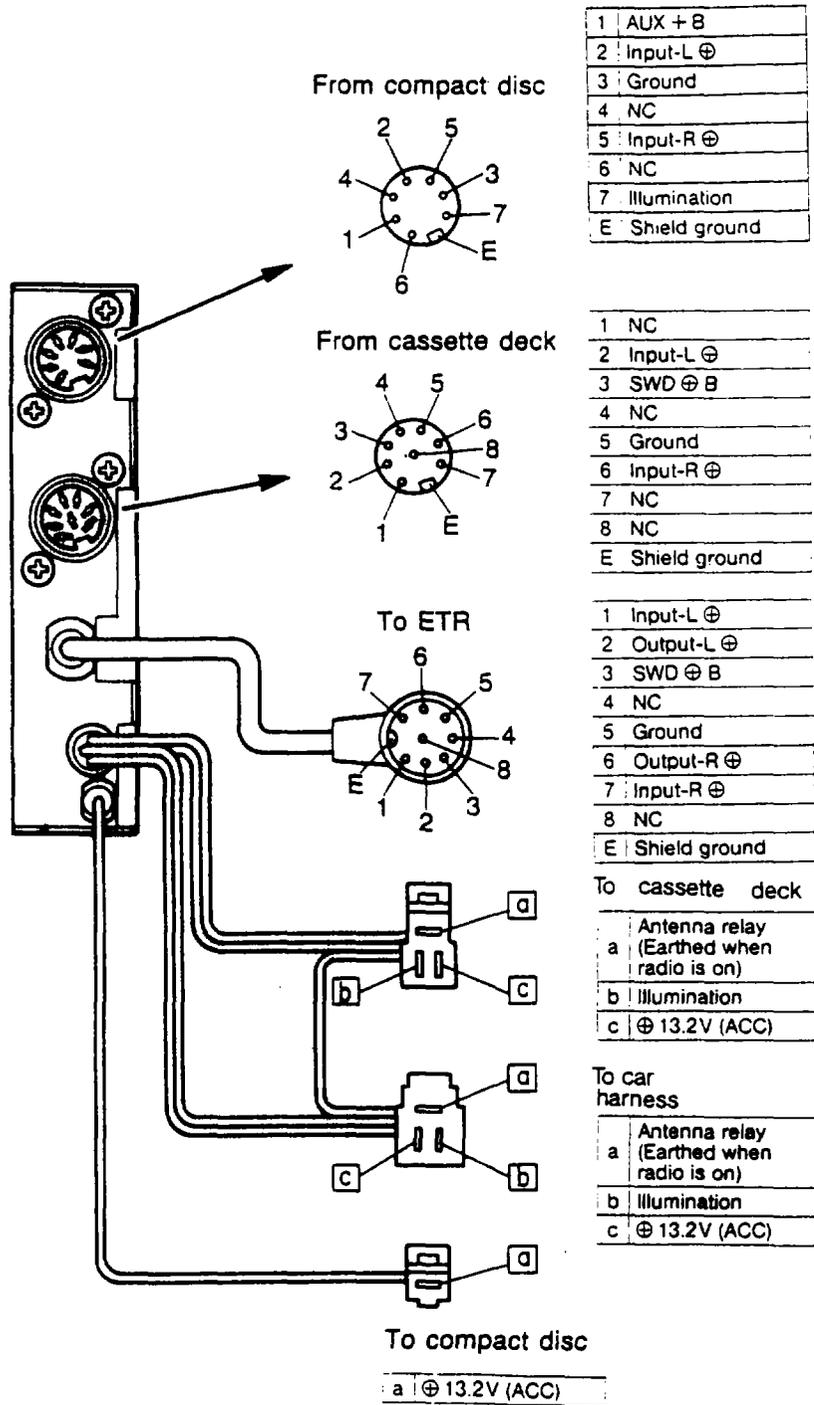
AM/FM MULTIPLEX RADIO (ETR)



