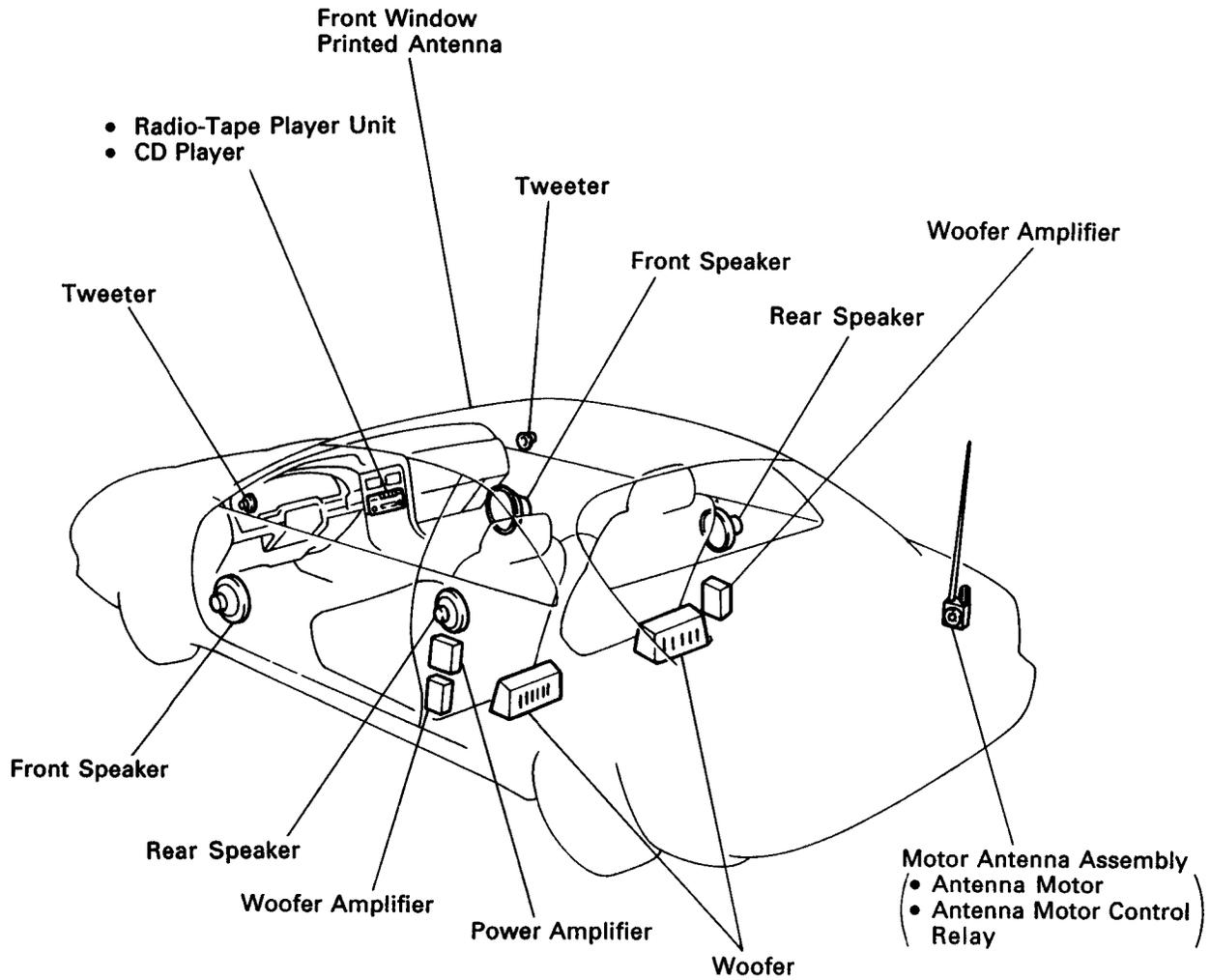


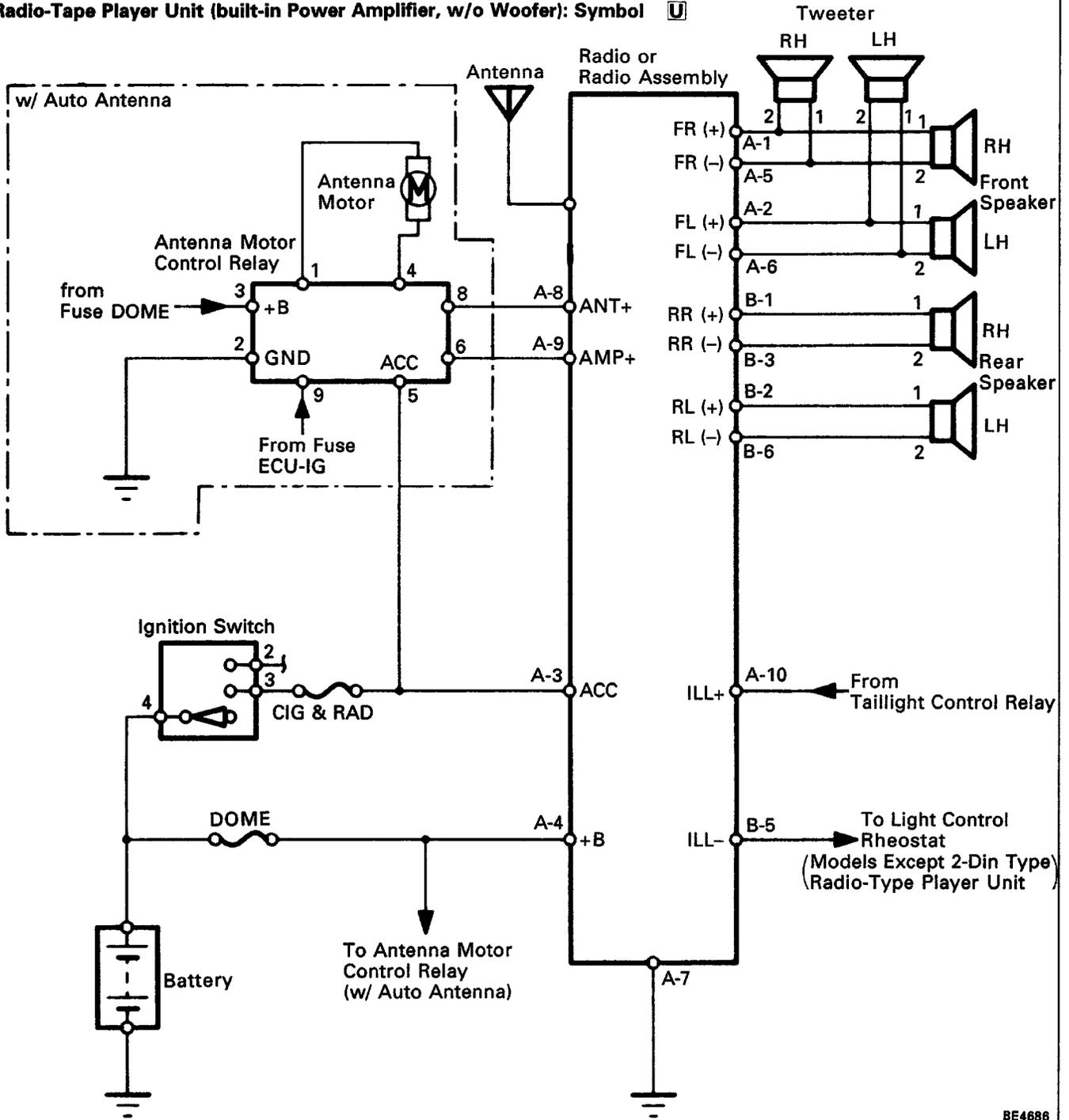
AUDIO SYSTEM PARTS LOCATION



WIRING AND CONNECTOR DIAGRAMS

Radio: Symbol **R**

Radio-Tape Player Unit (built-in Power Amplifier, w/o Woofer): Symbol **U**



BE4686

The POWER SOURCE CIRCUIT has been simplified. For full details, see page BE-9.

Radio Assembly
Connector "A" Connector "B"

Antenna Motor
Control Relay

Front Speaker

Rear Speaker

Tweeter



S-10-2-A

S-8-2-E



G-9-2



1e-2-2-J

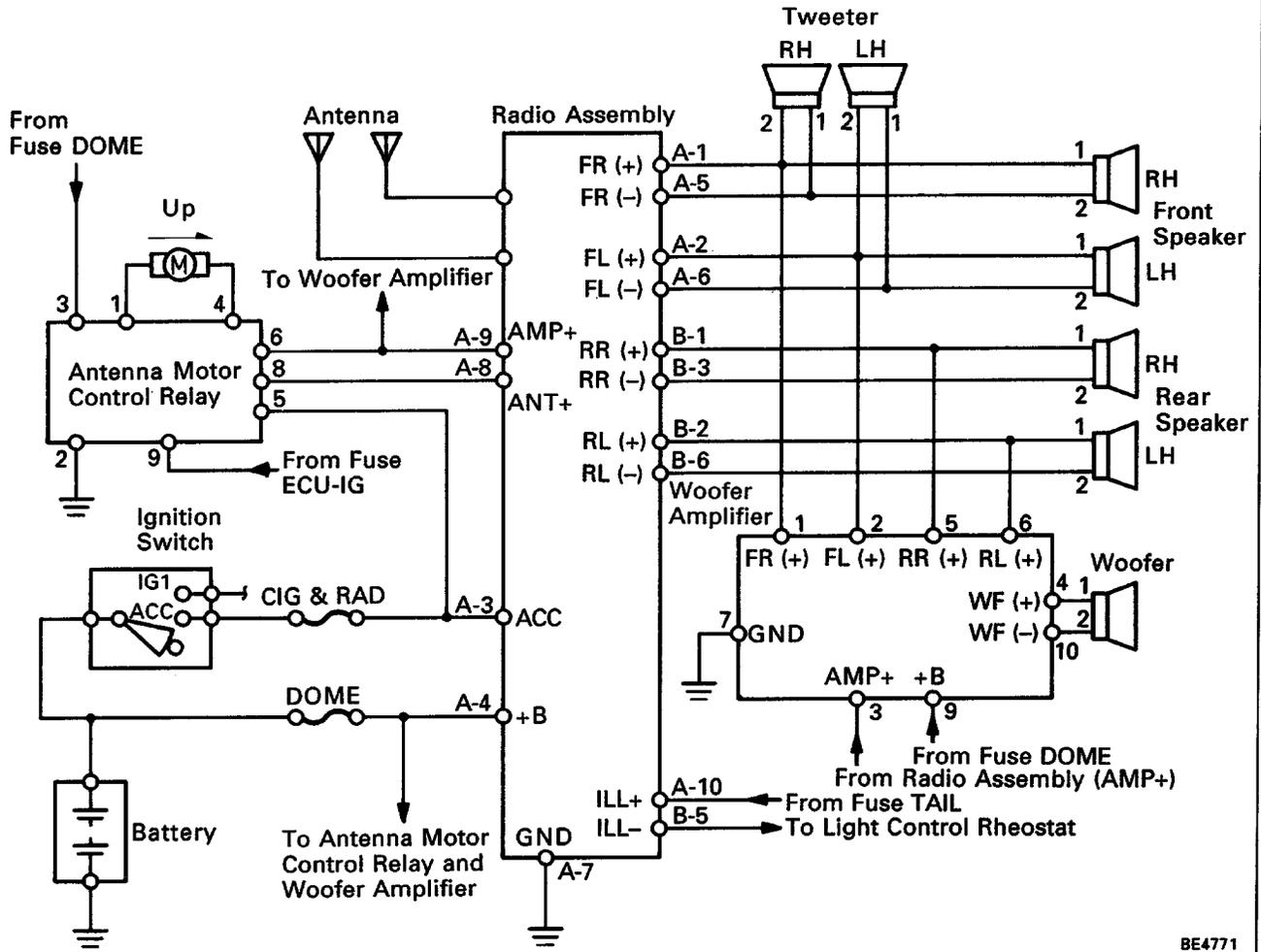


BE4123



GA-2-2-C

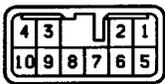
Radio-Tape Player Unit (built-in Power Amplifier, w/ Woofer): Symbol U



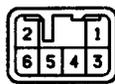
BE4771

The POWER SOURCE CIRCUIT has been simplified. For full details, see page BE-9.

