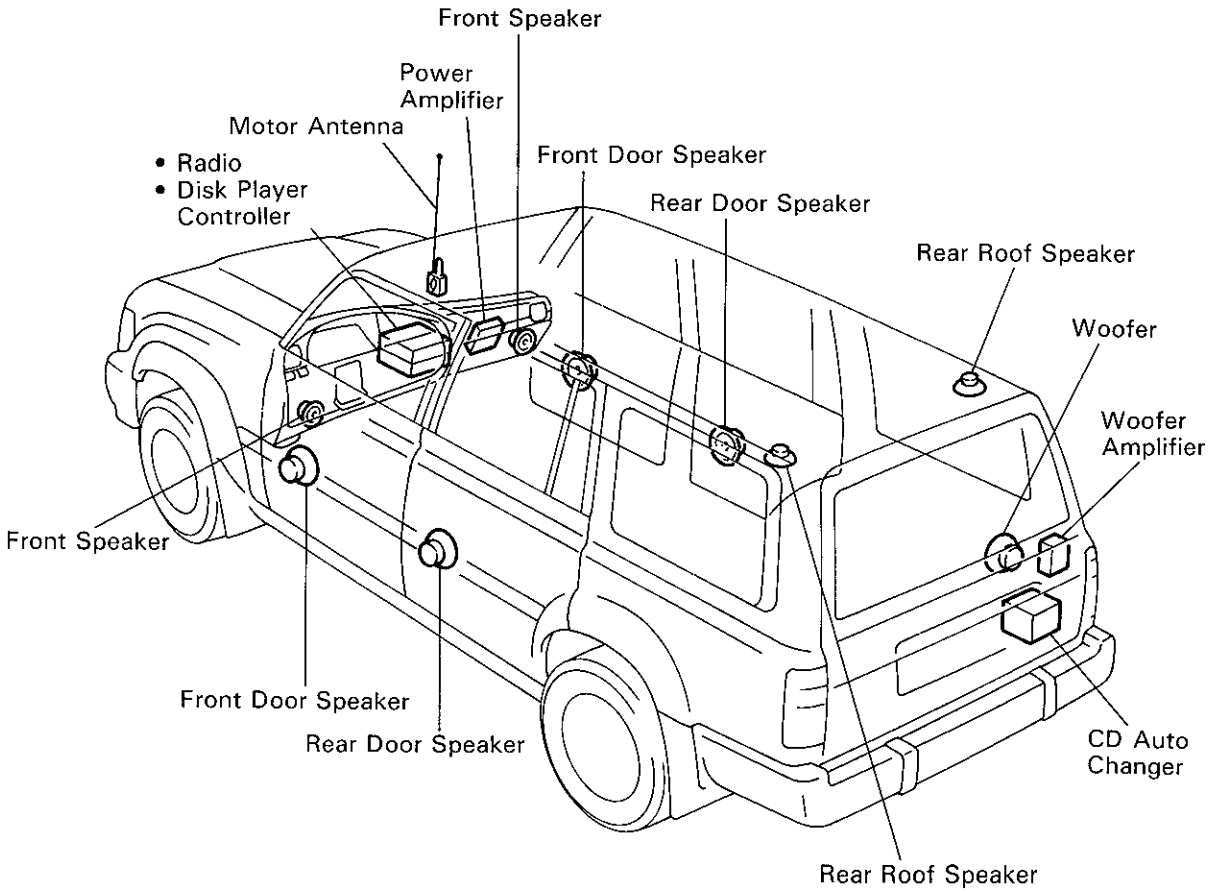
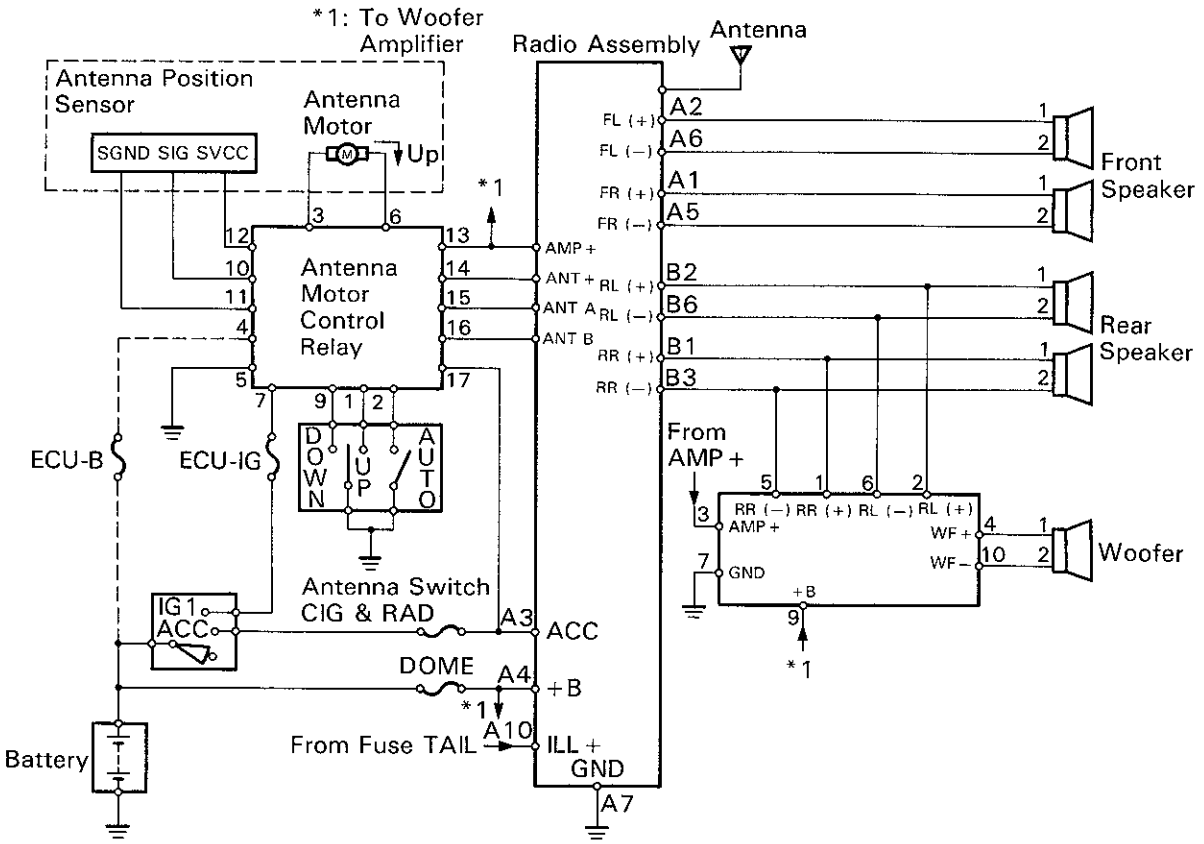
AUDIO SYSTEM