FULL LOGIC CONTROL CASSETTE DECK

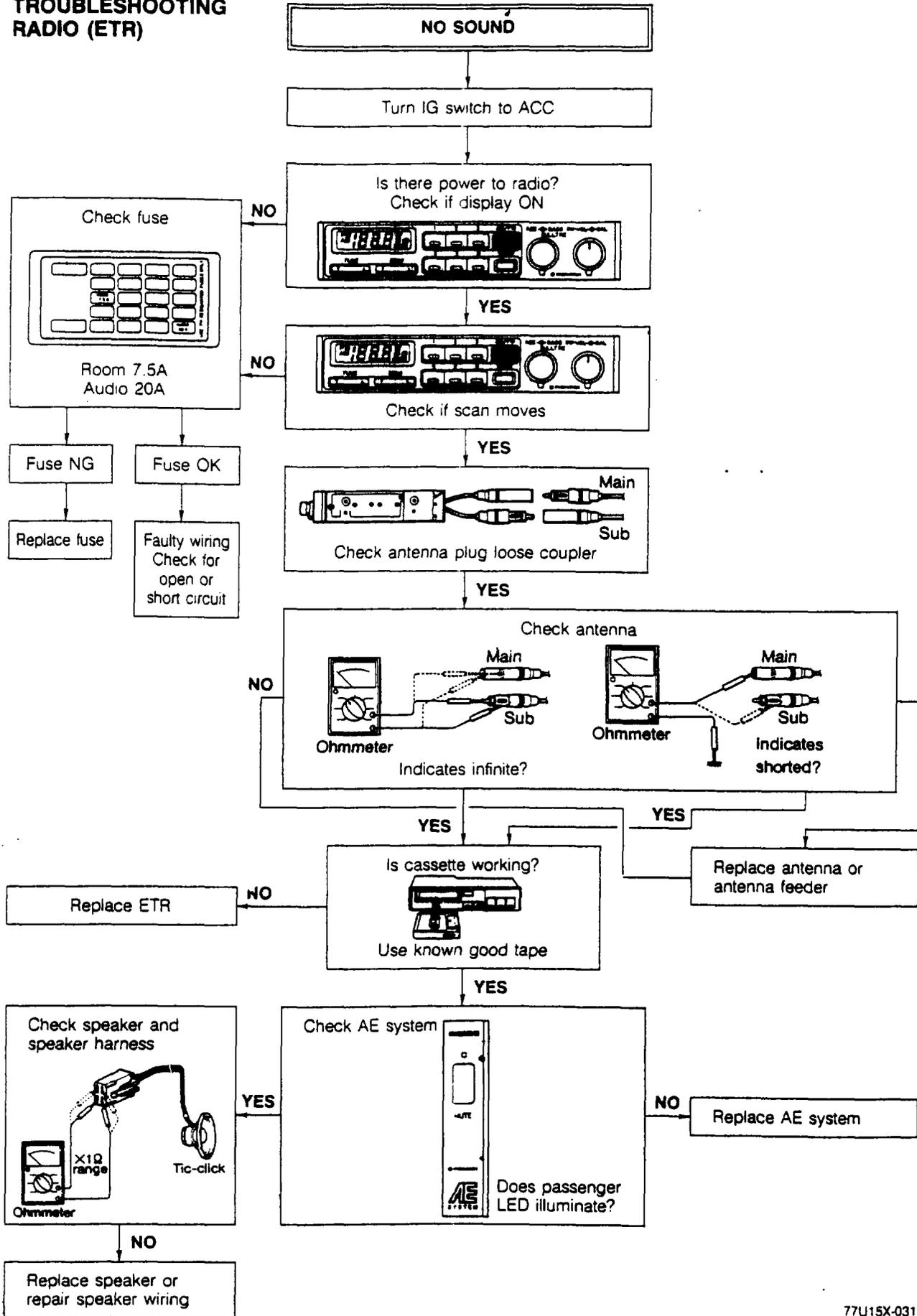


AE SYSTEM

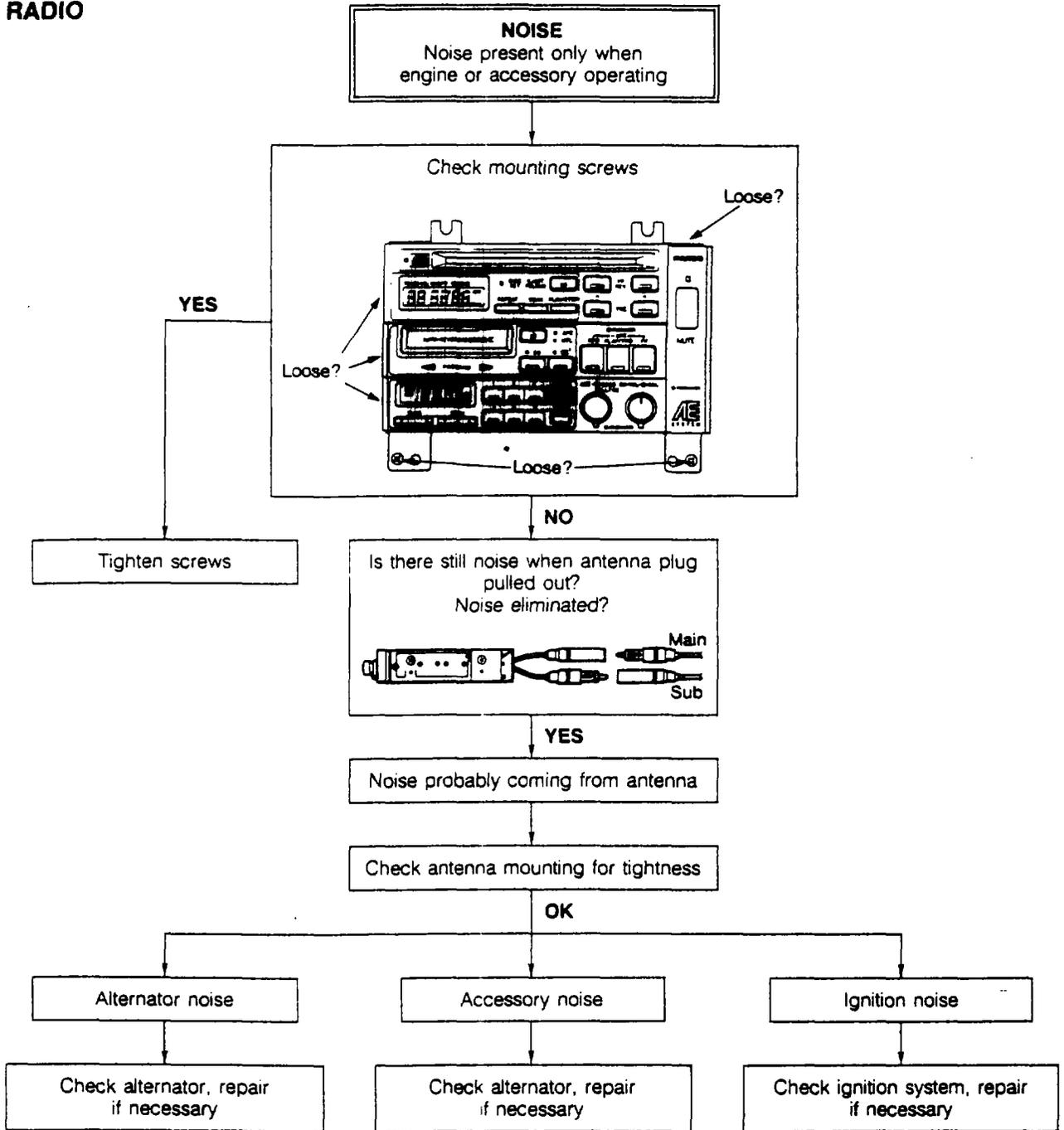


15 AUDIO SYSTEM

TROUBLESHOOTING RADIO (ETR)