Radio Assembly
Connector "A" Connector "B"

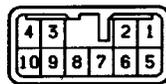


S-10-2-A



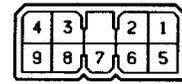
S-6-2-E

Woofer Amplifier



S-10-2-A

Antenna Motor
Control Relay



G-8-2

Front Speaker



1e-2-2-J

Rear Speaker and
Woofer



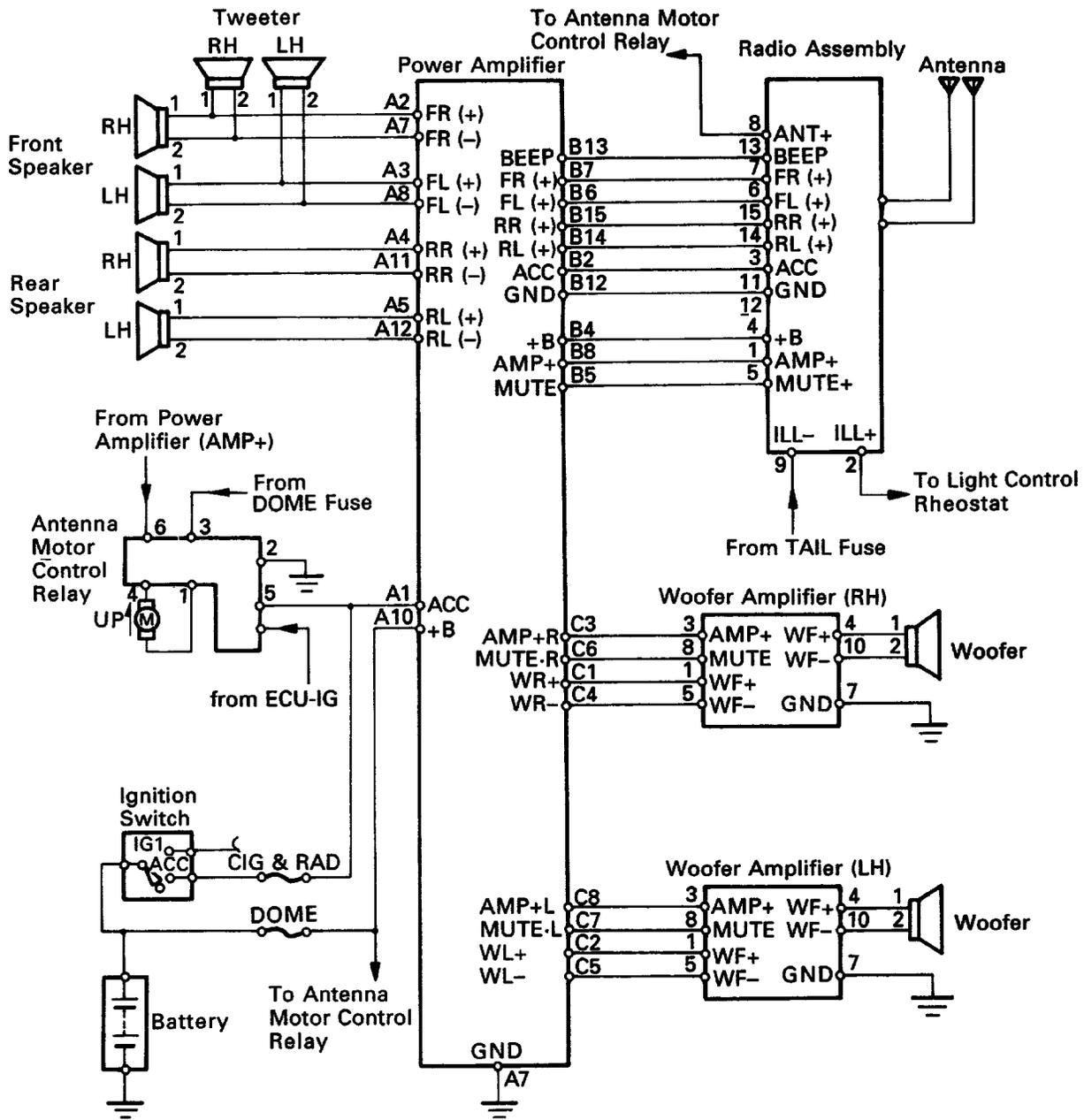
BE4123

Tweeter

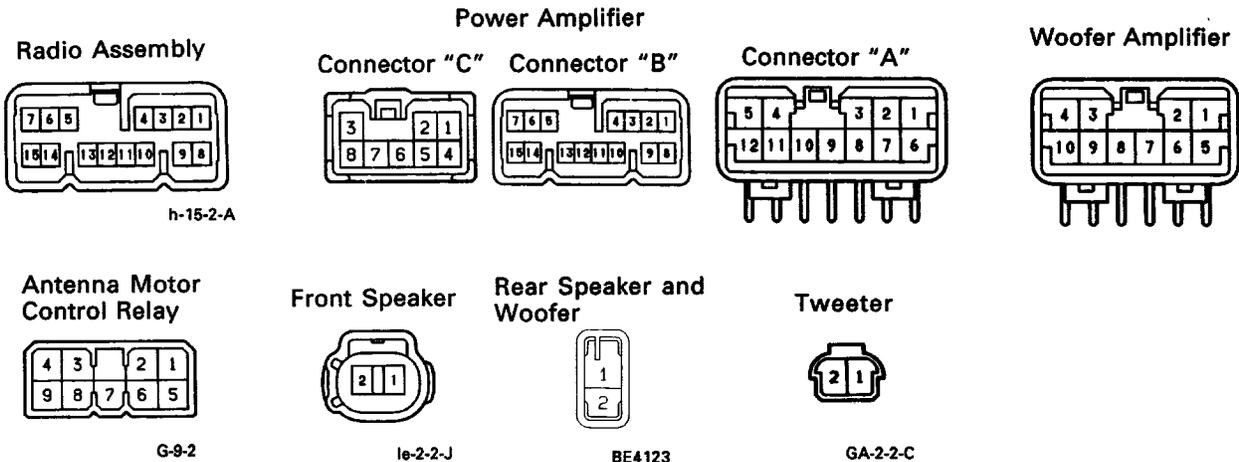


GA-2-2-C

Radio-Tape Player Unit (separate Power Amplifier, w/ Woofer): Symbol P
Radio-Tape-CD Player Unit: Symbol C



N04057



The POWER SOURCE CIRCUIT has been simplified. For full details, see page BE-9.

SYSTEM DESCRIPTION

RADIO WAVE BAND

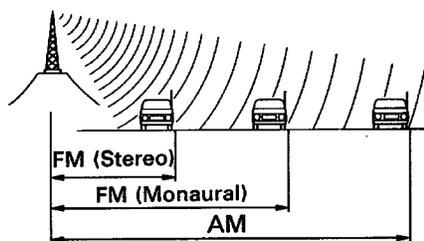
The radio wave bands used in radio broadcasting are as follows:

Frequency	30 kHz	300 kHz	3 MHz	30 MHz	300 M Hz
Designation		LF	MF	HF	VHF
Radio wave			AM		FM
Modulation method	Amplitude modulation			Frequency modulation	

LF: Low Frequency MF: Medium Frequency HF: High Frequency VHF: Very High Frequency

SERVICE AREA

There is great difference in the size of the service area for AM, FM monaural, and FM stereo broadcasting. Thus it may happen that FM broadcast cannot be received even though AM comes in very clearly. Not only does FM stereo have the smallest service area, but it also picks up static and other types of interference ("noise") the most easily.



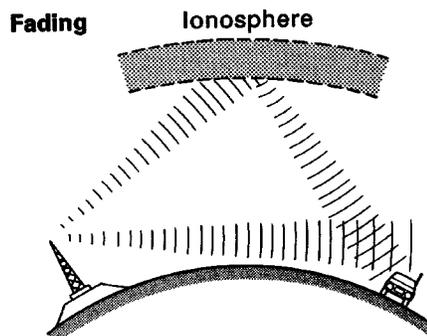
BE2818

RECEPTION PROBLEMS

Besides the problem of static, there are also the problems called "fading", "multipath", and "fade out". These problems are caused not by electrical noise but by the nature of the radio waves themselves.

Fading

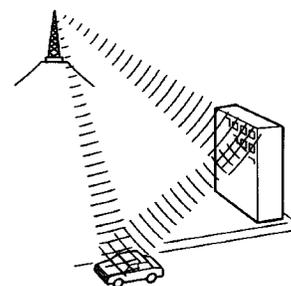
Besides electrical interference, AM broadcasts are also susceptible to other types of interference, especially at night. This is because AM radio waves bounce off the ionosphere at night. These radio waves then interfere with the signals from the same transmitter that reach the vehicle's antenna directly. This type of interference is called "fading".



BE2819

Multipath

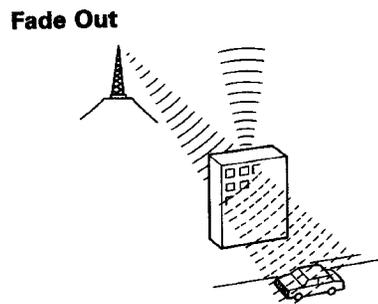
One type of interference caused by the bouncing of radio waves off of obstructions is called "multipath". Multipath occurs when a signal from the broadcast transmitter antenna bounces off of buildings and mountains and interferes with the signal that is received directly.



BE2820

Fade Out

Because FM radio waves are of higher frequencies than AM radio waves, they bounce off of buildings, mountains, and other obstructions. For this reason, FM signals often seem to gradually disappear or fade away as the vehicle goes behind a building or other obstruction. This is called "fade out".



BE2821

COMPACT DISC PLAYER

Compact Disc (hereafter called "CD") players use a laser beam pick-up to read the digital signals recorded on the CD and reproduce analog signals of the music, etc. There are 4.7 in. (12 cm) and 3.2 in. (8 cm) CD available.

HINT: Never attempt to disassemble or oil any part of the player unit. Do not insert any object other than a disc into the slot.

NOTICE: CD players use invisible laser beam which could cause hazardous radiation exposure if directed. Be sure to operate the player correctly as instructed.

MAINTENANCE

(Tape Player)

Head Cleaning

- (a) Raise the cassette door with your finger.
Next using a pencil or like object, push in the guide.
- (b) Using a cleaning pen or cotton applicator soaked in cleaner, clean the head surface, pinch rollers and capstans.

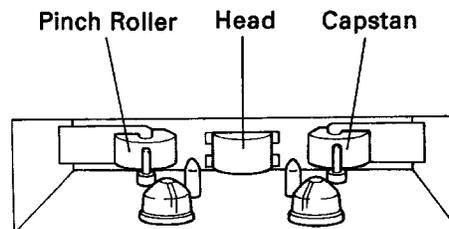
(CD Player)

Disc Cleaning

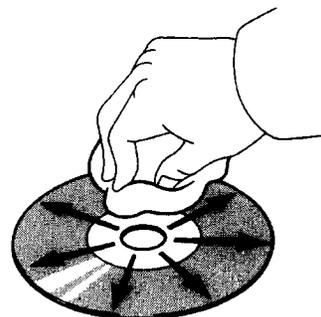
If the Disc gets dirty, clean the Disc by wiping the surfaces from the center to outside in the radial directions with a soft cloth.

NOTICE: Do not use a conventional record cleaner or anti-static record preservative.

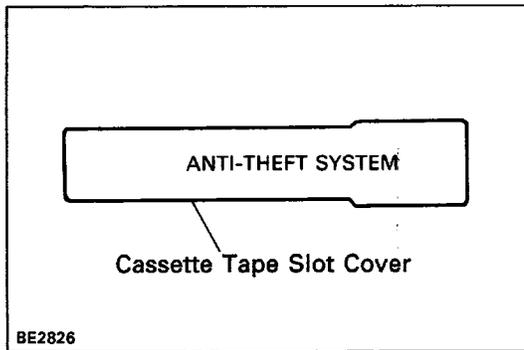
Example:



N02844



BE4331



ANTI-THEFT SYSTEM

The anti-theft system is only provided for audio systems equipped with an Acoustic Flavor function.

HINT: The words "ANTI-THEFT SYSTEM" are displayed on the cassette tape slot cover. For operation instructions for the anti-theft system, please consult the audio system section in the Owner's Manual.

SETTING SYSTEM

The system is in operation once the customer has pushed the required buttons and entered the customer-selected 3-digit ID number.

(Refer to the Owner's Manual "SETTING THE ANTI-THEFT SYSTEM")

HINT:

- When the audio system is shipped the ID number has not been input, so the anti-theft system is not in operation.
- If the ID number has not been input, the audio system remains the same as a normal audio system.

2. ANTI-THEFT SYSTEM OPERATION

If the normal electrical power source (connector or battery terminal) is cut off, the audio system becomes inoperable, even if the power supply resumes.

3. CANCELLING SYSTEM

The ID number chosen by the customer is input to cancel the anti-theft system.

(Refer to the Owner's Manual "IF THE SYSTEM IS ACTIVATED")

HINT: To change or cancel the ID number, please refer to the owner's Manual "CANCELLING THE SYSTEM".

TROUBLESHOOTING

NOTICE: when replacing the internal mechanism (ECU part) of the audio system, be careful that no part of your body or clothing comes in contact with the terminals of the leads from the IC, etc. of the replacement part (spare part).