Parts Location



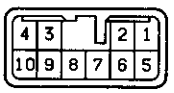
N04083

Radio-Tape Player, 5 Speaker, w/Radio Linked Motor Antenna: Symbol U

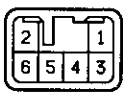


The POWER SOURCE CIRCUIT has been simplified. For full details, see pub. No. RM184E, pages BE-10,11.

Radio Assembly Connector "A"



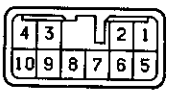
Connector "B"



Connector "C"



Woofer Amplifier



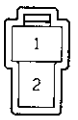
Front Speaker



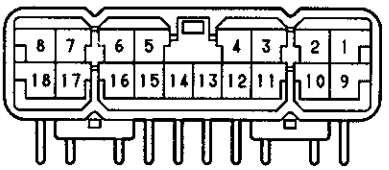
Rear Speaker



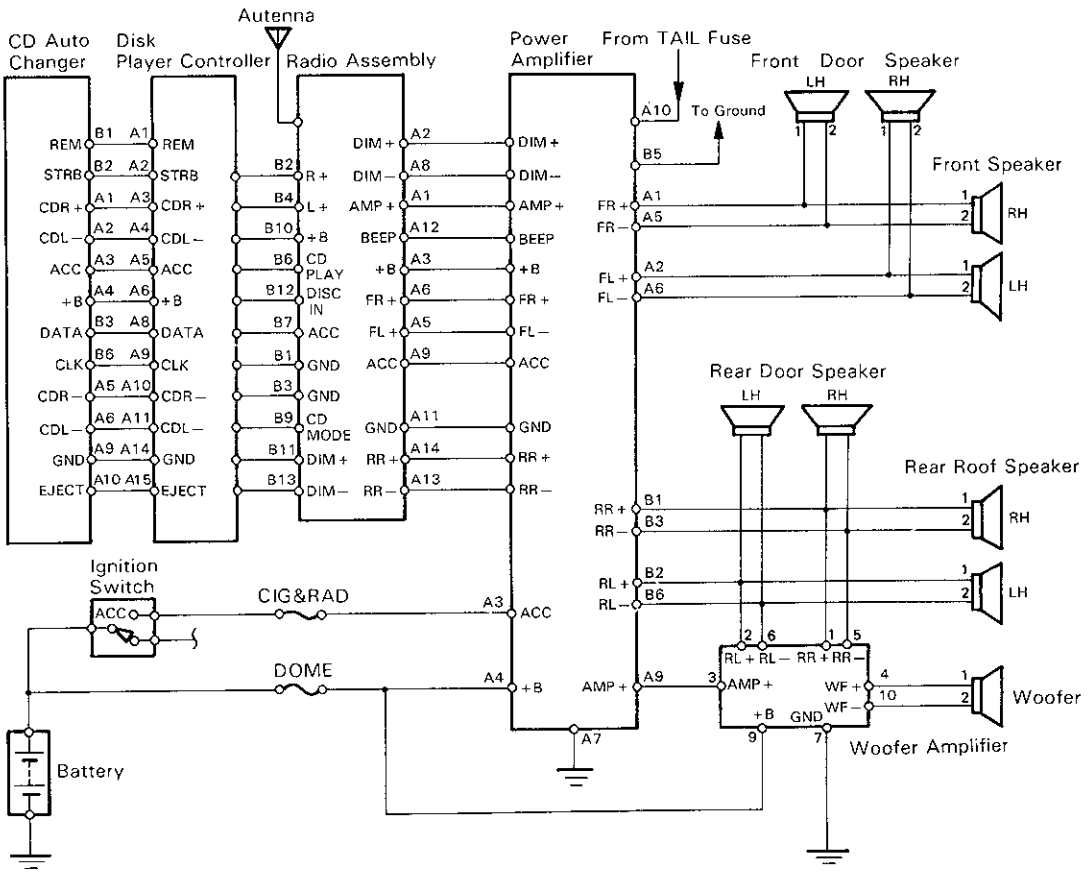
Woofer



Antenna Motor Control Relay

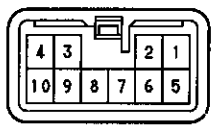


Radio-Tape Player, 9 Speaker + CD Auto Changer: Symbol A

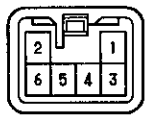


The POWER SOURCE CIRCUIT has been simplified. For full details, see pub. No.RM184E, page BE-10,11.