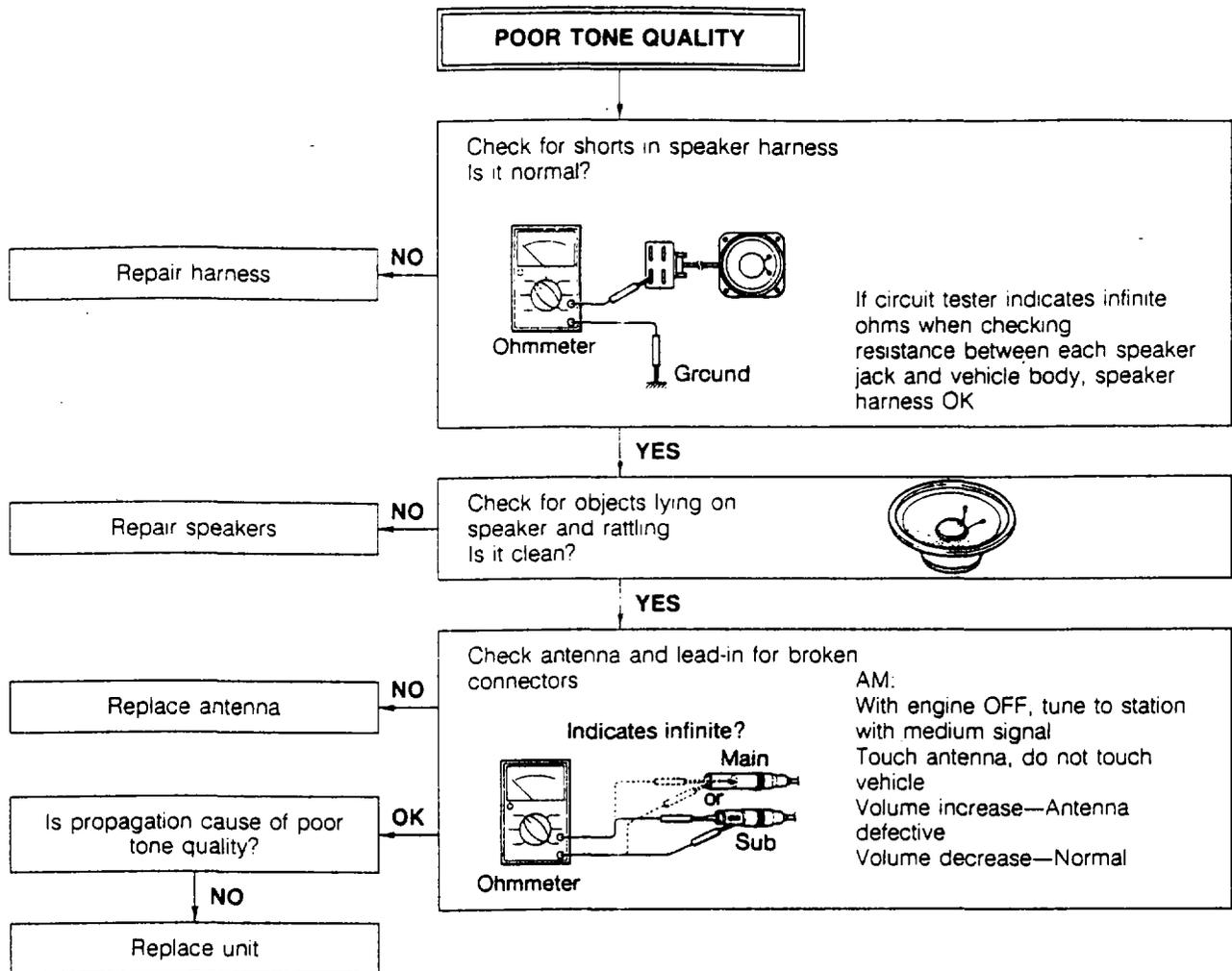
RADIO



77U15X-032

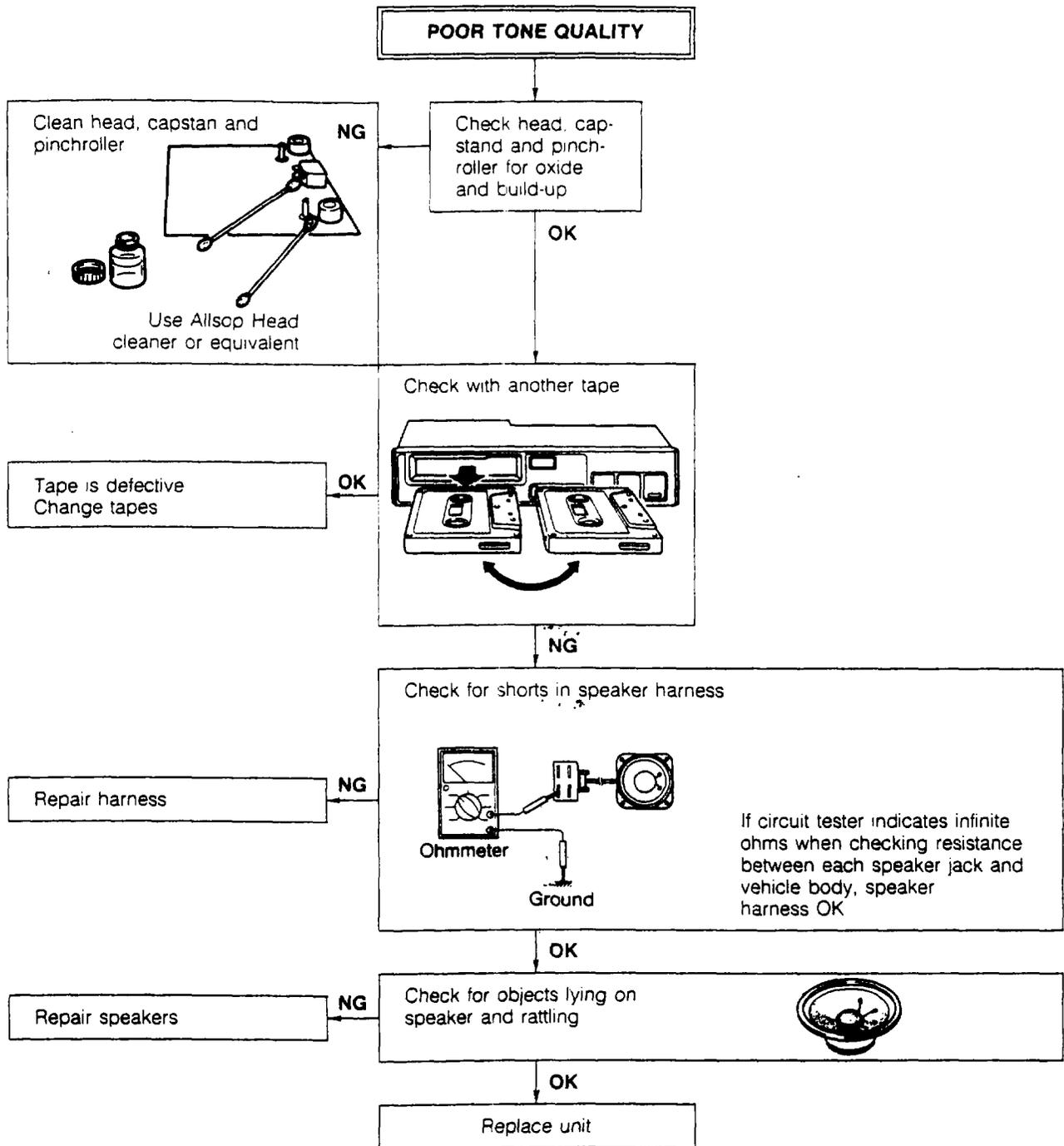
15 AUDIO SYSTEM

RADIO



77U15X-033