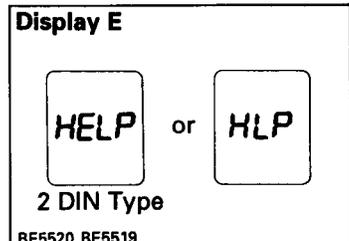
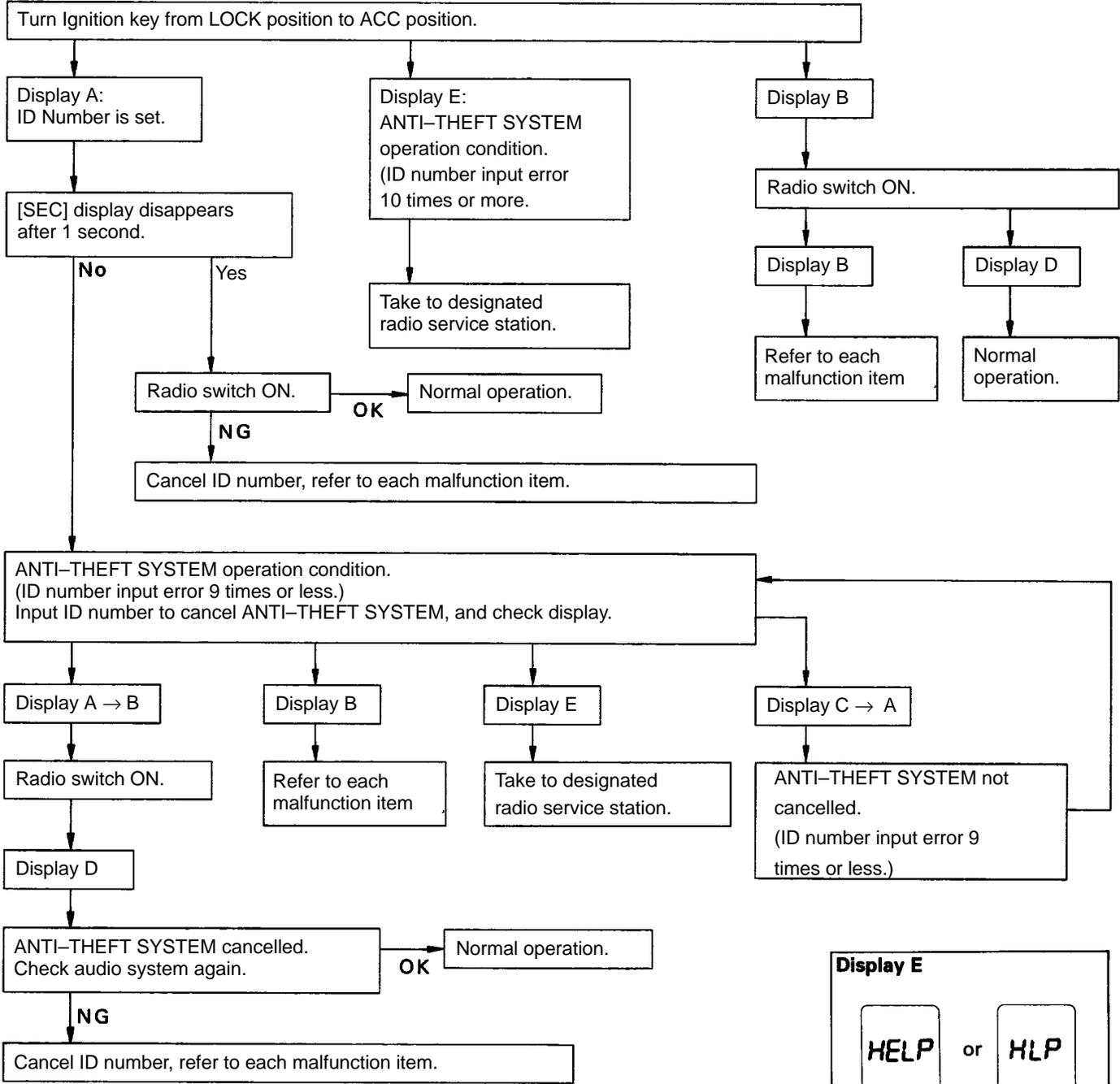
HINT: This inspection procedure is a simple troubleshooting which should be carried out on the vehicle during system operation and was prepared on the assumption of system component troubles (except for the wires and connectors, etc.)

Always inspect the trouble taking the following items into consideration.

- Open or short circuit of the wire harness
- Connector or terminal connection fault
- For audio systems with anti-theft system, troubleshooting items marked (*) indicate that "Troubleshooting for ANTI-THEFT SYSTEM" should be carried out first.

Problem		No.
Radio	No power coming in.	*1
	Power coming in, but radio not operating.	*2
	Noise present, but AM – FM not operating.	3
	Either speaker does not work.	4
	Either AM or FM does not work.	5
	Reception poor (Volume faint).	5
	Few preset tuning bands.	5
	Sound quality poor.	6
	Cannot set station select button.	7
	Preset memory disappears.	7
Tape Player	Cassette tape cannot be inserted.	8
	Cassette tape inserts, but no power.	*9
	Power coming in, but tape player not operating.	10
	Either speaker does not work.	11
	Sound quality poor (Volume faint).	12
	Tape jammed, malfunction with tape speed or auto-reverse.	13
	APS, SKIP, RPT buttons not operating.	14
	Cassette tape will not eject.	*15
CD Player	CD cannot be inserted.	16
	CD inserts, but no power.	17
	Power coming in, but CD player not operating.	18
	Sound jumps.	19
	Sound quality poor (Volume faint).	20
	Either speaker does not work.	21
	CD will not eject.	22
Antenna	Antenna – related.	23
Noise	Noise produced by vibration or shock while driving.	24
	Noise produced when engine starts.	25

TROUBLESHOOTING FOR ANTI-THEFT SYSTEM



(Liquid Crystal Display (LCD) for Audio System)

<p>Display A</p> <p>2 DIN Type BE2810</p>	<p>Display B</p> <p>Blank, No Illumination 2 DIN Type BE2811</p>	<p>Display C</p> <p>Error Times 2 DIN Type BE2812</p>	<p>Display D Example:</p> <p>Radio Display 2 DIN Type BE2813</p>
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HINT:

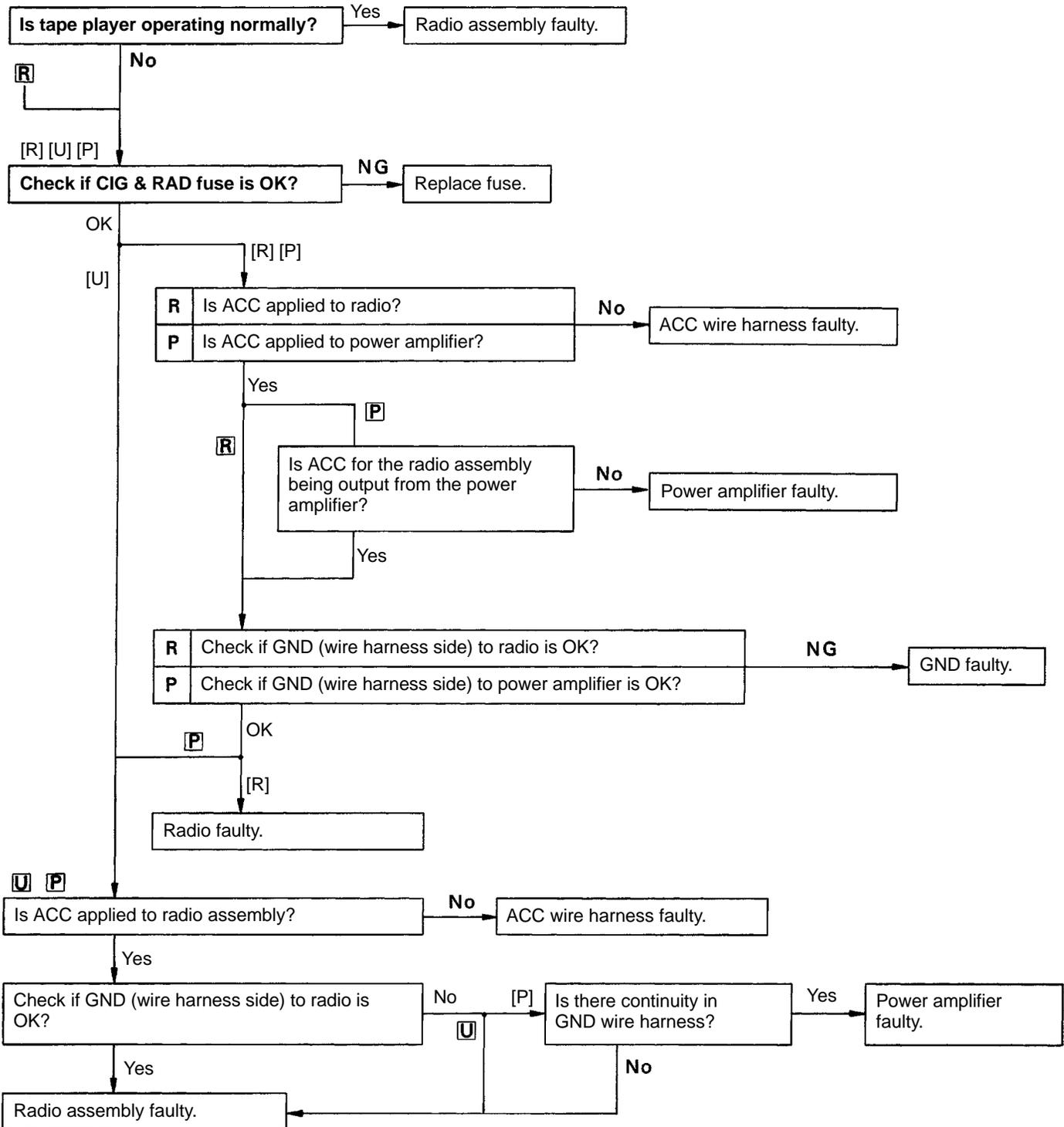
- Refer to Owner's Manual for operation details of ANTI-THEFT SYSTEM.
- When the ID number has been cancelled, reset the same number after completing the operation, or inform the customer that it has been cancelled.

1 Radio NO POWER COMING IN

[R] : Radio [U] : Radio – Tape Player Unit (Built-in Power Amplifier)

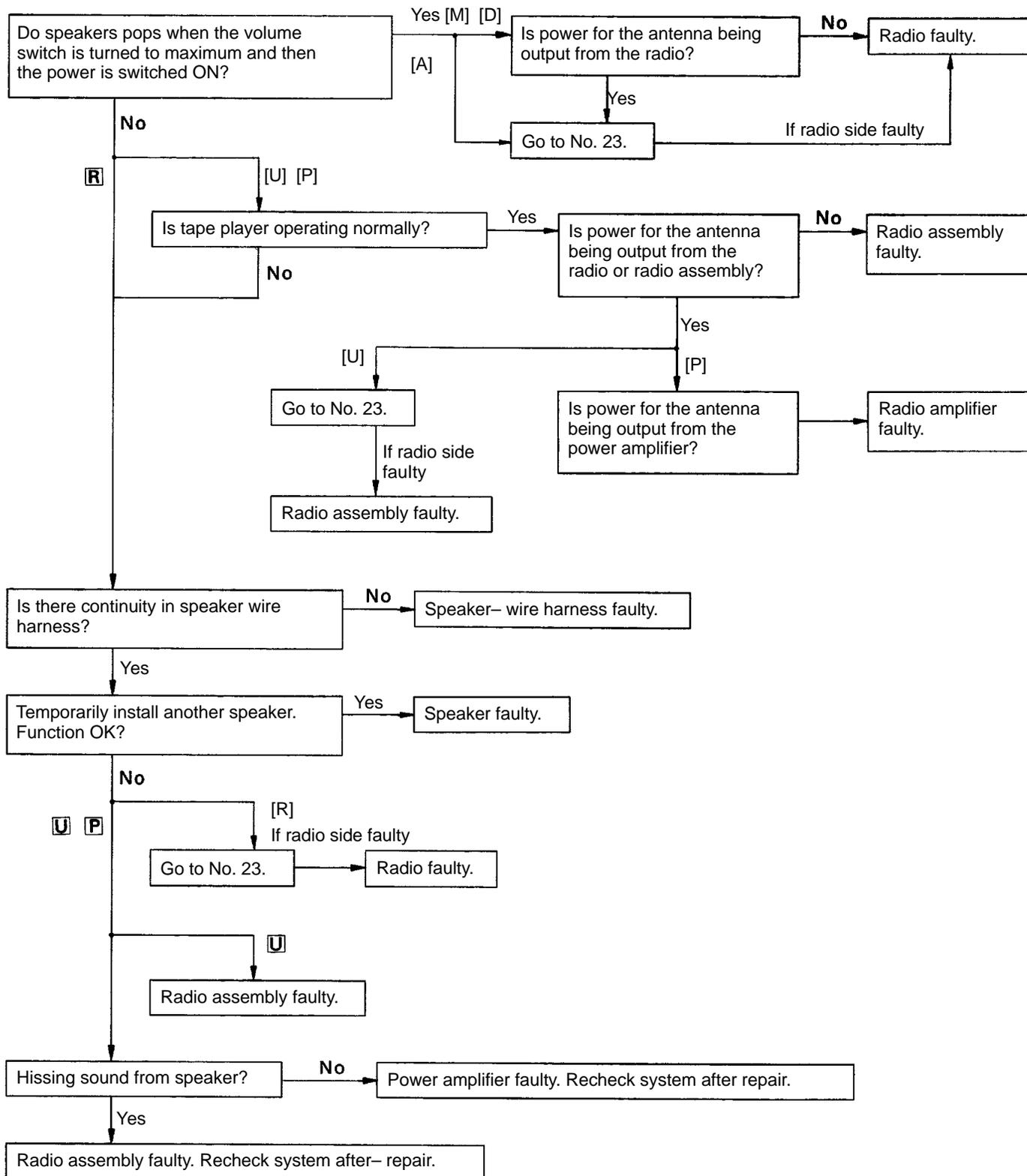
[P] : Radio – Tape Player Unit (Separate Power Amplifier)

[U] [P]



2	Radio	POWER COMING IN, BUT RADIO NOT OPERATING
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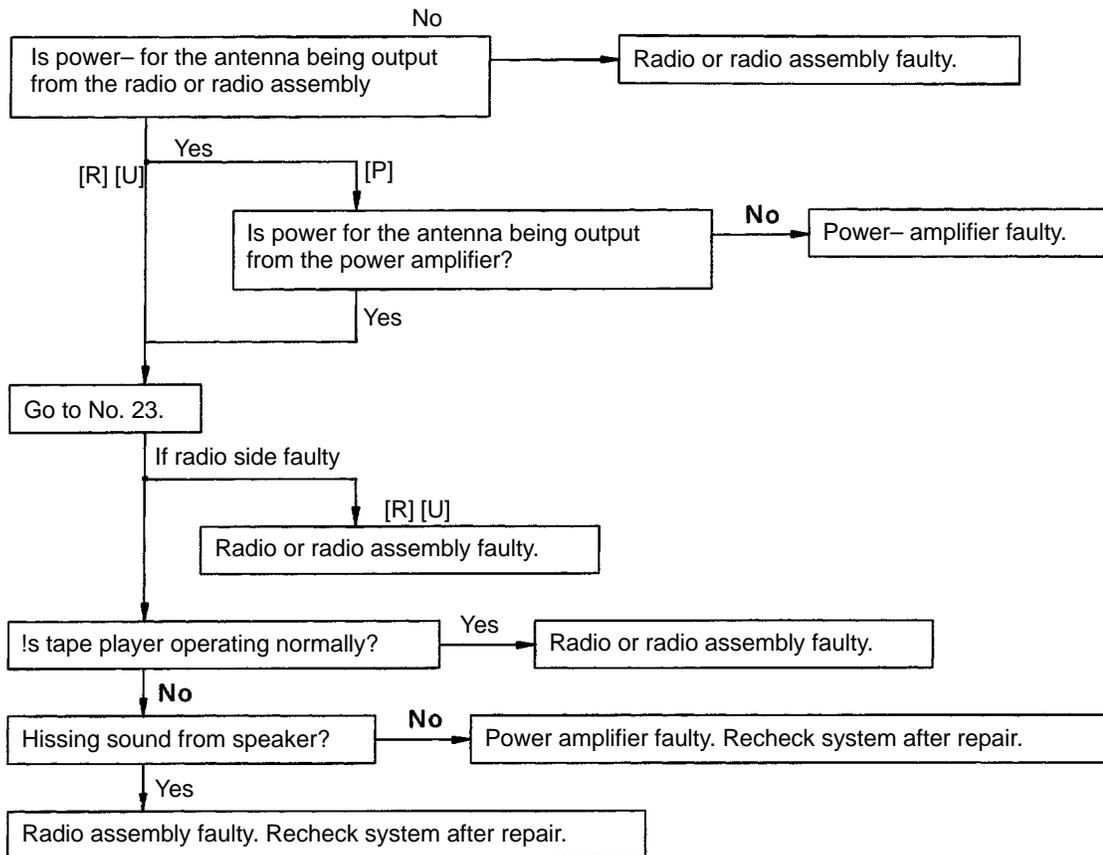
- R** : Radio **U** : Radio – Tape Player Unit (Built-in Power Amplifier)
P : Radio – Tape Player Unit (Separate Power Amplifier)
A : Antenna w/o Motor **M** : Motor Antenna **D**: Motor Antenna and Glass Printed Antenna