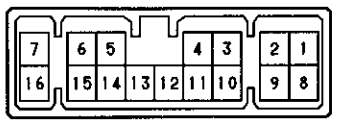
CD Auto Changer
Connector "A"



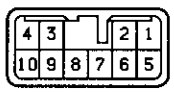
Connector "B"



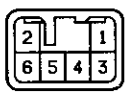
Disk Player Controller
Connector "A"



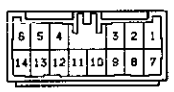
Power Amplifier
Connector "A"



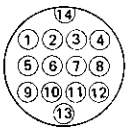
Connector "B"



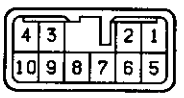
Radio Assembly
Connector "A"



Connector "B"



Woofer Amplifier



Front Speaker



Front Door Speaker



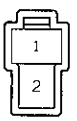
Rear Door Speaker



Rear Roof Speaker

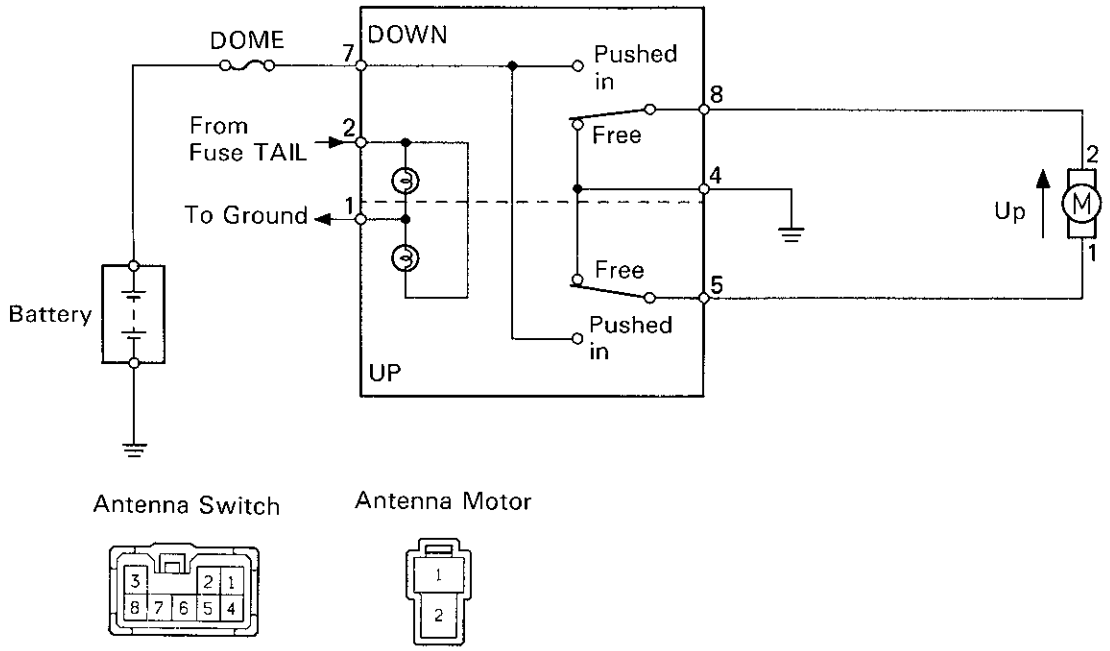


Woofer



N04085
Ie-10-2 Ie-6-2-A S-16-2-A
S-10-2-A S-6-2-E Y-14-2 BE3309 S-10-2-A
T-2-2 IS-2-2-B IS-2-2-B GA-2-2-C H-2-2

Motor Antenna
(w/o AUTO Switch Type)

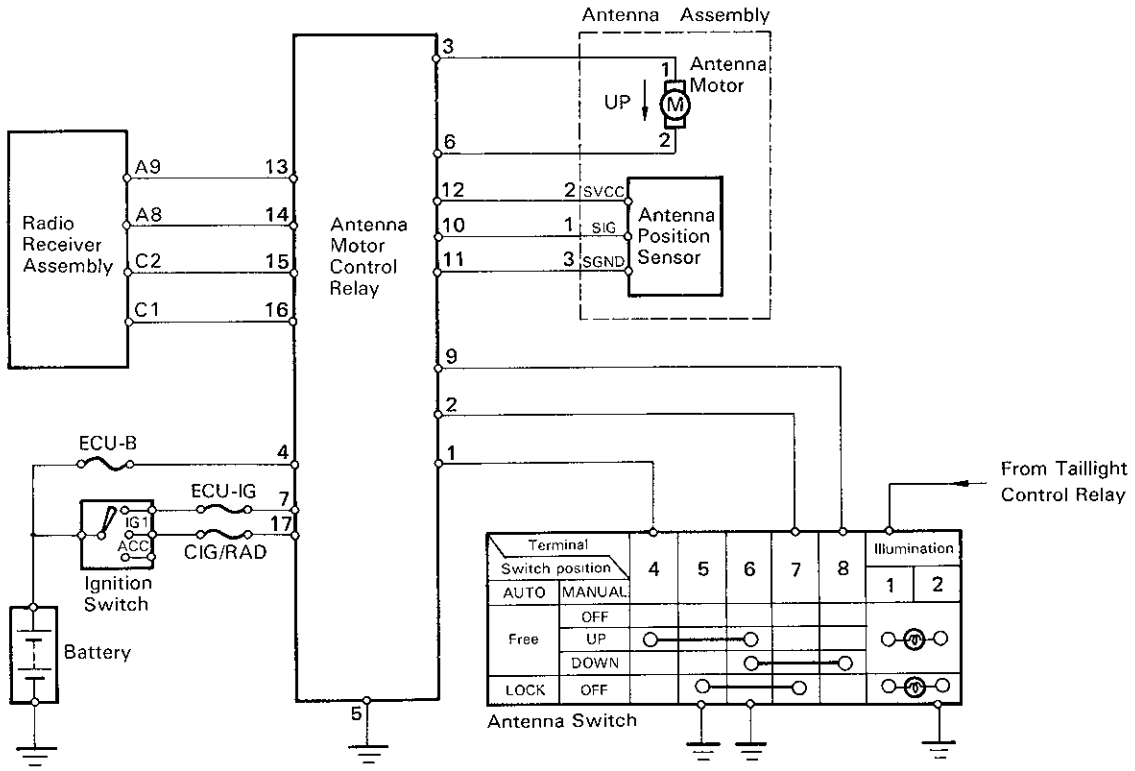


Antenna Switch

Antenna Motor

BE5074
S-8-2 H-2-2

Motor Antenna
(w/ Auto Switch Type)

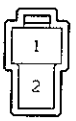


The POWER SOURCE CIRCUIT has been simplified. For full details, see pub, No. RM184E page BE-10, 11.