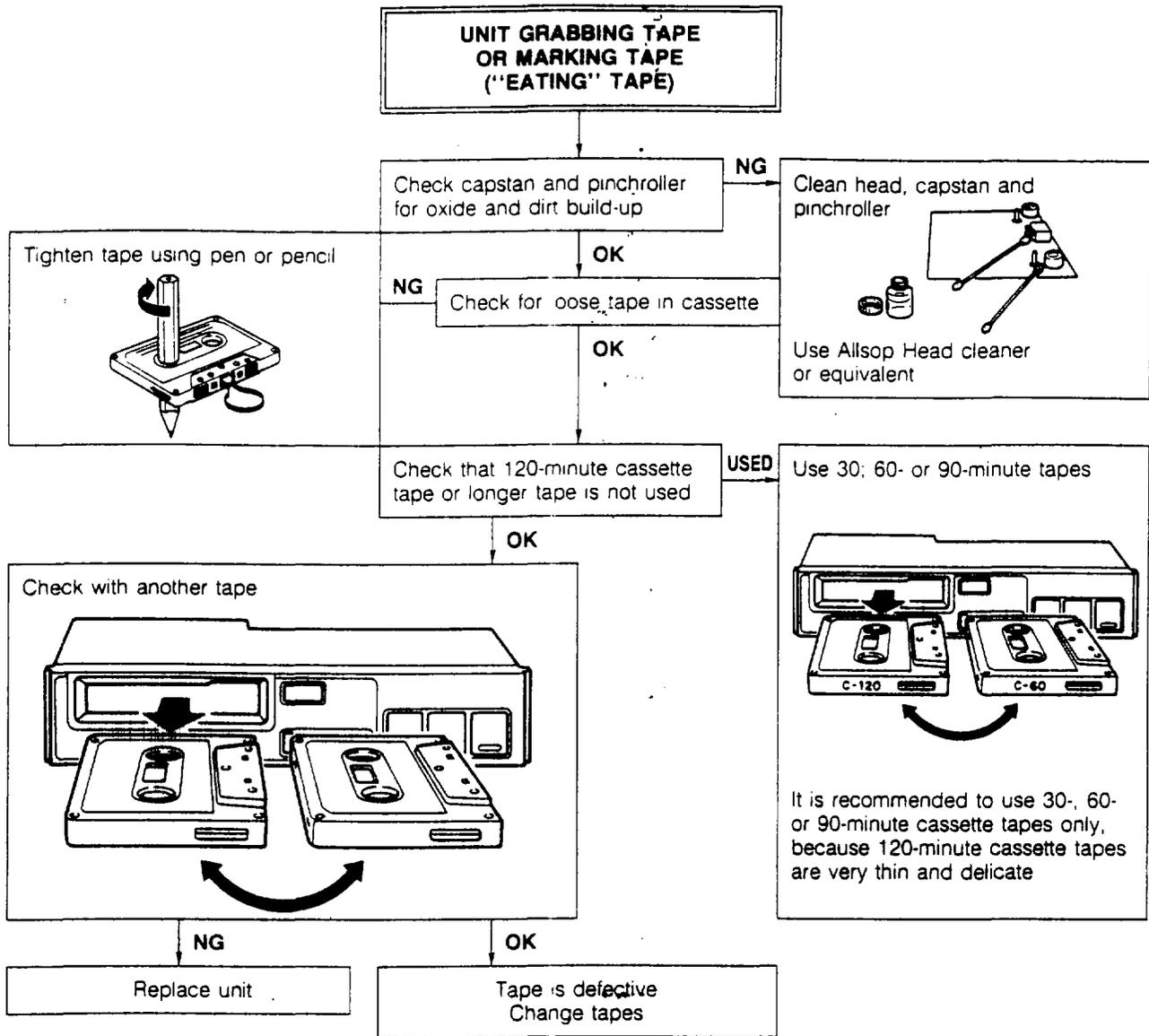
CASSETTE TAPE PLAYER



77U15X-034

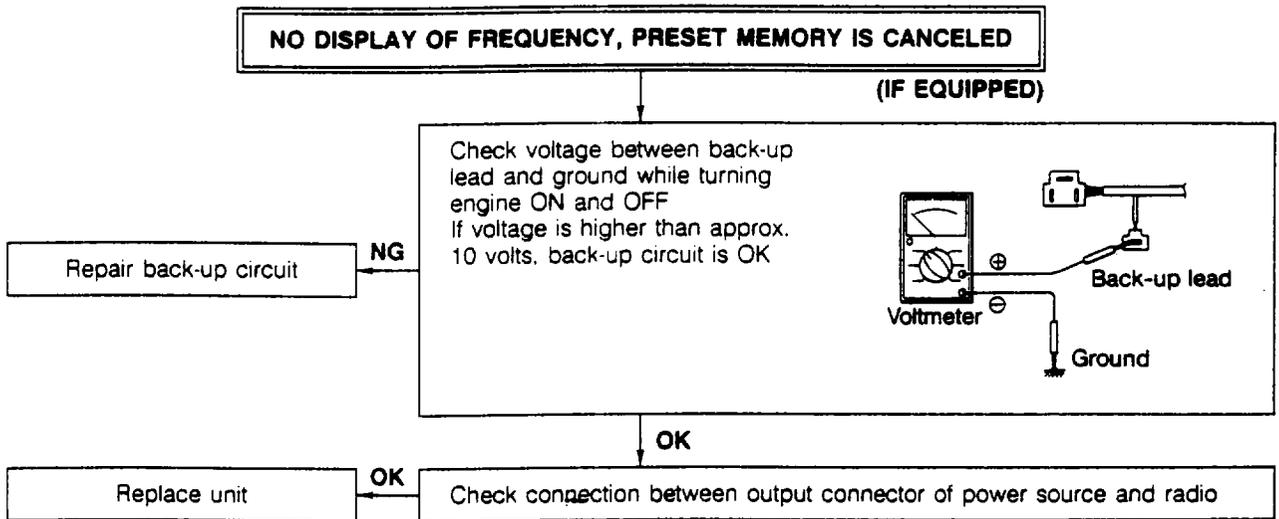
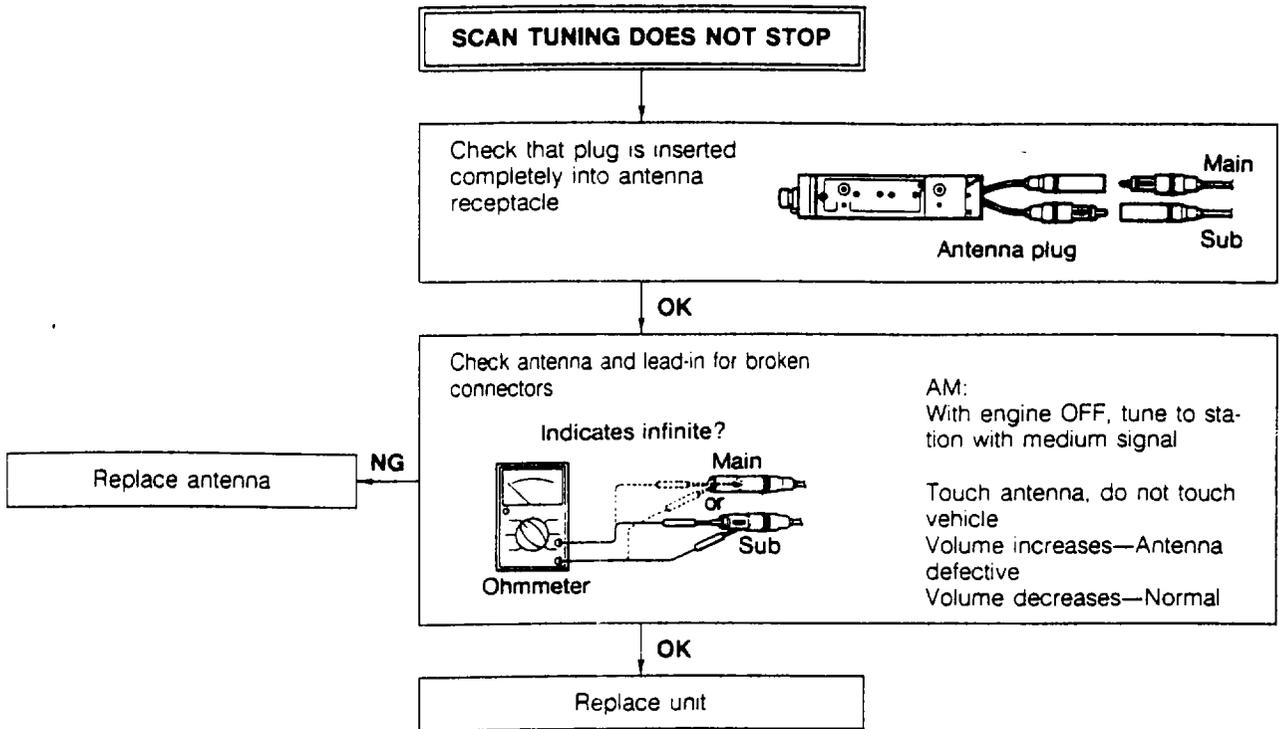
15 AUDIO SYSTEM