3 Radio NOISE PRESENT, BUT AM-FM NOT OPERATING

[R]: Radio [U] : Radio – Tape Player Unit (Built-in Power Amplifier)

[P] : Radio – Tape Player Unit (Separate Power Amplifier)

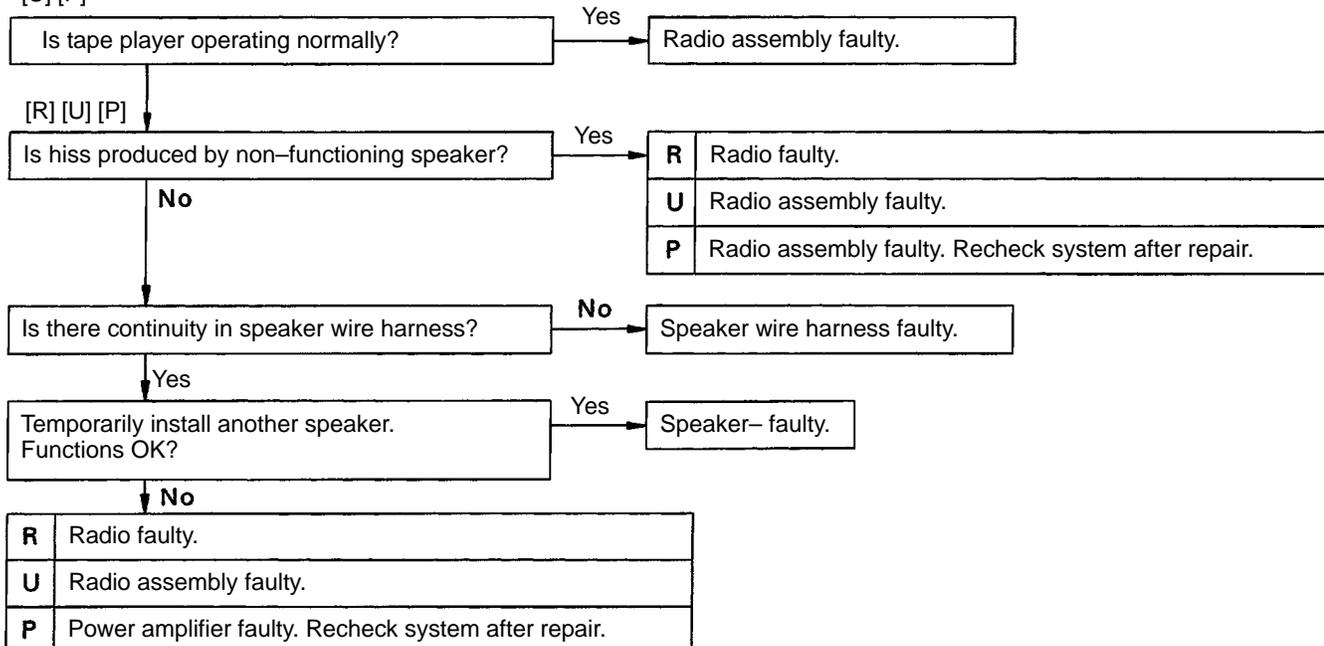


4 Radio EITHER SPEAKER DOES NOT WORK

[R] : Radio [U] : Radio – Tape Player Unit (Built-in Power Amplifier)

[P] : Radio – Tape Player Unit (Separate Power Amplifier)

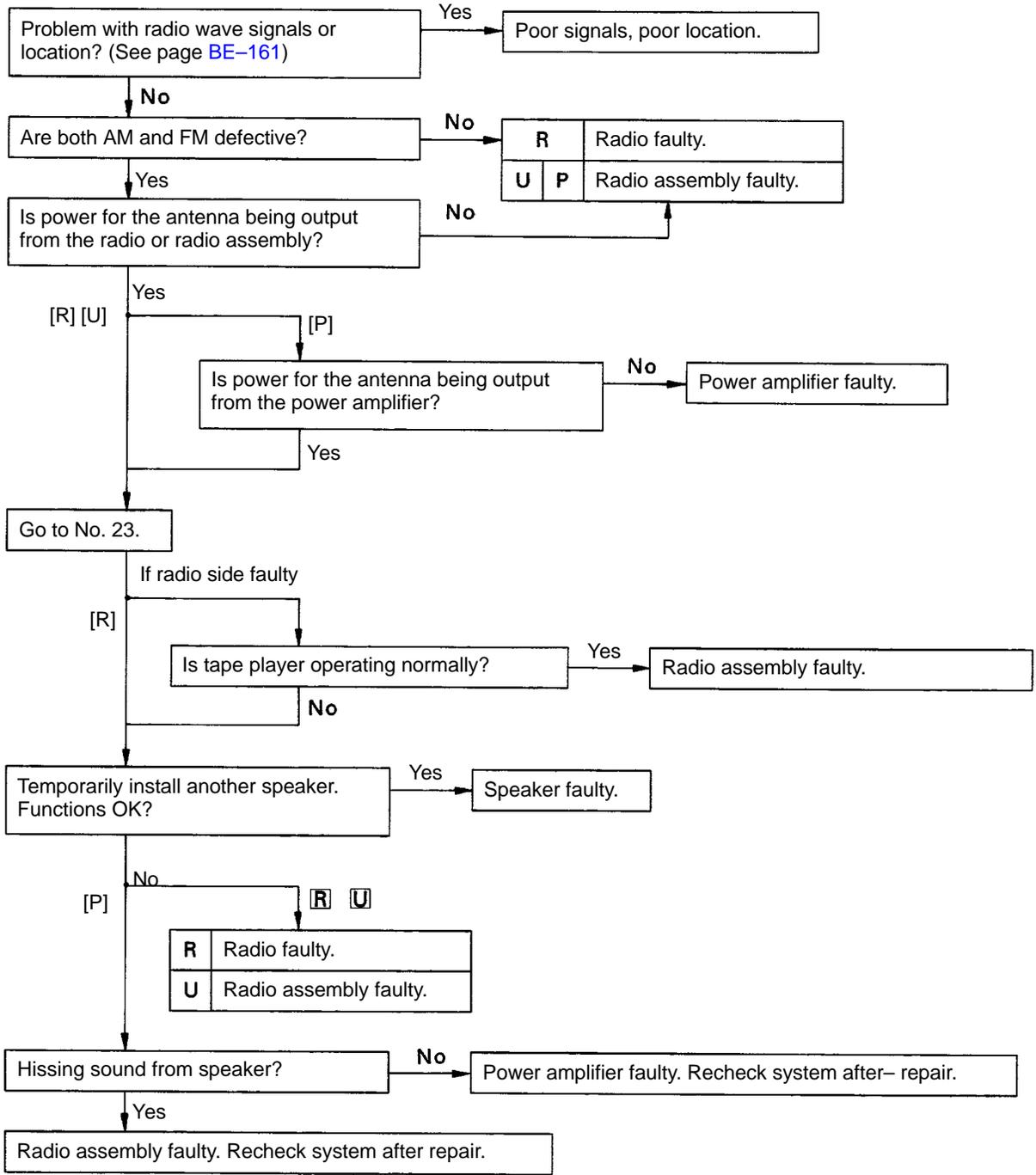
[U] [P]



5	Radio	EITHER AM OR FM DOES NOT WORK, RECEPTION POOR (VOLUME FAINT), FEW PRESET TUNING BANDS
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[R]: Radio [U] : Radio – Tape Player Unit (Built-in Power Amplifier)

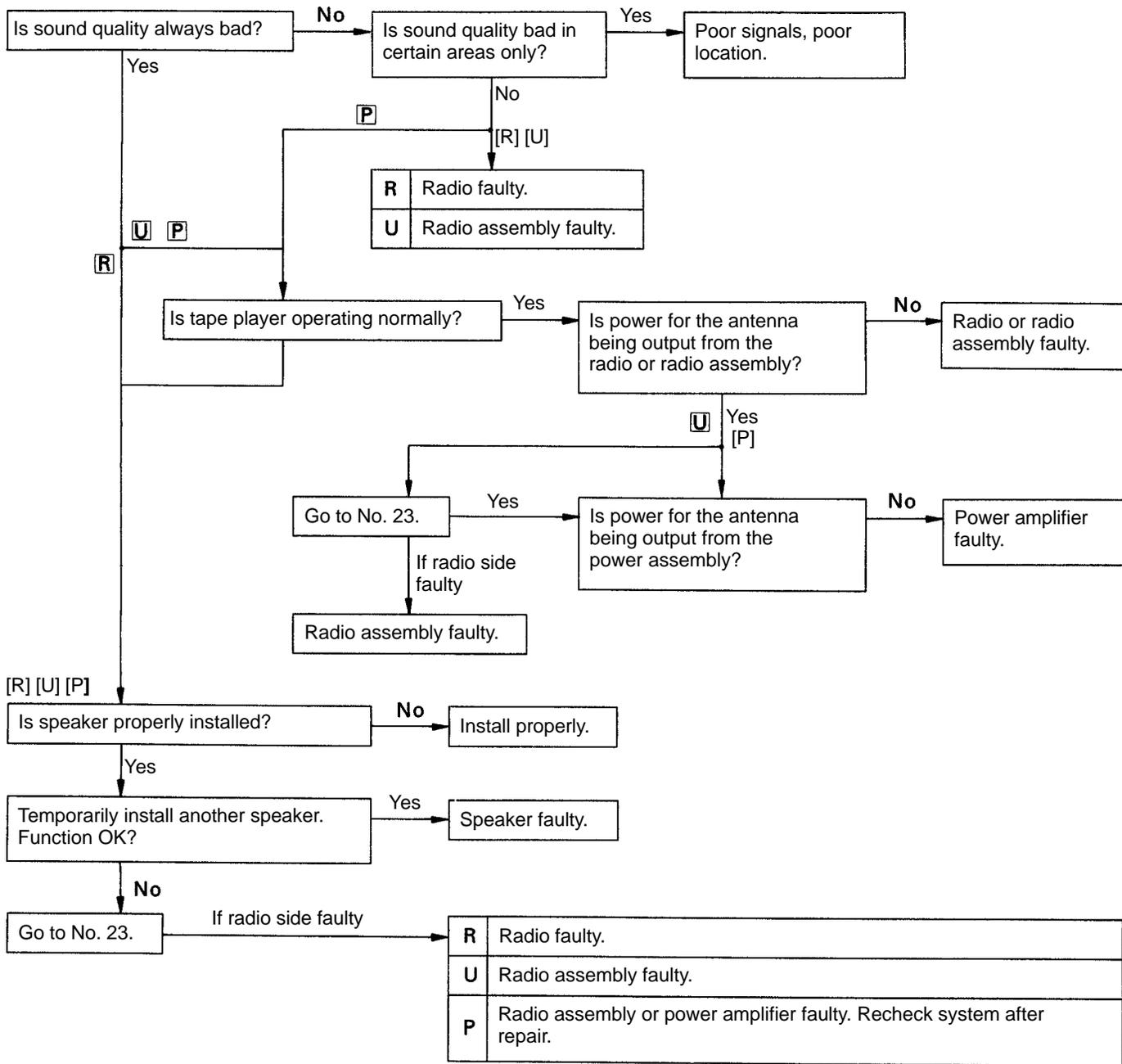
[P]: Radio – Tape Player Unit (Separate Power Amplifier)



6	Radio	SOUND QUALITY POOR
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[R]: Radio [U] : Radio – Tape Player Unit (Built-in Power Amplifier)

[P]: Radio – Tape Player Unit (Separate Power Amplifier)