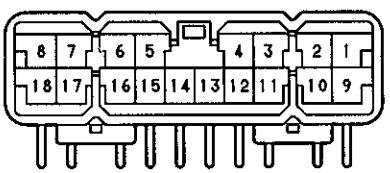
Antenna Switch



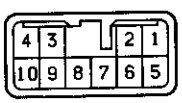
Antenna Motor



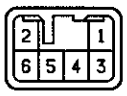
Antenna Motor Control Relay



Radio Assembly Connector "A"



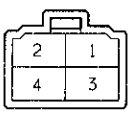
Connector "B"



Connector "C"



Antenna Position Sensor



N04086
e-8-2 H-2-2 e-18-2-A
S-10-2-A S-6-2-E GA-2-2-C H-4-2

System Description

RADIO WAVE BAND

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

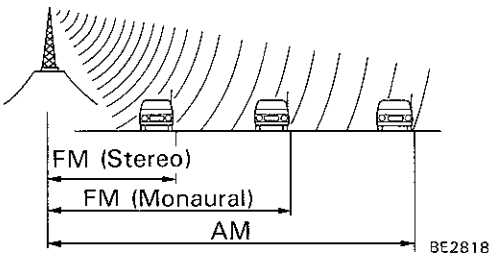
Frequency	30 kHz	300 kHz	3 MHz	30 MHz	300 MHz
Designation	LF	MF	HF	VHF	
Radio wave	LW	AM (MW)	SW	FM (UKW)	
Modulation method	Amplitude modulation			Frequency modulation	

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

HINT: In this section, the term "AM" includes LW, MW and SW, and the term "FM" includes UKW.

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.



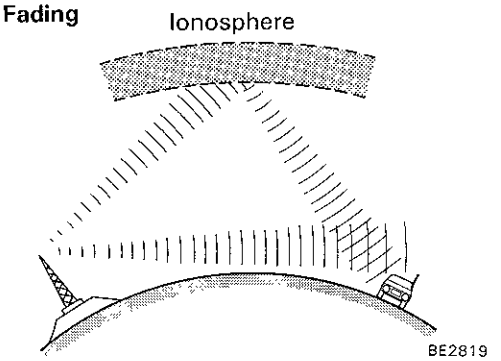
RECEPTION PROBLEMS

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".

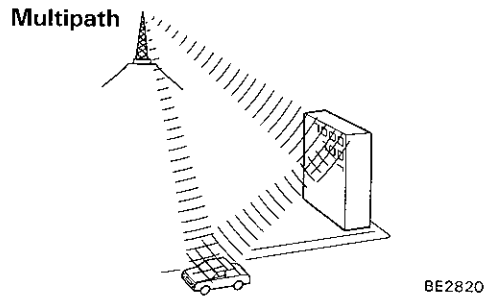
Fading



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.

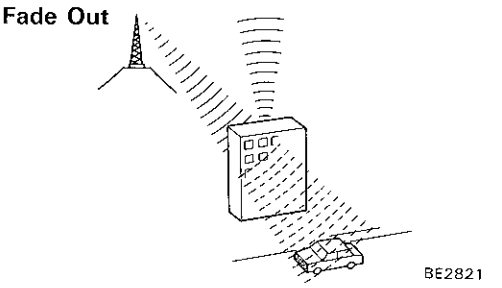
Multipath



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".

Fade Out



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 explosure if directed. Be sure to operate the player correctly as instructed.

MAINTENANCE

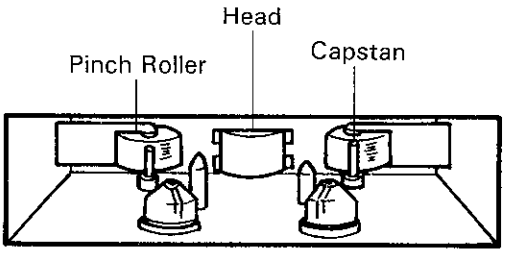
(Tape Player)

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.

Example:



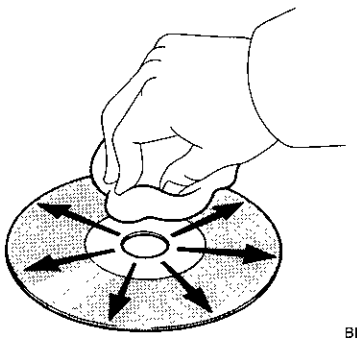
C0192

(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.



BE4331

Troubleshooting

NOTICE: When replacing the internal mechanism (computer 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.