CASSETTE TAPE PLAYER



77U15X-035

RADIO



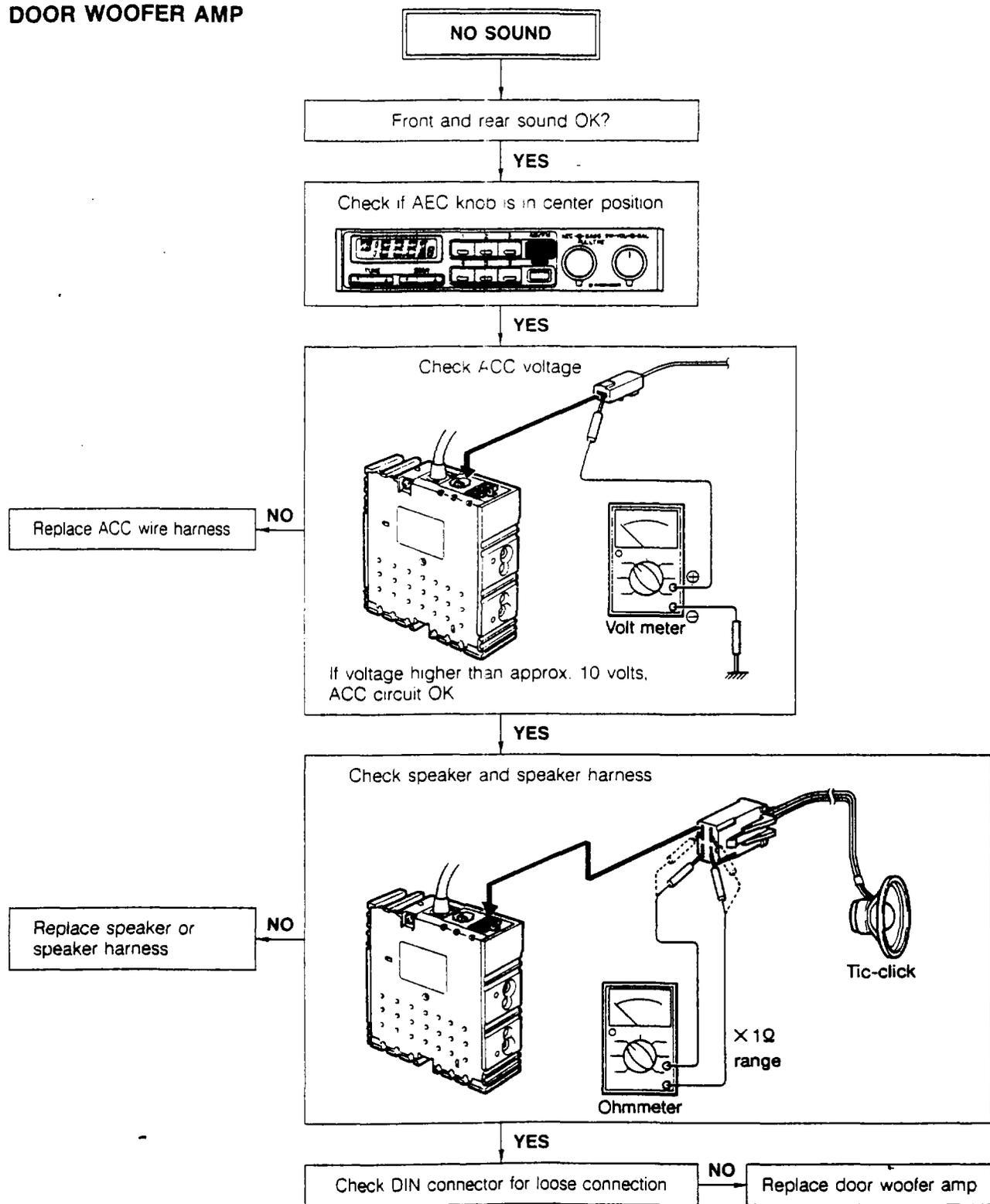
77U15X-036

Note

When battery is dead or radio is disconnected from battery for repair, all memory is canceled. The stations must be preset again.