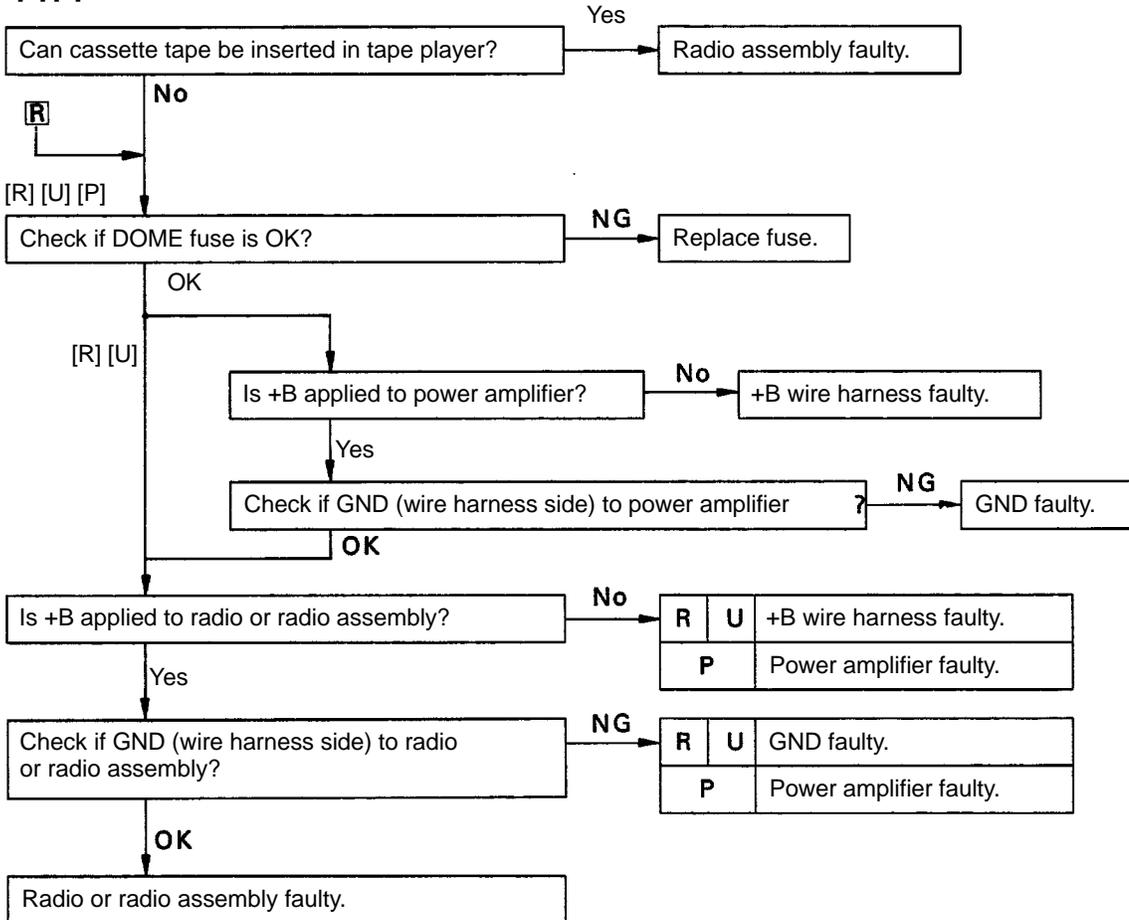


7	Radio	CANNOT SET STATION SELECT BUTTON, PRESET MEMORY DISAPPEARS
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[R] : Radio [U] : Radio – Tape Player Unit (Built-in Power Amplifier)

[P] : Radio – Tape Player Unit (Separate Power Amplifier)

[U] [P]

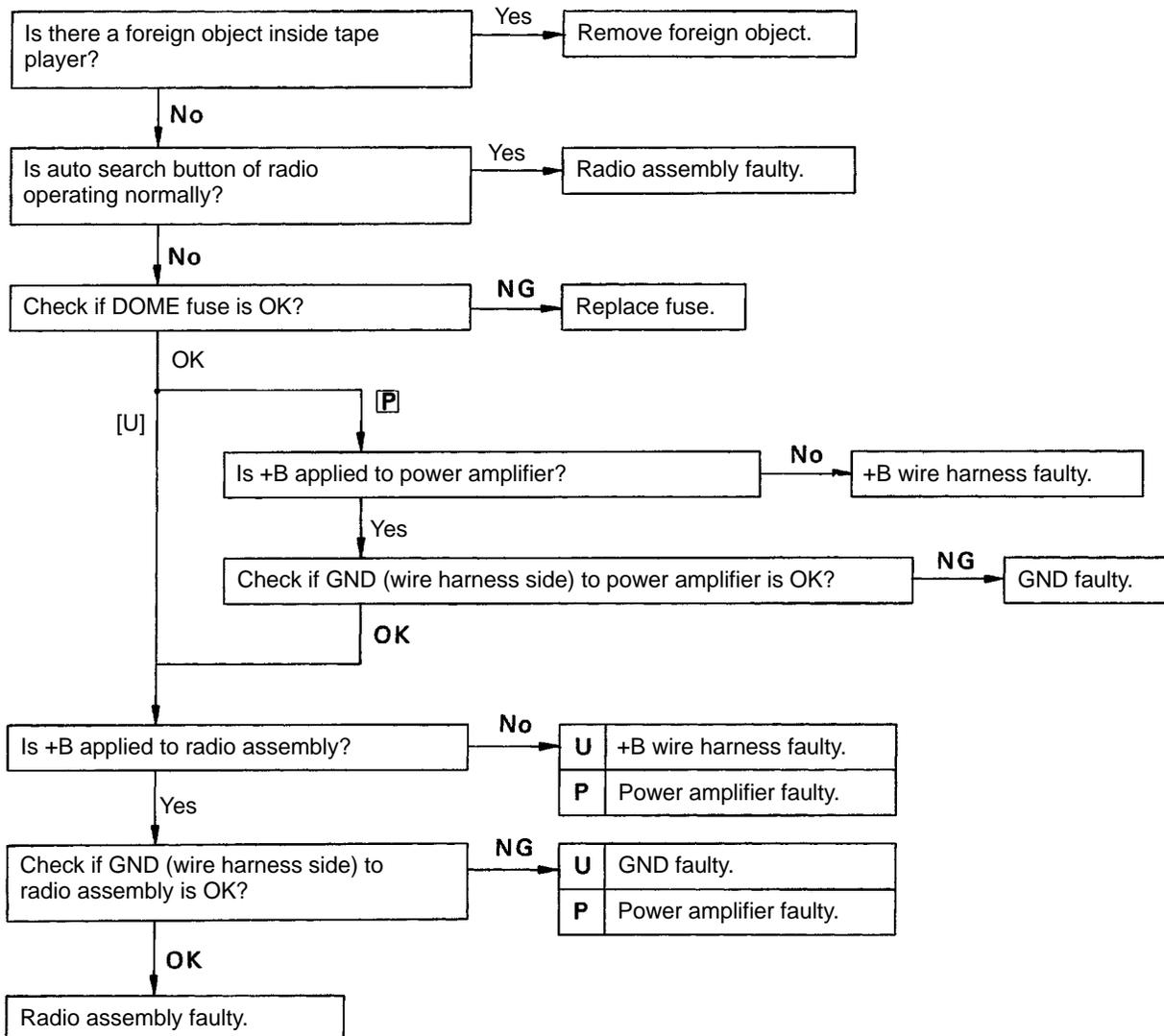


8 Tape Player CASSETTE TAPE CANNOT BE INSERTED

[U] : Radio - Tape Player Unit (Built-in Power Amplifier)

[P] : Radio - Tape Player Unit (Separate Power Amplifier)

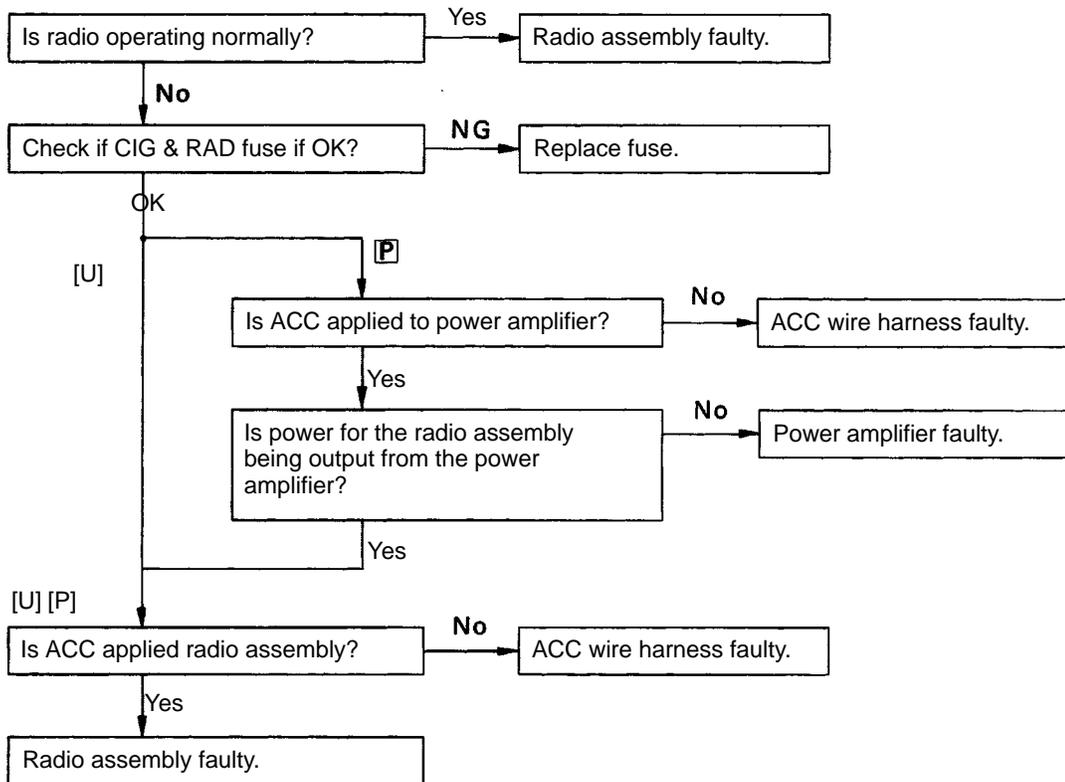
[U] [P]



9 Tape Player CASSETTE TAPE INSERTS, BUT NO POWER

[U] : Radio – Tape Player Unit (Built-in Power Amplifier)

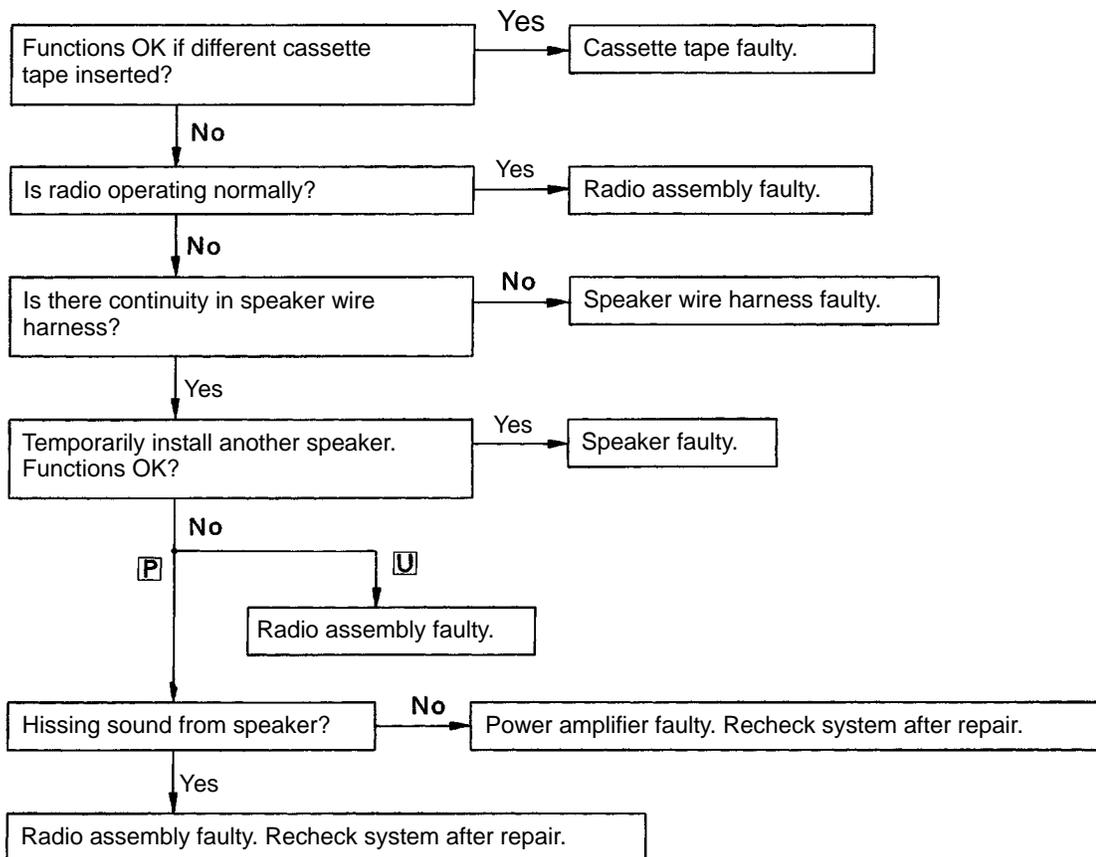
[P] : Radio – Tape Player, Unit (Separate Power Amplifier)



10 Tape Player POWER COMING IN, BUT TAPE PLAYER NOT OPERATING

[U] Radio – Tape Player Unit (Built-in Power Amplifier)