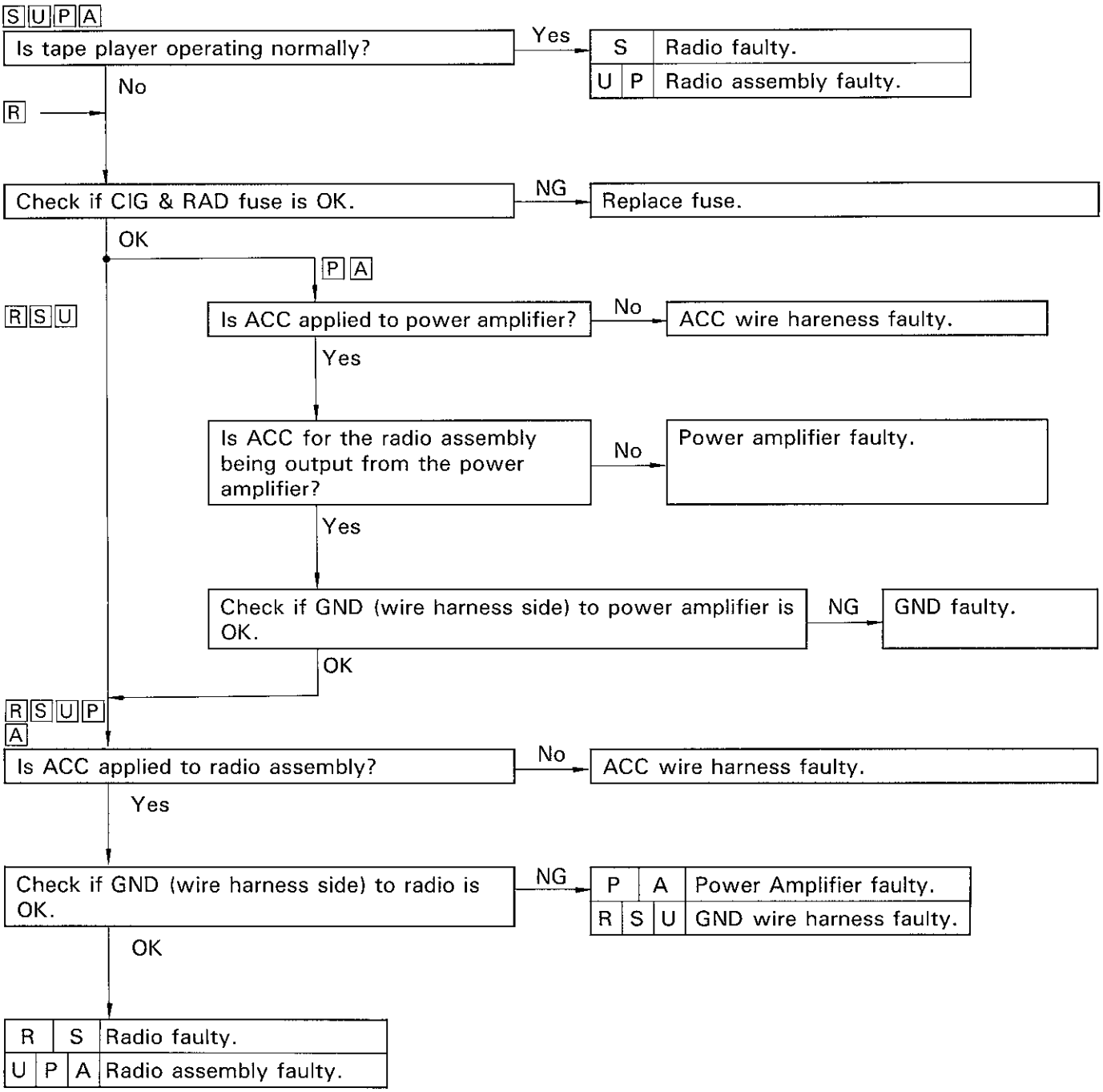
- Open or short circuit of the wire harness
- Connector or terminal connection fault
- For audio systems with anti-theft system, troubleshooting items marked (*) indicate that "Troubleshooting for ANTI-THEFT SYSTEM" should be carried out first.

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
	Auto-Radio Information (ARI) not received.	7
	Cannot set station select button.	8
	Preset memory disappears.	8
Tape Player	Cassette tape cannot be inserted.	9
	Cassette tape inserts, but no power.	*10
	Power coming in, but tape player not operating.	11
	Either speaker does not work.	12
	Sound quality poor (Volume faint).	13
	Tape jammed, malfunction with tape speed or auto-reverse.	14
	APS, SKIP, RPT buttons not operating.	15
	Cassette tape will not eject.	*16
CD Player	CD cannot be inserted.	17
	CD inserts, but no power.	18
	Power coming in, but CD player not operating.	19
	Sound jumps.	20
	Sound quality poor (Volume faint).	21
	Either speaker does not work.	22
	CD will not eject.	23
CD Auto Changer	Magazine cannot be inserted into CD auto changer.	24
	Magazine inserts, but no power.	25
	Power coming in, but CD auto changer not operating.	26
	Sound jumps.	27
	Sound quality poor (Volume faint).	28

CD Auto Changer (Cont'd)	Any speaker does not work	29
	Woofer speaker does not work	30
	Magazine will not eject	31
Antenna	Antenna-related.	32
Noise	Noise produced by vibration or shock whille driving.	33
	Noise produced when engine starts.	34