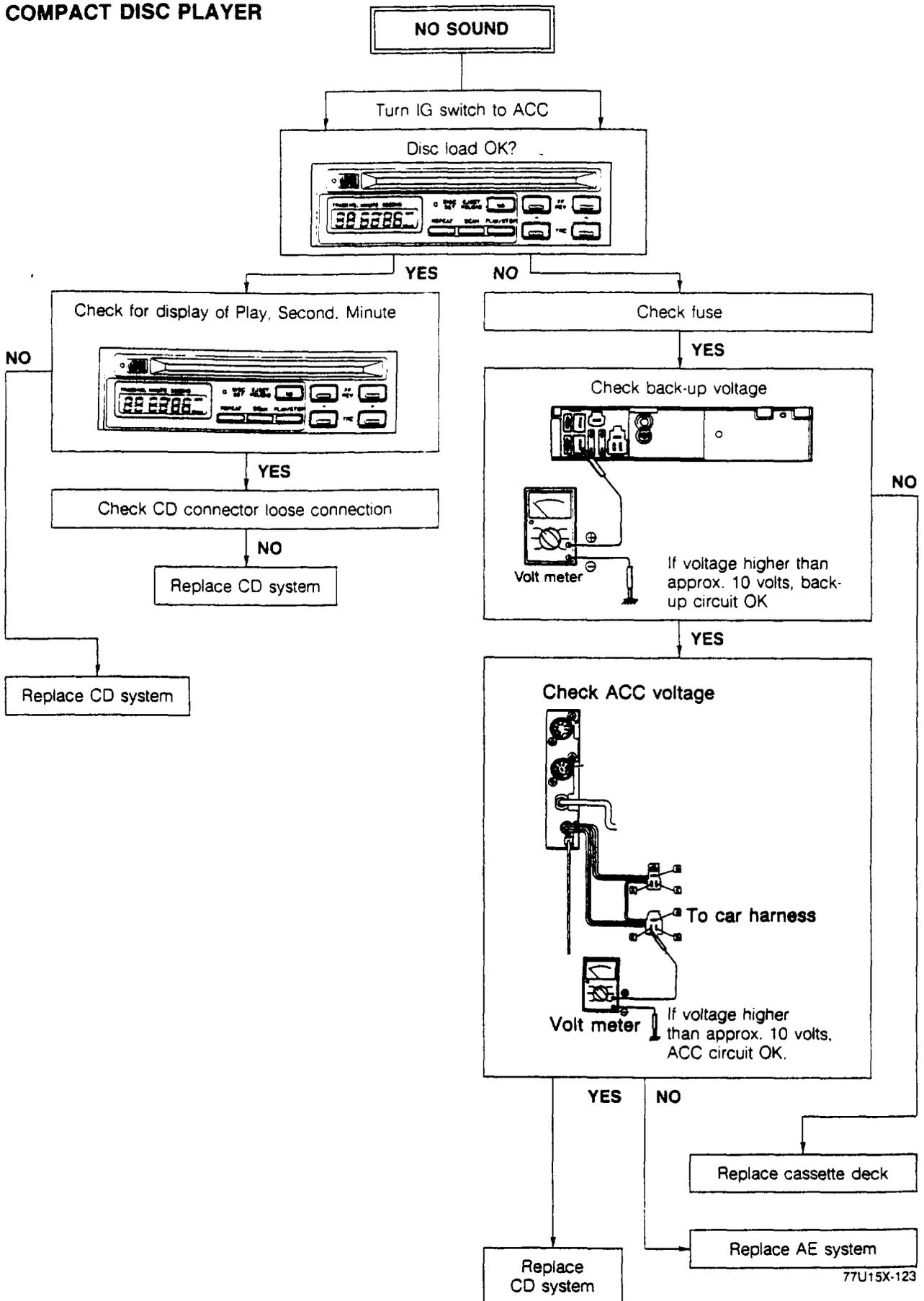
15 AUDIO SYSTEM

DOOR WOOFER AMP



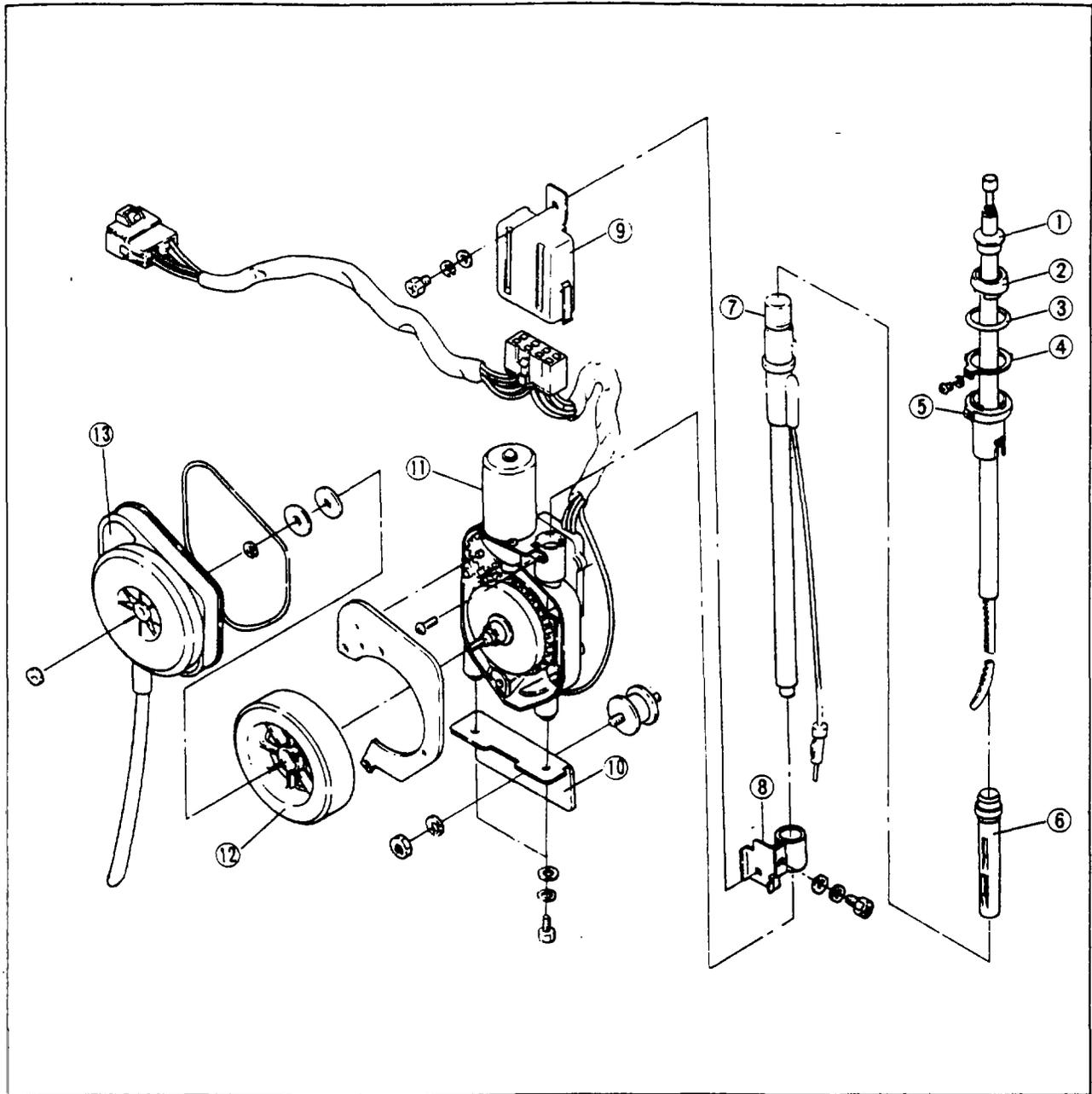
77U15X-039

COMPACT DISC PLAYER



15 AUDIO SYSTEM

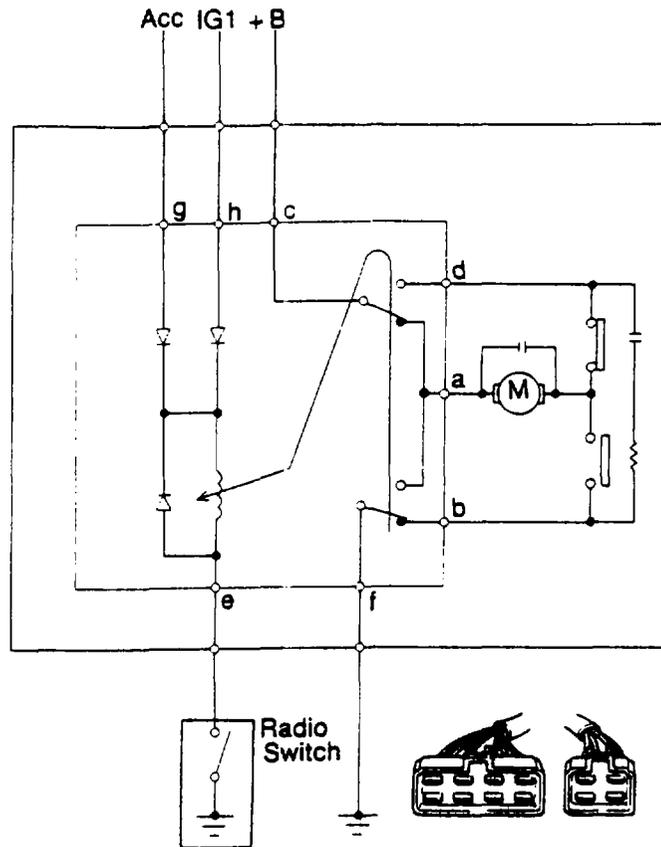
POWER ANTENNA



67U15X-165

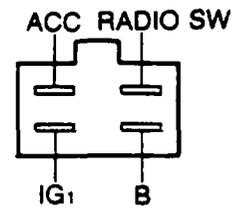
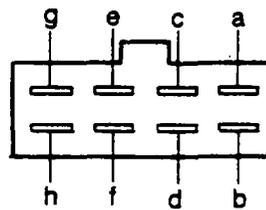
- | | |
|------------------|---------------------------|
| 1. Mounting nut | 8. Relay bracket |
| 2. Base | 9. Antenna relay |
| 3. Base pad | 10. Bracket |
| 4. Ground plate | 11. Motor drive unit |
| 5. Ground base | 12. Drive mechanism |
| 6. Rod insulator | 13. Drive mechanism cover |
| 7. Mast assembly | |

CIRCUIT DIAGRAM

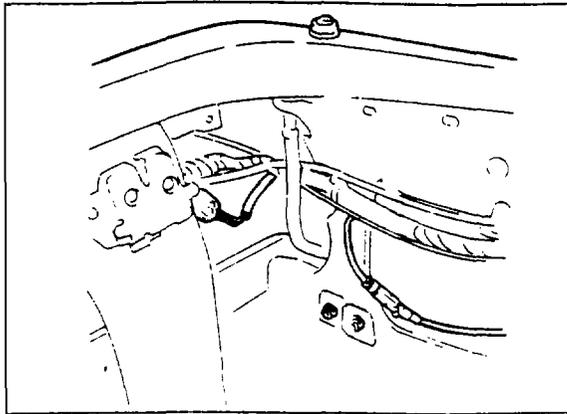


	RADIO SW	ACC or IG	a	b	c	d	f
UP	○	○	○	○	○	○	○
DOWN	X	○	○	○	○	○	○
	○	X	○	○	○	○	○

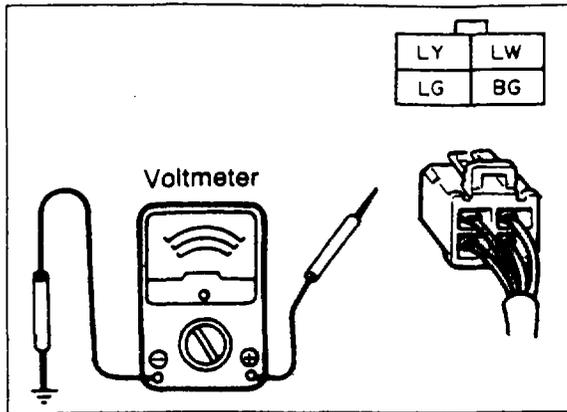
○—○ Indicates continuity



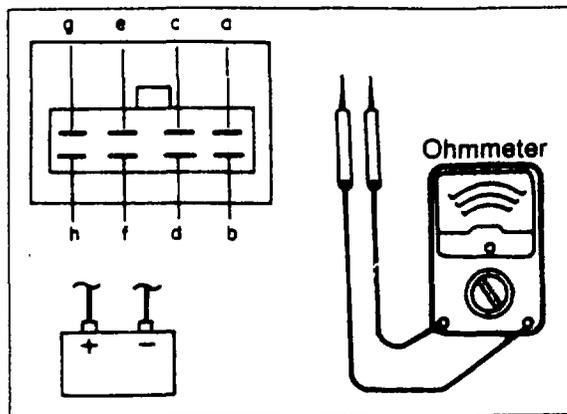
15 AUDIO SYSTEM



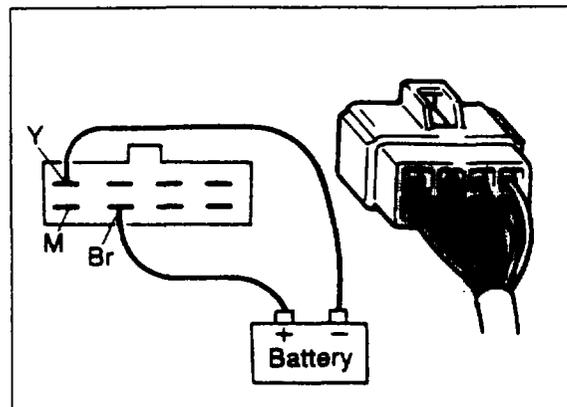
67U15X-167



67U15X-168



67U15X-169



67U15X-170

On-vehicle Inspection

If the antenna will not raise or lower, make the following checks:

1. Check the radio and antenna fuse (10A).
2. Disconnect the power antenna connector, and measure the harness side connector terminal voltage.