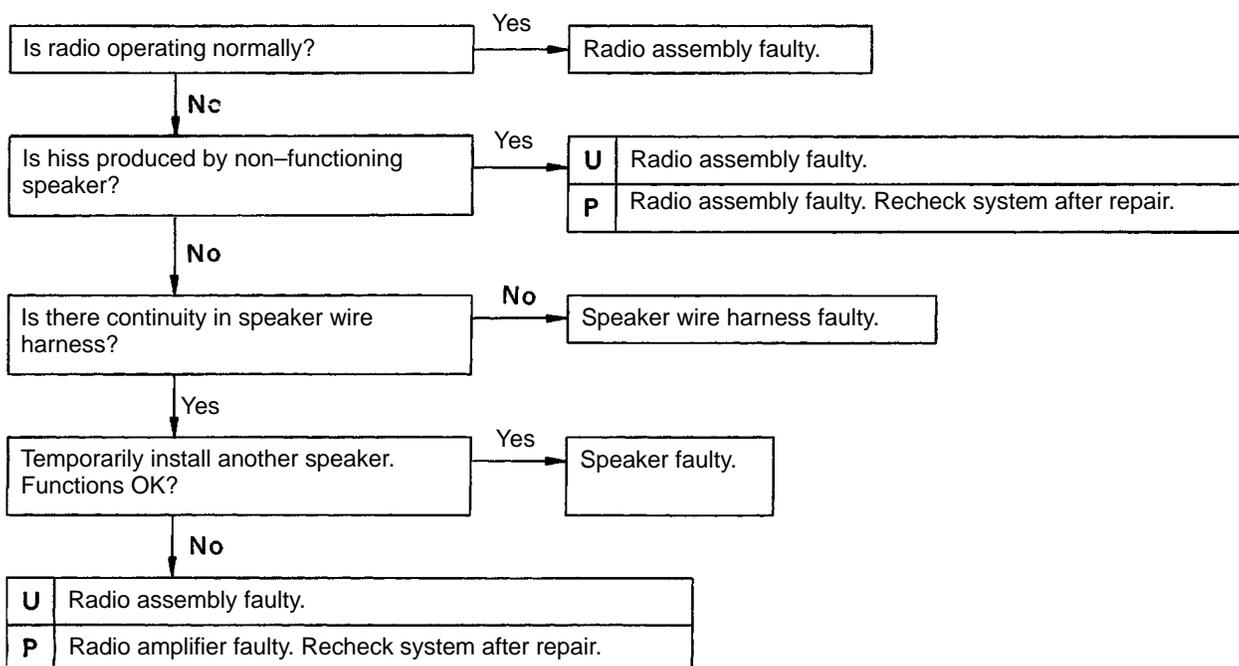
[P]: Radio – Tape Player Unit (Separate Power Amplifier)



11 Tape Player EITHER SPEAKER DOES NOT WORK

[U] : Radio – Tape Player Unit (Built-in Power Amplifier)

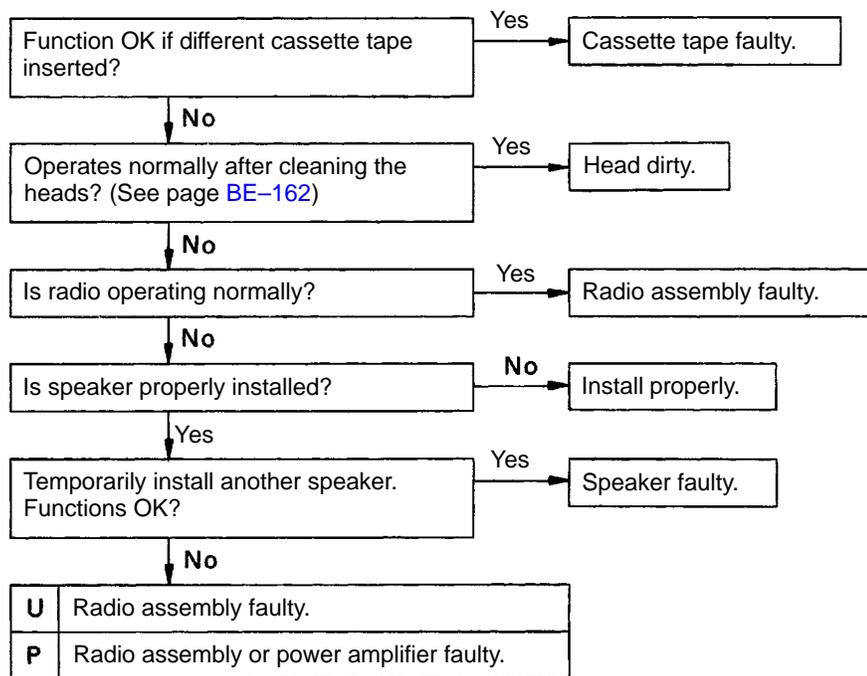
[P] : Radio – Tape Player Unit (Separate Power Amplifier)



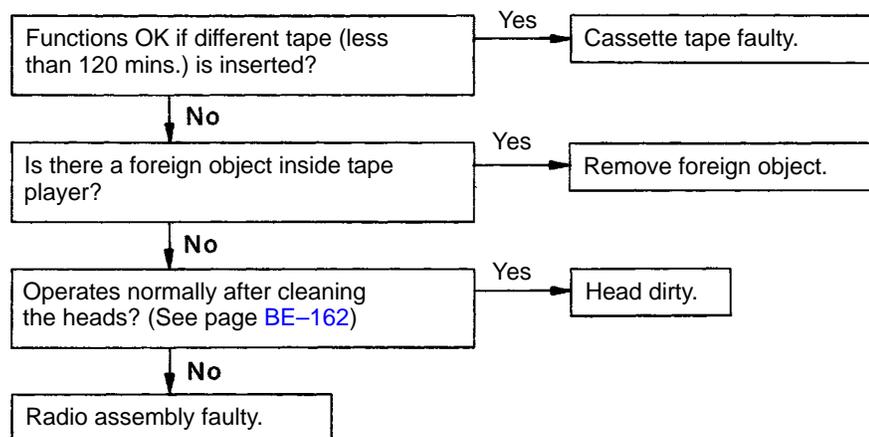
12 Tape Player SOUND QUALITY POOR (VOLUME PAINT)

[U]: Radio – Tape Player Unit (Built-in Power Amplifier)

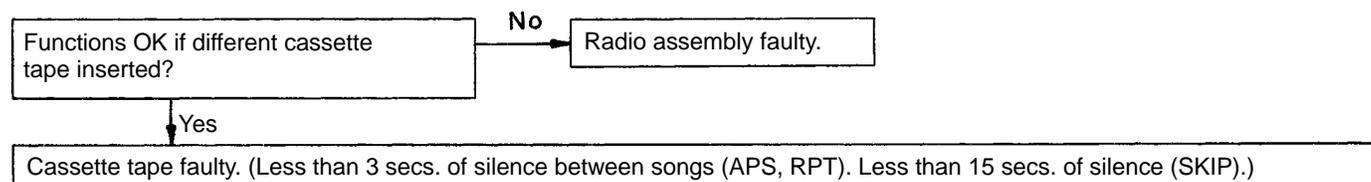
[P] : Radio – Tape Player Unit (Separate Power Amplifier)



13 Tape Player TAPE JAMMED, MALFUNCTION WITH TAPE SPEED OR AUTO-REVERSE



14 Tape Player APS, SKIP, RPT BUTTONS NOT OPERATING

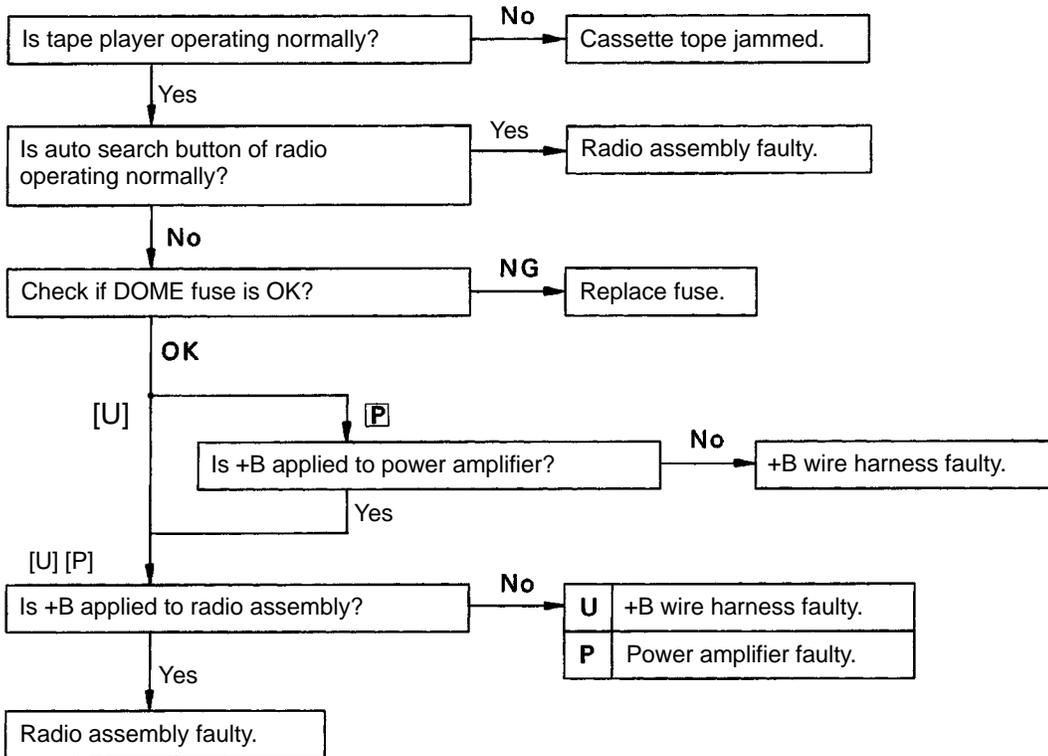


[U] [P]

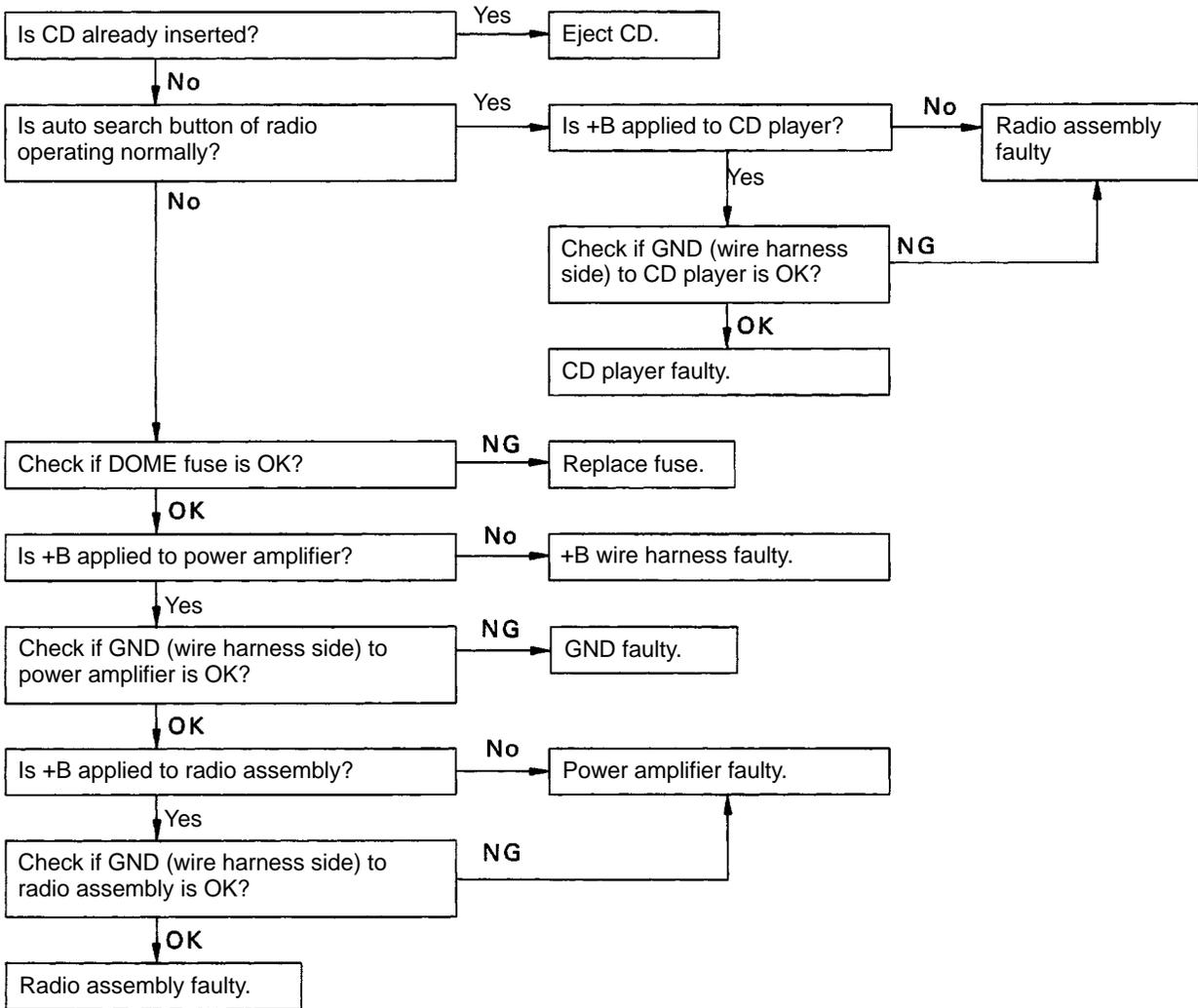
15 Tape Player CASSETTE TAPE WILL NOT EJECT

[U] : Radio – Tape Player Unit (Built-in Power Amplifier)