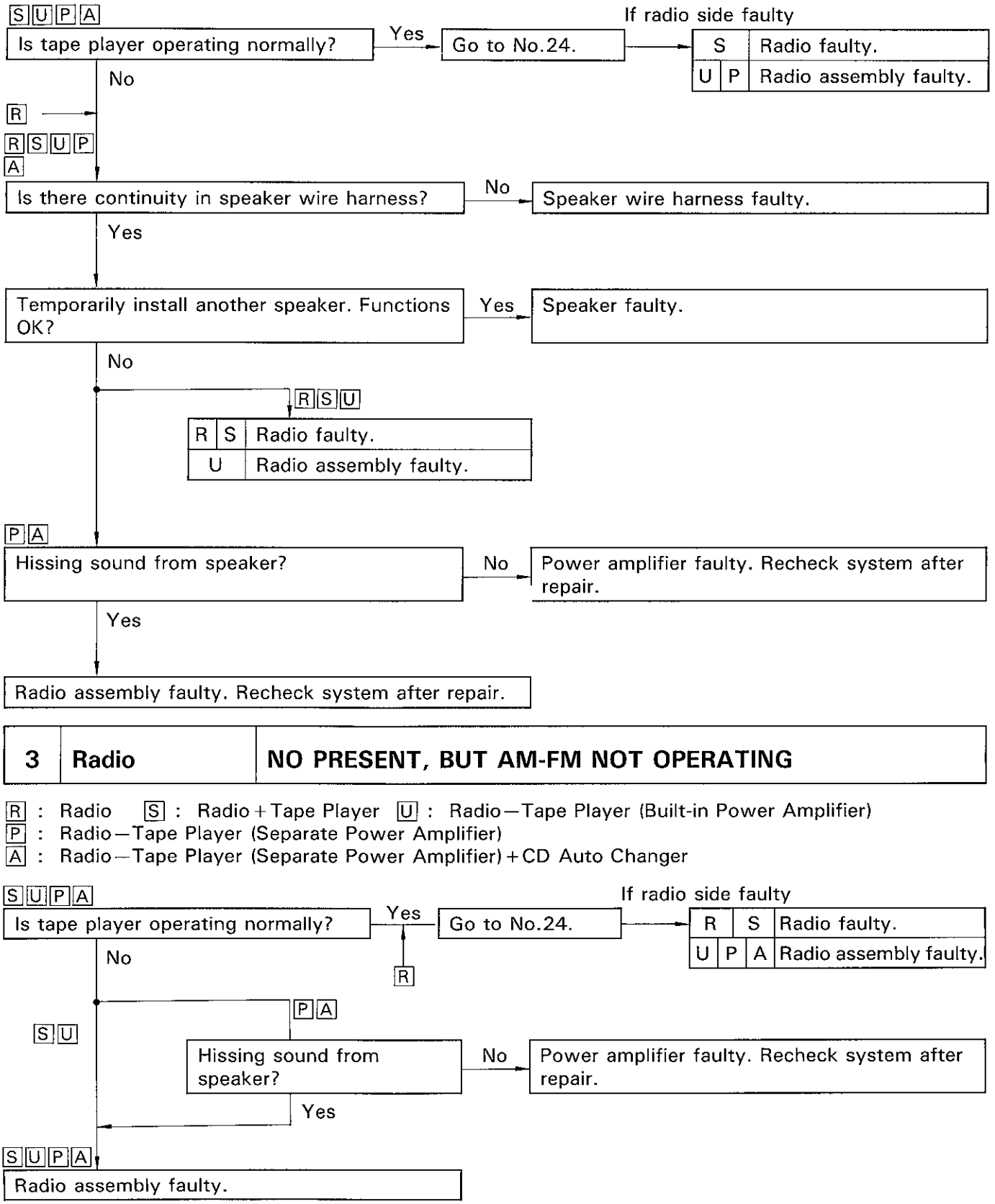
1 Radio — NO POWER COMING IN

[R] : Radio [S] : Radio + Tape Player [U] : Radio — Tape Player (Built-in Power Amplifier)
[P] : Radio — Tape Player (Separate Power Amplifier)
[A] : Radio — Tape Player (Separate Power Amplifier) + CD Auto Changer



2 Radio — POWER COMING IN, BUT RADIO NOT OPERATING

[R] : Radio [S] : Radio + Tape Player [U] : Radio — Tape Player (Built-in Power Amplifier)
[P] : Radio — Tape Player (Separate Power Amplifier)
[A] : Radio — Tape Player (Separate Power Amplifier) + CD Auto Changer



3 Radio — NO PRESENT, BUT AM-FM NOT OPERATING

[R] : Radio [S] : Radio + Tape Player [U] : Radio — Tape Player (Built-in Power Amplifier)
[P] : Radio — Tape Player (Separate Power Amplifier)
[A] : Radio — Tape Player (Separate Power Amplifier) + CD Auto Changer

4	Radio	EITHER SPEAKER DOES NOT WORK

[R] : Radio [S] : Radio + Tape Player [U] : Radio — Tape Player (Built-in Power Amplifier)
[P] : Radio — Tape Player (Separate Power Amplifier)
[A] : Radio — Tape Player (Separate Power Amplifier) + CD Auto Changer

[S] [U] [P] [A]

Is tape player operating normally?

Yes →

	S		Radio faulty.
U	P	A	Radio assembly faulty.

No

[R] →

[R] [S] [U] [P] [A]

Is hiss produced by non-functioning speaker?

Yes →

R	S	Radio faulty.
	U	Radio assembly faulty.
P	A	Radio assembly faulty. Recheck system after repair.

No

Is there continuity in speaker wire harness?

No → Speaker wire harness faulty.

Yes

Temporarily install another speaker. Functions OK?

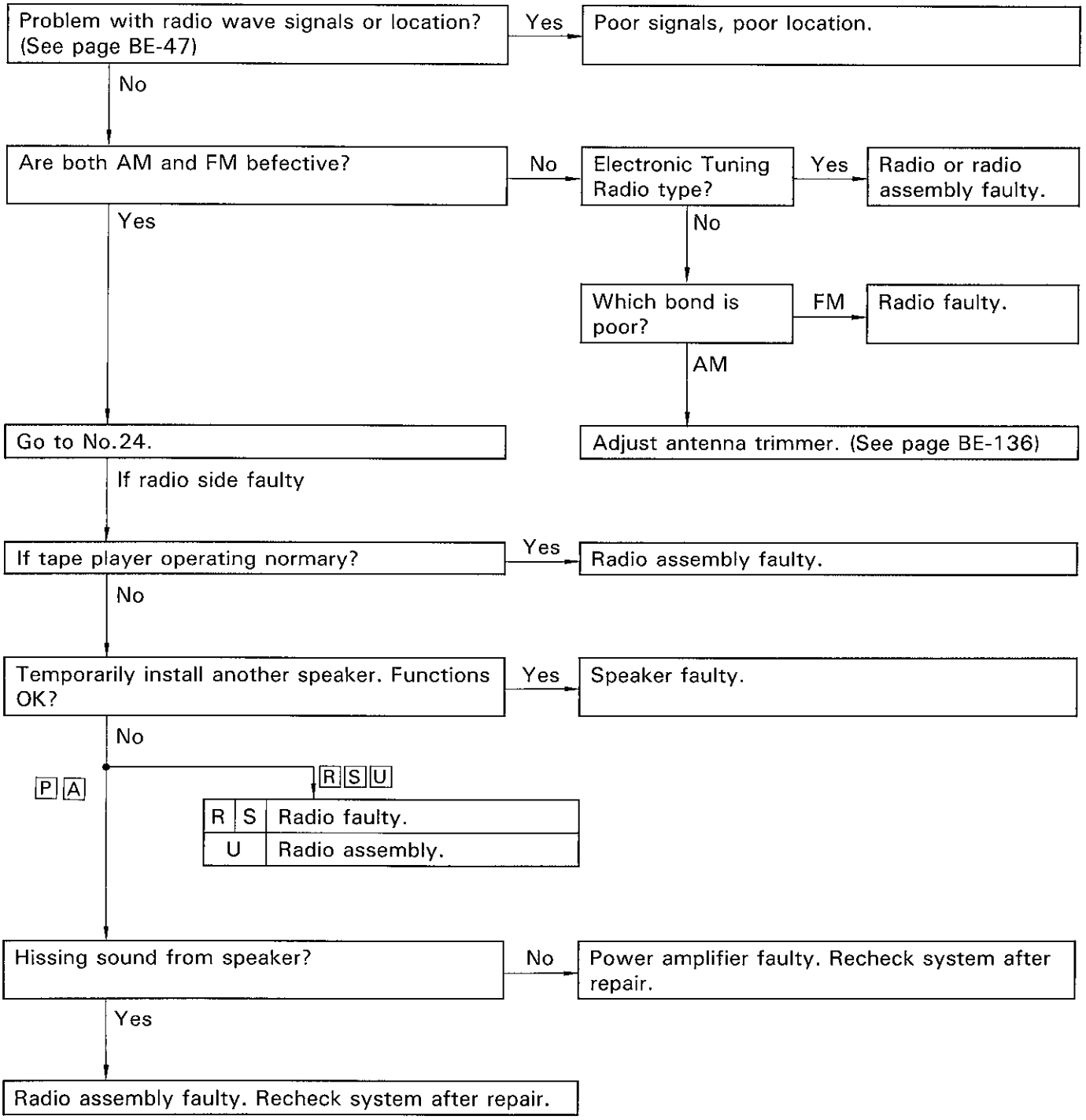
Yes → Speaker faulty.