3. Measure the voltage between the terminals and a body ground.

Terminal	Voltage
LG	12V
BG	12V (Ignition switch ON)
LW	12V (Ignition switch ACC)
LY	0V (Radio power switch ON, Ignition switch ACC)

If the voltage is not correct, check the antenna relay.

4. Check for continuity between the terminals of the power antenna relay. If there is no continuity, replace the relay.

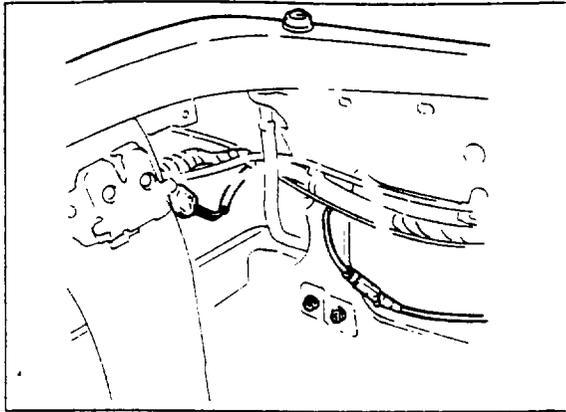
Battery		Terminal							
Pos.	Neg.	a	b	c	d	e	f	g	h
		○	—	○					
			○	—			○		
g	e	○		○	—				
h	e	○		○	—				

○—○: Indicate continuity

If the antenna does not function even though there is continuity, the problem may be either in the wiring harness or in the radio.

5. Apply battery voltage to the terminals and check the operation.

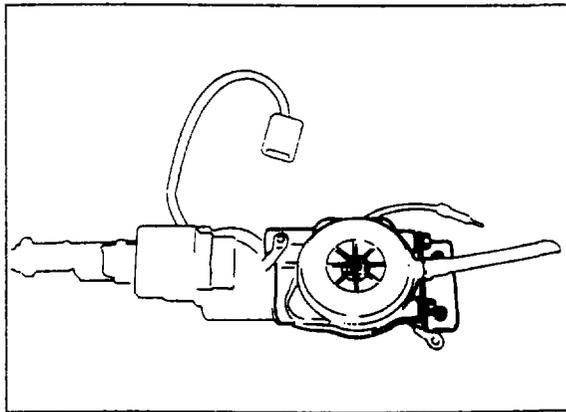
Battery		Function of antenna
Pos.	Neg.	
Br	Y	UP
Y	W	DOWN



67U15X-17

Removing Power Antenna

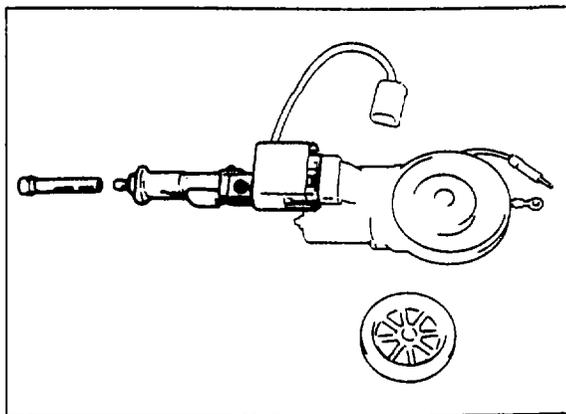
1. Remove the left rear trunk side trim.
2. Disconnect the antenna feeder and connector.
3. Remove the attaching nuts and remove the power antenna assembly.



67U15X-17a

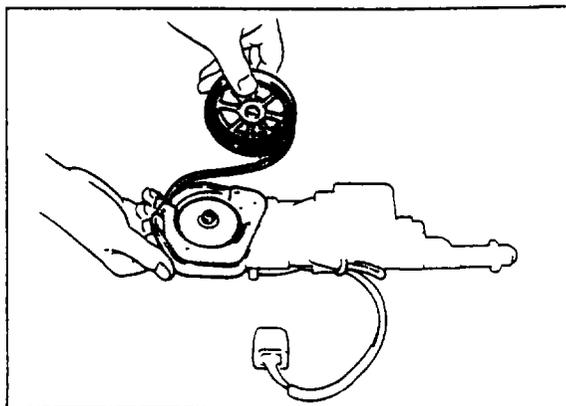
Disassembling Power Antenna

1. Remove the bracket.
2. Remove the drive mechanism cover.



67U15X-17b

3. Remove the rod insulator.
4. Remove the rod assembly.

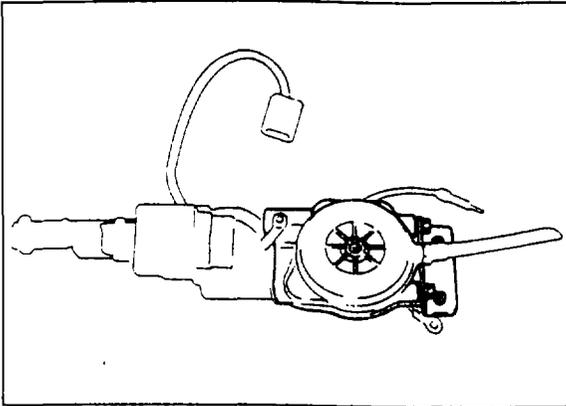


67U15X-17c

Assembling Power Antenna

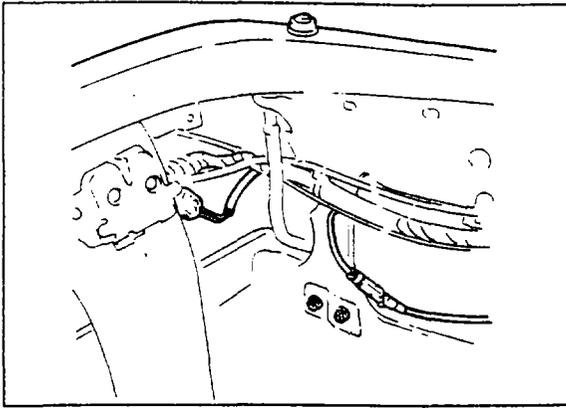
1. Insert the rod assembly into the mast assembly.
2. Roll the cable into the case and place the case in position.
3. Insert the rod insulator into the mast assembly.