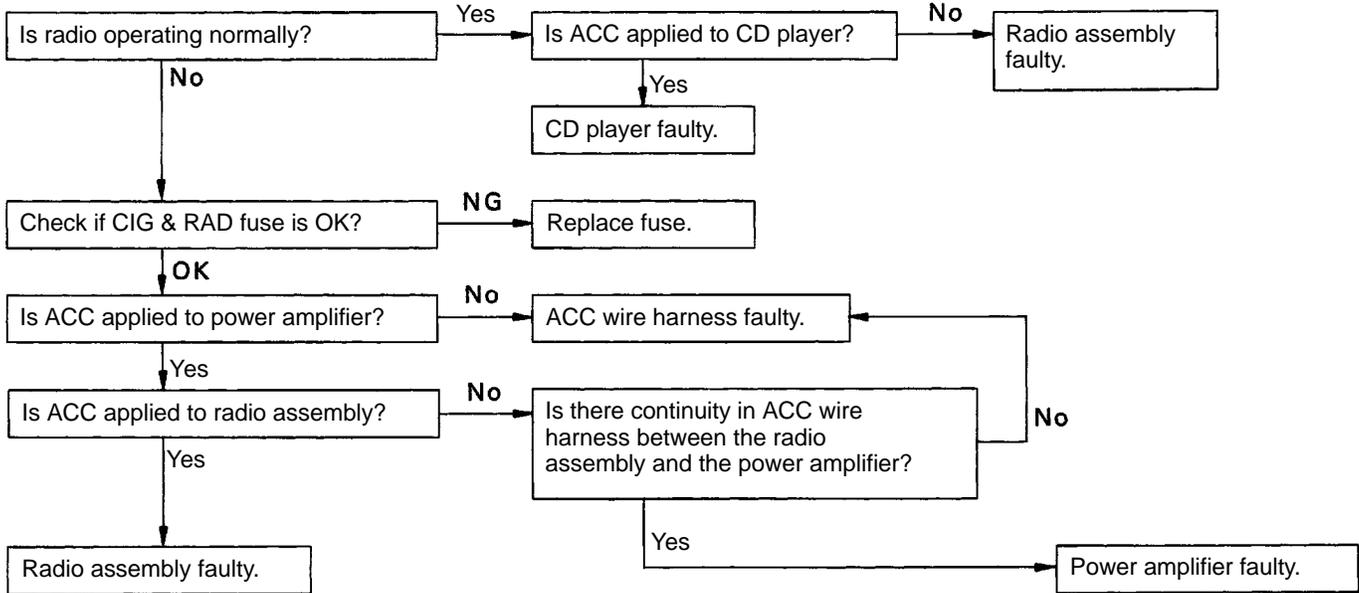
[P] : Radio – Tape Player Unit (Separate Power Amplifier)



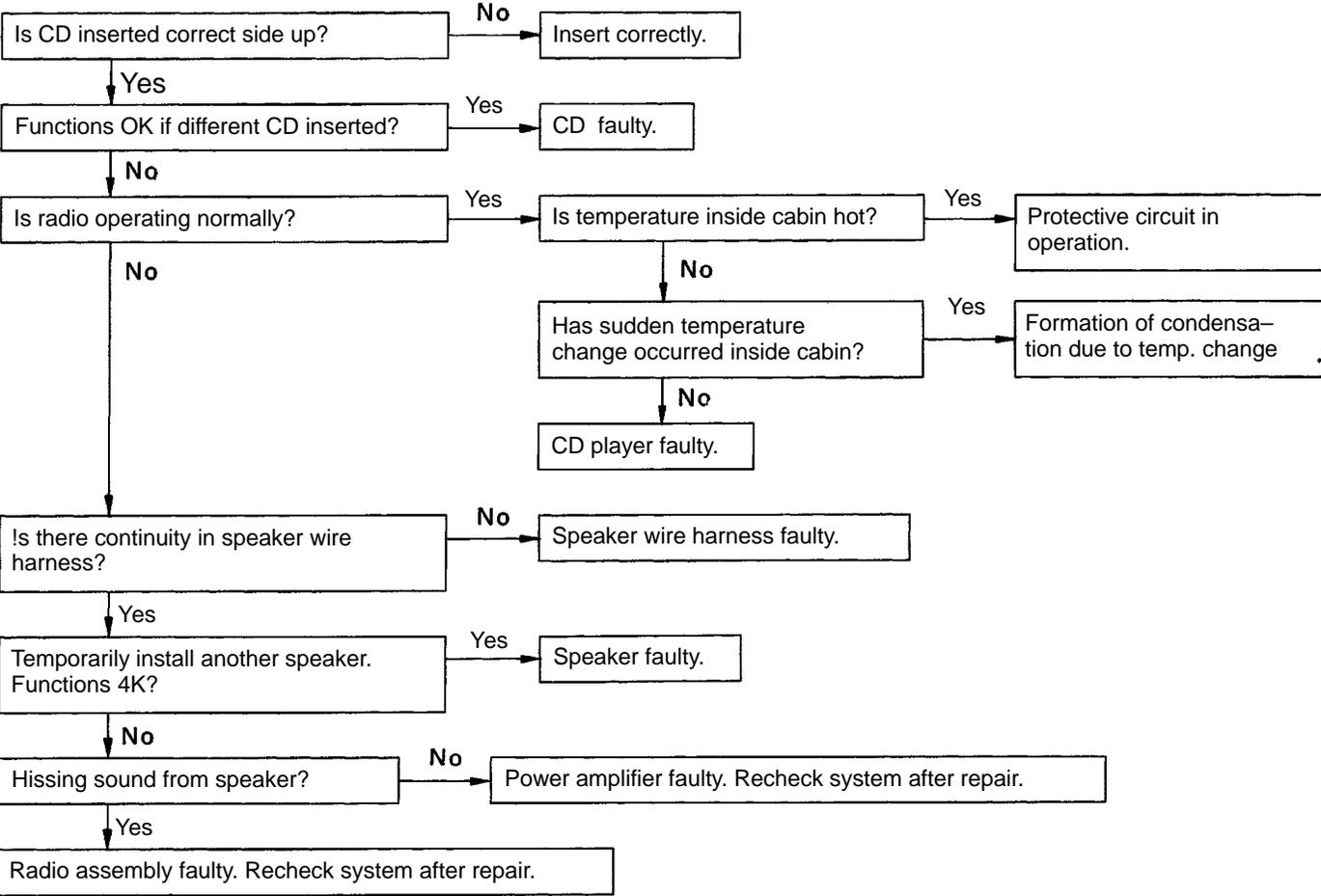
16 CD Player CD CANNOT BE INSERTED



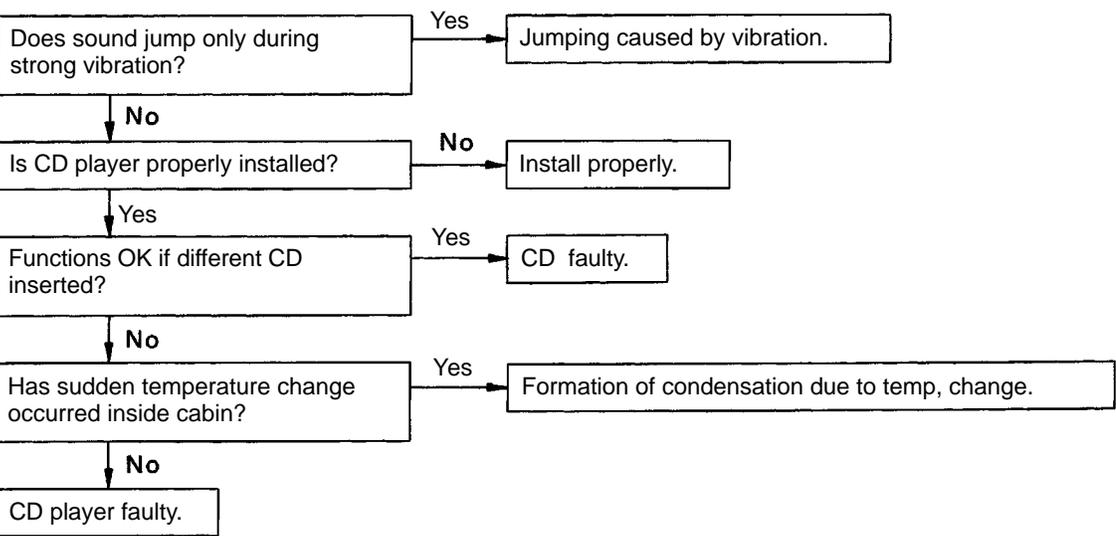
17 CD Player CD INSERTS, BUT NO POWER



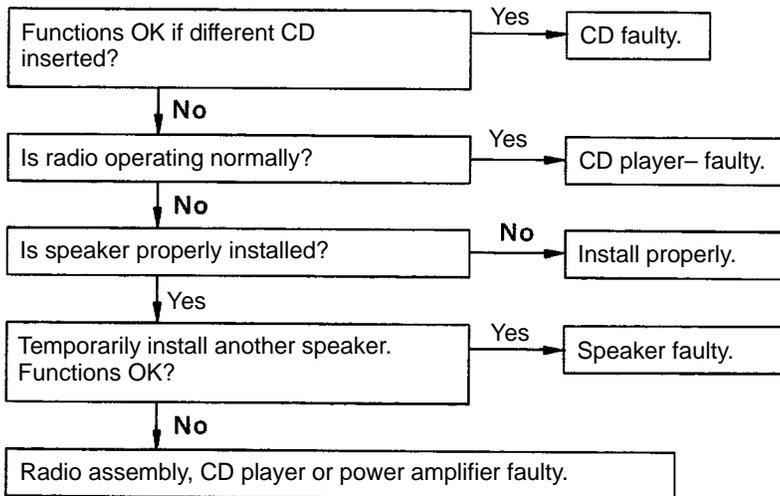
18 CD Player POWER COMING IN, BUT CD PLAYER NOT OPERATING