No

R	S	Radio faulty.
	U	Radio assembly faulty.
P	A	Power amplifier faulty. Recheck system after repair.

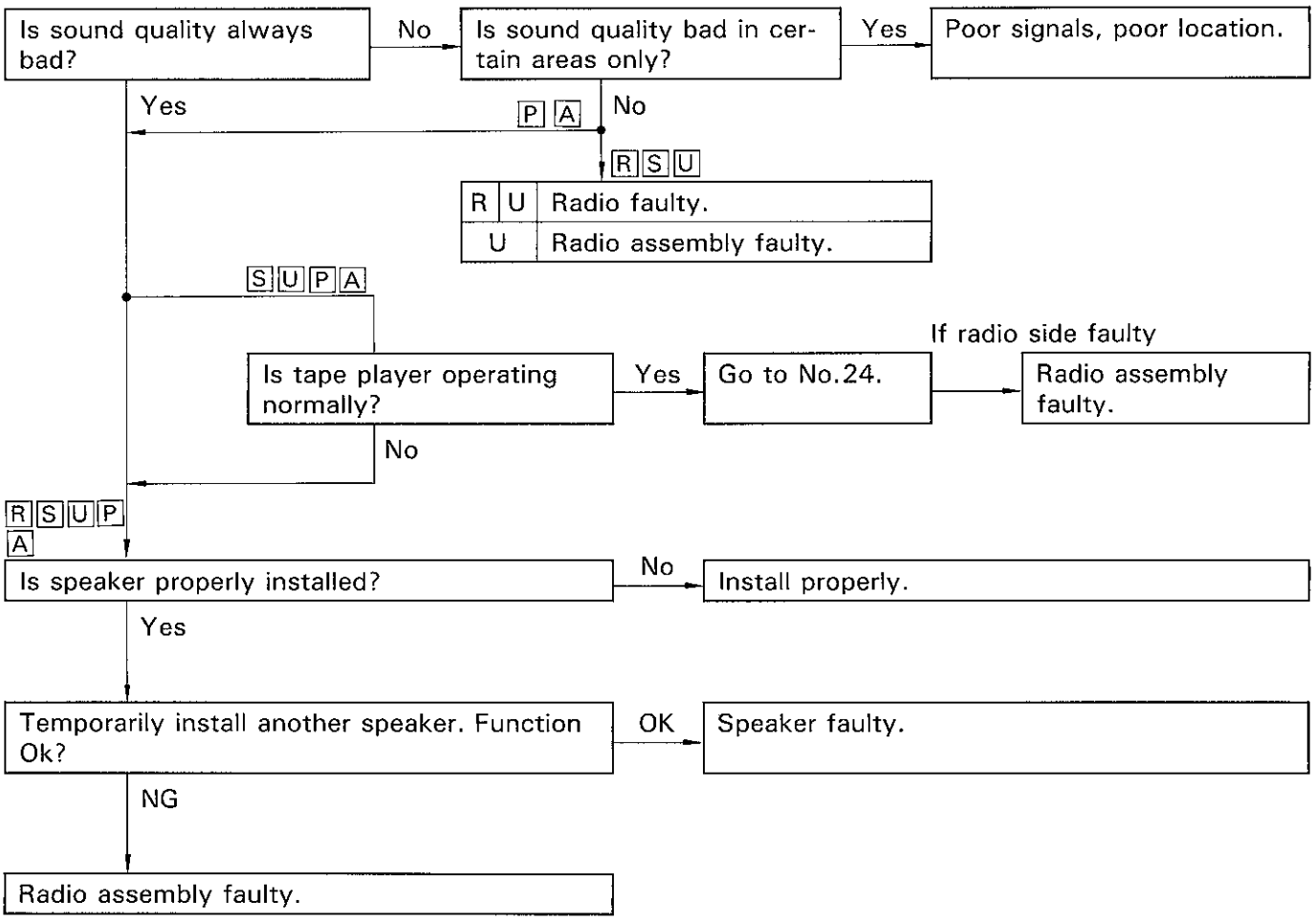
5	Radio	EITHER AM OR FM DOES NOT WORK, RECEPTION POOR (VOLUME FAINT), FEW PRESET TUNING BANDS

[R] : Radio [S] : Radio + Tape Player [U] : Radio—Tape Player (Built-in Power Amplifier)
[P] : Radio—Tape Player (Separate Power Amplifier)
[A] : Radio—Tape Player (Separate Power Amplifier) + CD Auto Changer