15 AUDIO SYSTEM



67U15X-175

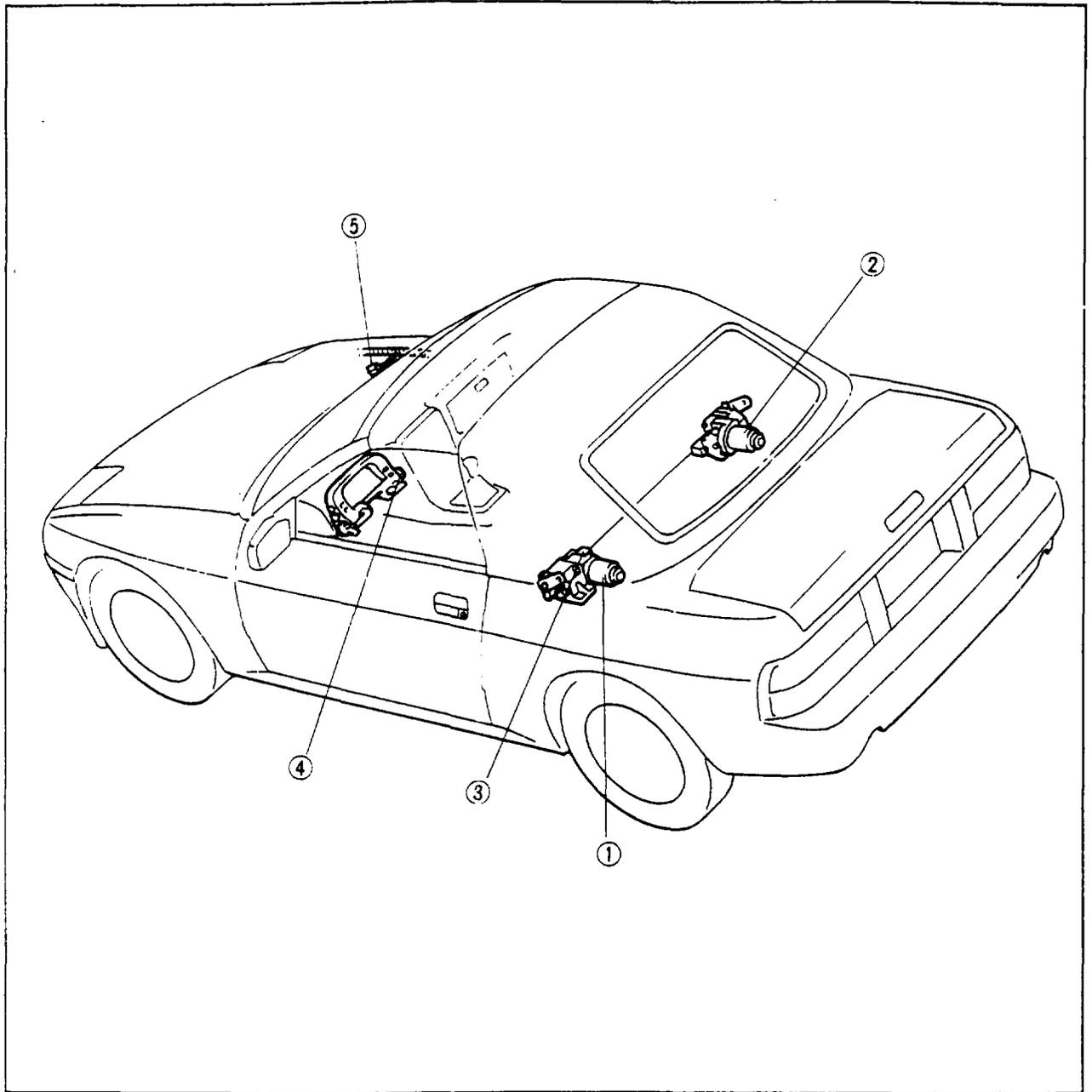
4. Install the drive mechanism cover and bracket.



67U15X-176

5. Attach the power antenna assembly to the vehicle and connect the antenna feeder and connector.
6. Check the operation of the power antenna and install the left rear trunk side trim.

STRUCTUAL VIEW

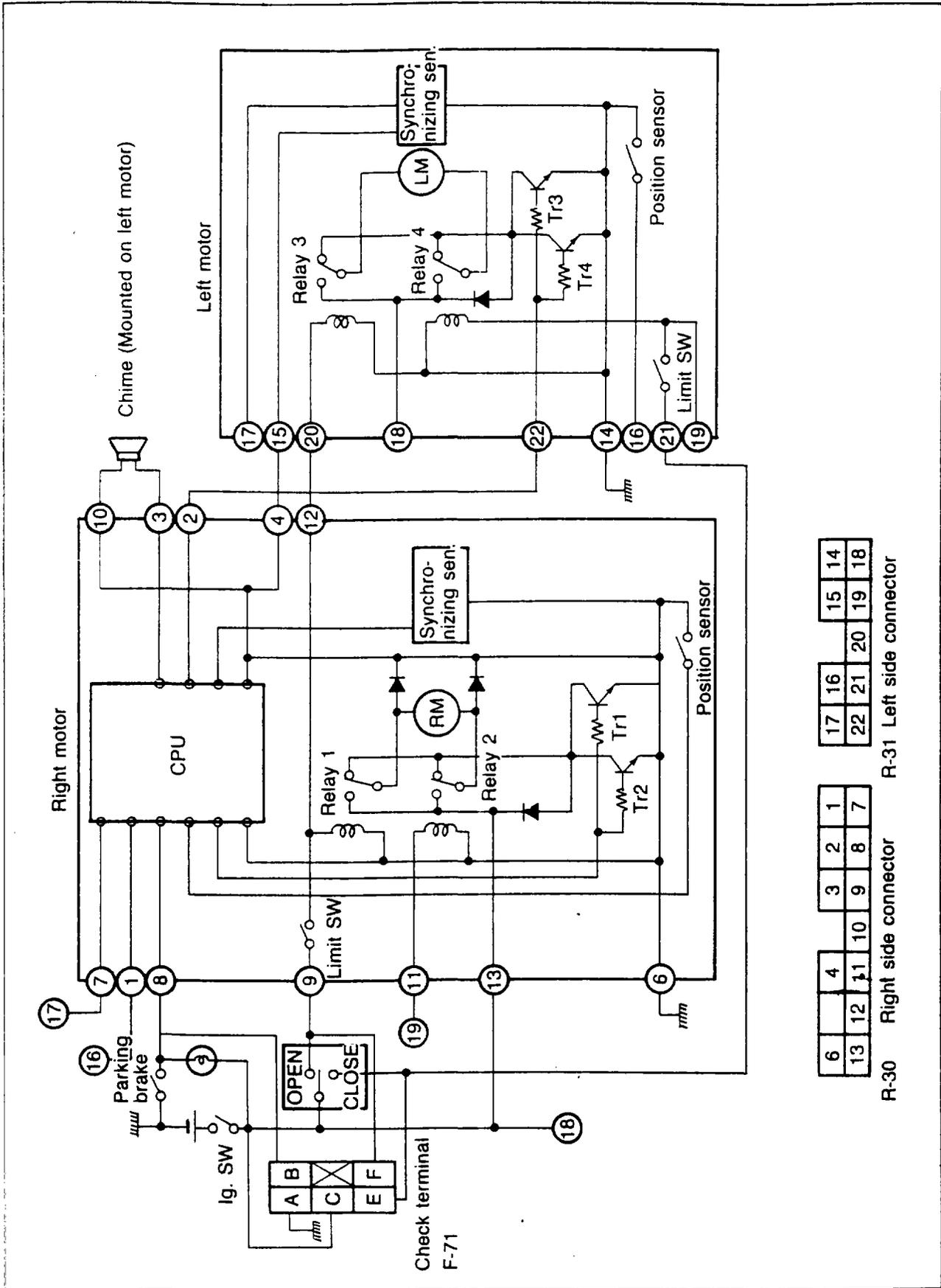


87U15X-065

1. Right motor
2. Left motor
3. Chime
4. Convertible top control switch
(ON cluster switch)
5. Check terminal

15 CONVERTIBLE TOP MOTOR

ELECTRICAL CIRCUIT



TROUBLESHOOTING

Convertible top motor does not work

Check F-71 Connector (check terminal) for voltage.

Condition	Connector	Voltage
Ignition switch ON	C	12V
Ignition switch ON and convertible top switch OPEN	F	12V
Ignition switch ON and convertible top switch CLOSE	E	12V
Ignition switch ON and parking brake ON	B	0V

NG

Repair harness or check cluster switch
(Refer to page 15—158)

OK

Check R-30 and R-31 connector for voltage.

Condition	Connector	Voltage
Ignition switch ON	13	12V
Ignition switch ON and convertible top switch OPEN	9	12V
Ignition switch ON and parking brake ON	8	0V
Always	6	0V

NG

Repair harness

Condition	Connector	Voltage
Ignition switch ON	18	12V
Ignition switch ON and convertible top switch CLOSE	21	12V
Always	14	0V

OK

Replace motor

87U15X-067