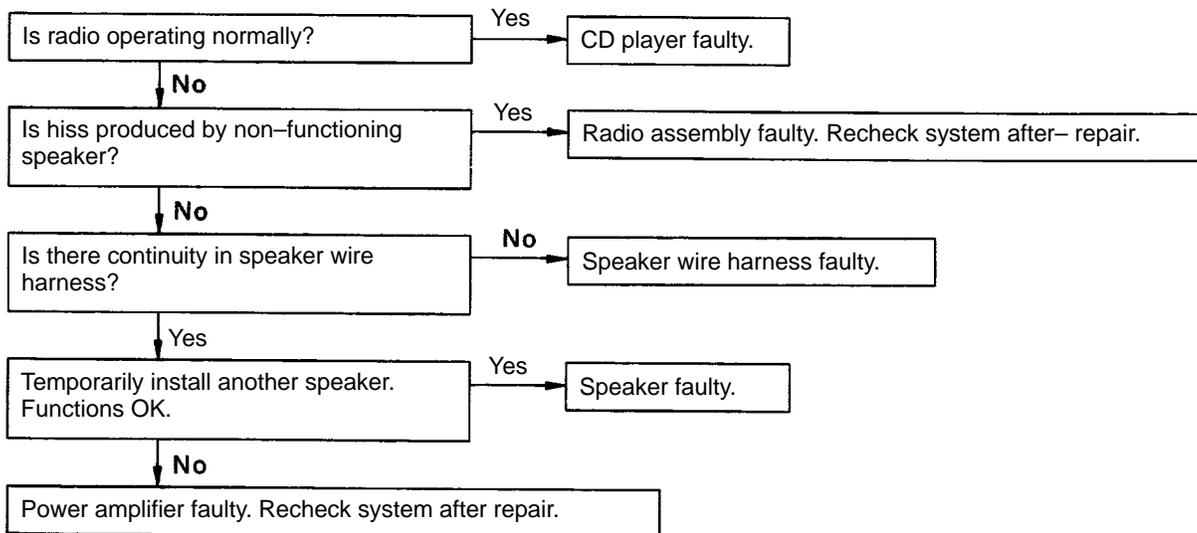
19 CD Player SOUND JUMPS



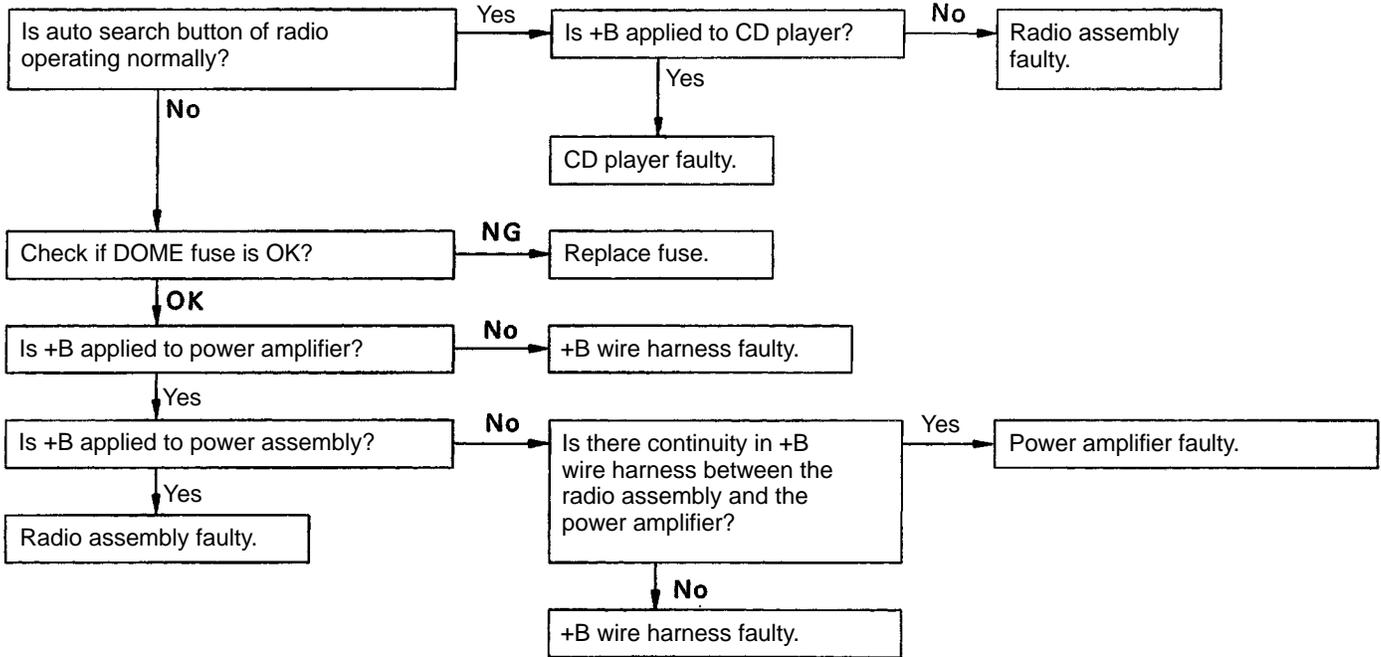
20	CD Player	SOUND QUALITY POOR (VOLUME FAINT)
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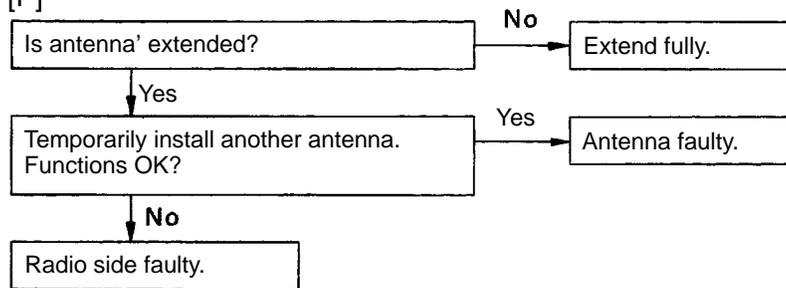
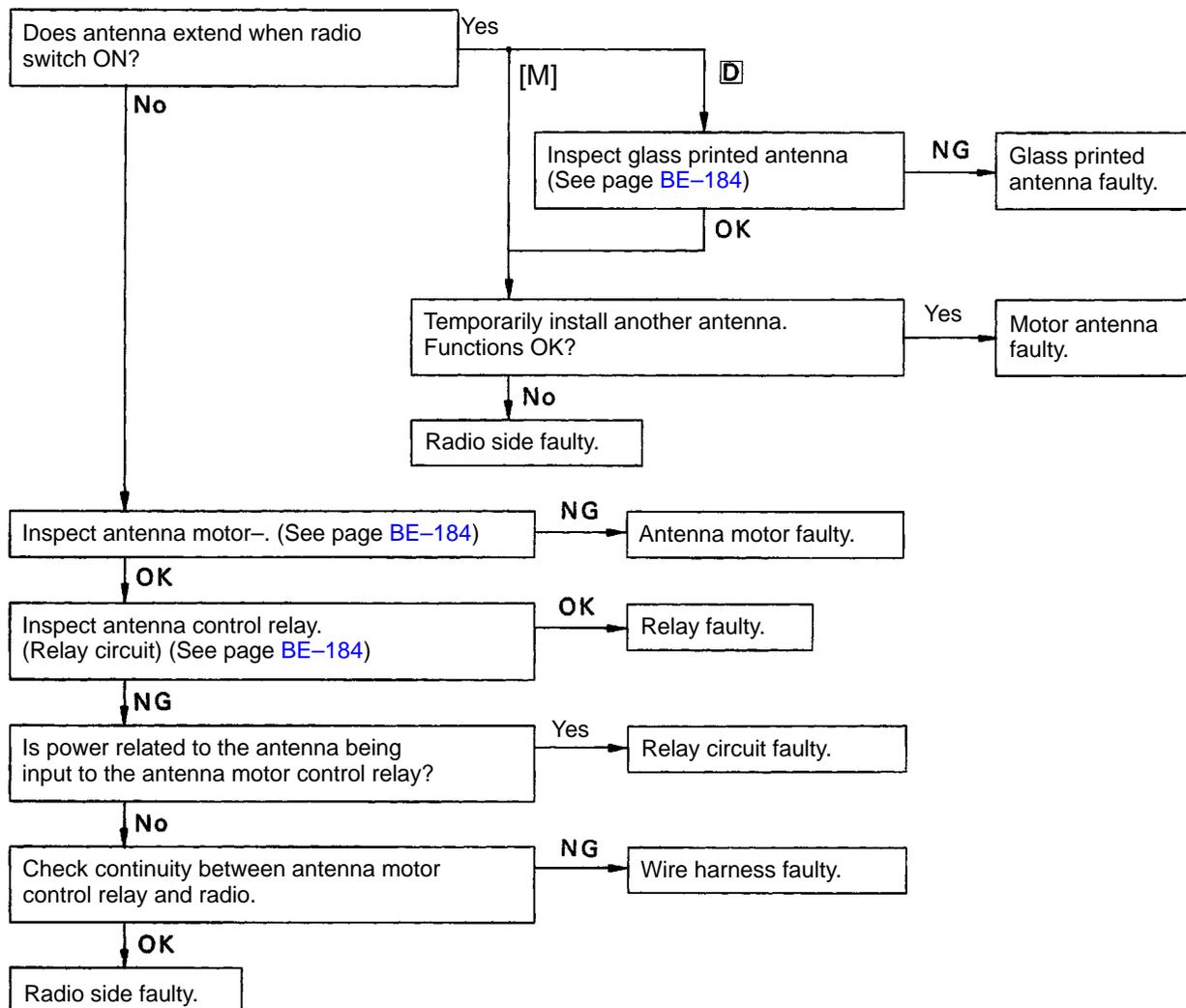


21	CD Player	EITHER SPEAKER DOES NOT WORK
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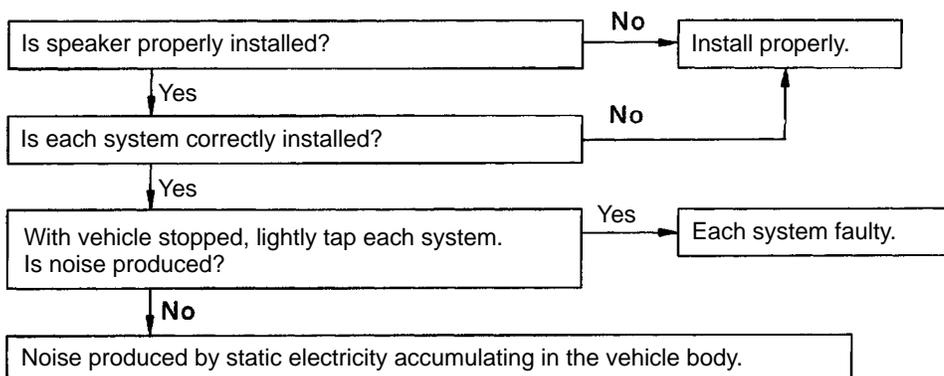


22 CD Player CD WILL NOT EJECT

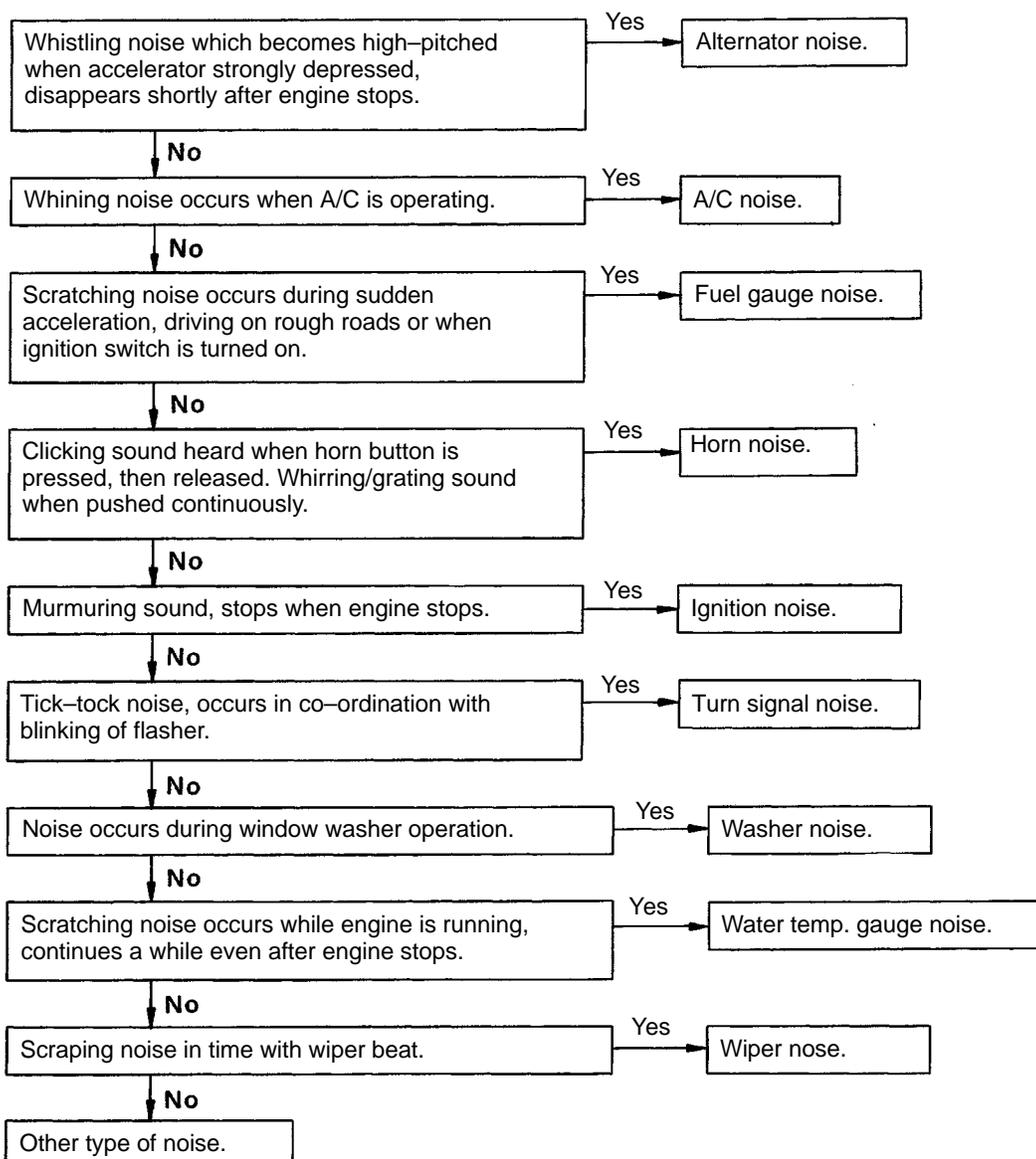


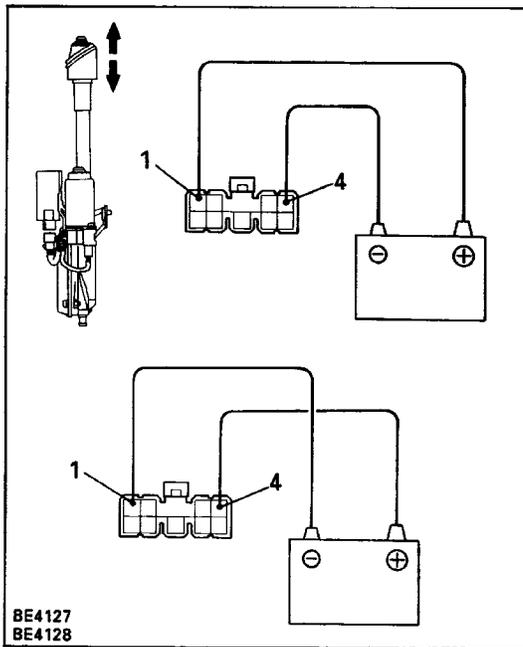
23**Antenna****ANTENNA-RELATED****[P]** : Antenna w/o Motor**[M]** : Motor Antenna**[D]** : Motor Antenna and Glass Printed Antenna**[P]****[M]** **[D]**

24	Noise	NOISE PRODUCED BY VIBRATION OR SHOCK WHILE DRIVING
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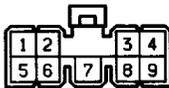


25	Noise	NOISE PRODUCED WHEN ENGINE STARTS
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Wire Harness Side



G-9-1

ANTENNA MOTOR**ANTENNA MOTOR INSPECTION****INSPECT ANTENNA MOTOR**

(a) Connect the positive (+) lead from the battery to terminal 1 and the negative (-) lead to terminal 4.

(b) Check that the motor turns (moves upward).

NOTICE: These tests must be performed quickly (within 3–5 seconds) to prevent the coil from burning out.

(c) Then, reverse the polarity, check that the motor turns the opposite way (moves downward).

NOTICE: These tests must be performed quickly (within 3–5 seconds) to prevent the coil from burning out.

If operation is not as specified, replace the motor.

**ANTENNA MOTOR CONTROL RELAY
ANTENNA MOTOR CONTROL RELAY
INSPECTION****RELAY CIRCUIT**

Disconnect the connector from the relay and inspect the connector on wire harness side as shown in the chart.

Check for	Tester connection	Condition		Specified value	
Continuity	1–4	Constant		Continuity	
	2 – Ground	Constant		Continuity	
Voltage	3 – Ground	Constant		Battery voltage	
	5 – Ground	Ignition switch position	LOCK	No voltage	
			ACC or ON	Battery voltage	
	6 – Ground	Ignition switch position	LOCK	No voltage	
			ACC or ON	Radio switch and cassette OFF	No voltage
				Radio switch or cassette ON	Battery voltage
	8 – Ground	Ignition switch position	LOCK	No voltage	
			ACC or ON	Radio switch OFF or cassette ON	No voltage
				Radio switch ON and cassette OFF	Battery voltage
9 – Ground	Ignition switch position	LOCK or ACC	No voltage		
		ON	Battery voltage		

If circuit is as specified, replace the relay.

GLASS PRINTED ANTENNA**GLASS PRINTED ANTENNA INSPECTION****INSPECT GLASS PRINTED ANTENNA**

(Use same procedure as for "INSPECT DEFOGGER WIRES" or page [BE-87](#).)

REPAIR GLASS PRINTED ANTENNA

(Use same procedure as for "REPAIR DEFOGGER WIRES" or page [BE-87](#))