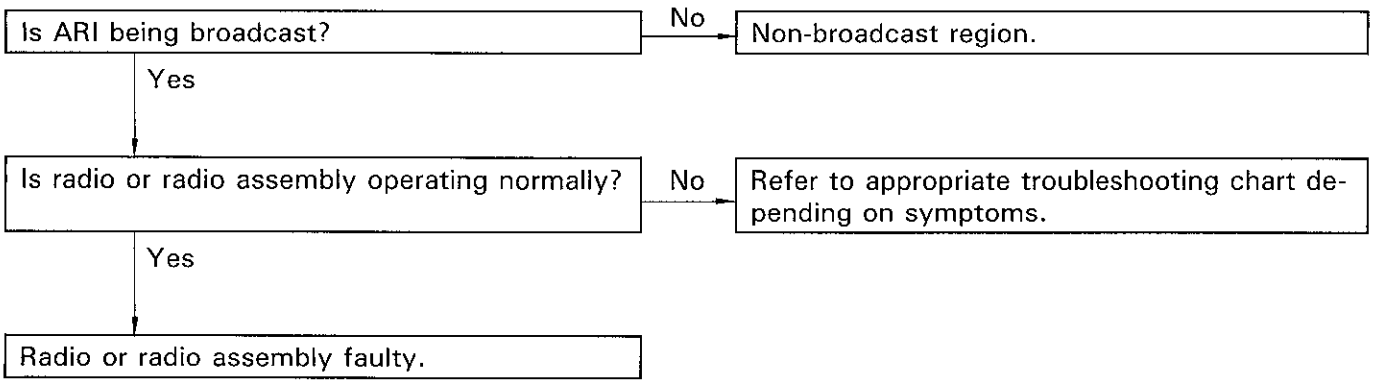


6 Radio — SOUND QUALITY POOR

[R] : Radio [S] : Radio + Tape Player [U] : Radio — Tape Player (Built-in Power Amplifier)
[P] : Radio — Tape Player (Separate Power Amplifier)
[A] : Radio — Tape Player (Separate Power Amplifier) + CD Auto Changer

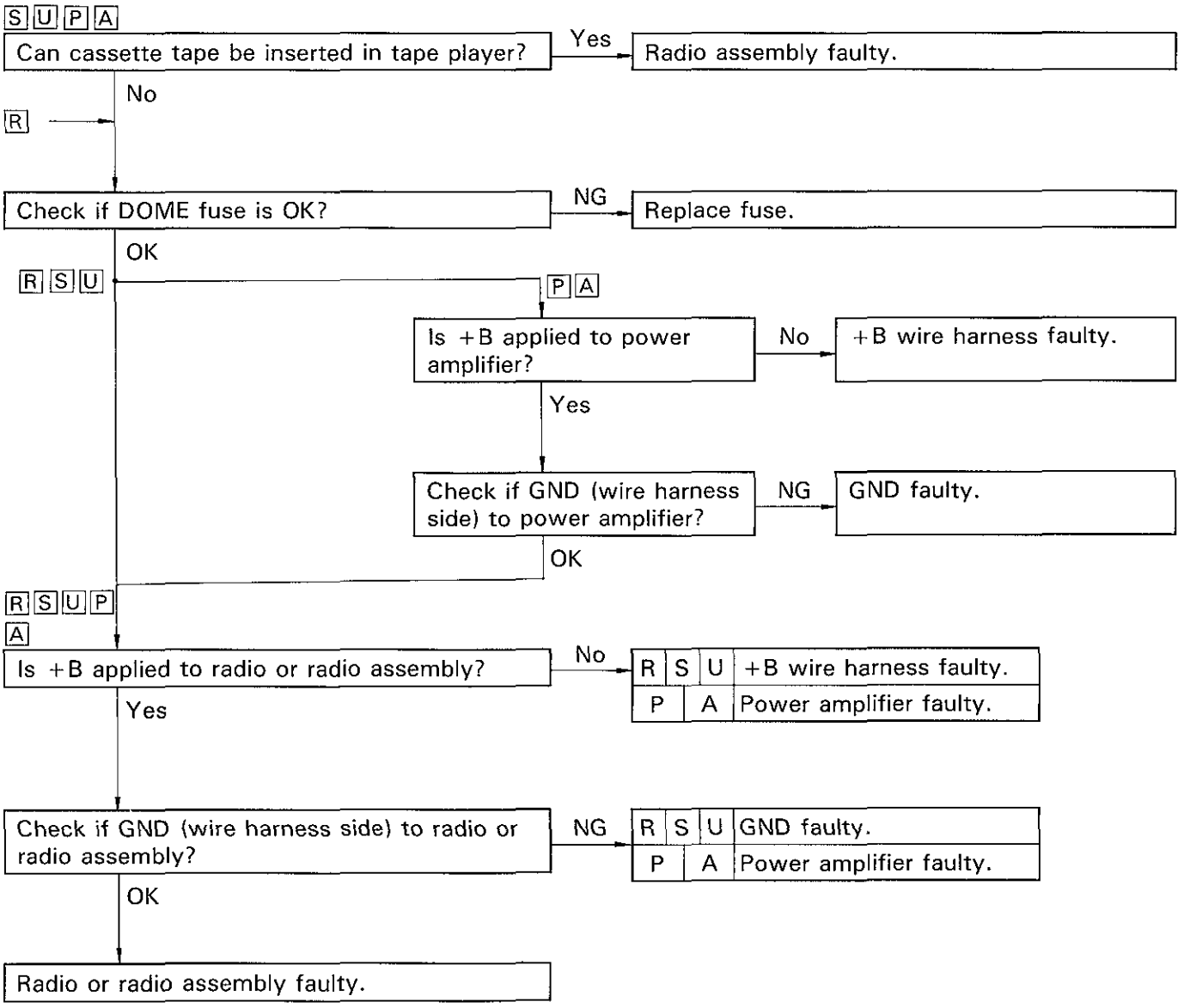


7 Radio — AUTO-RADIO INFORMATION (ARI) NOT RECEIVED



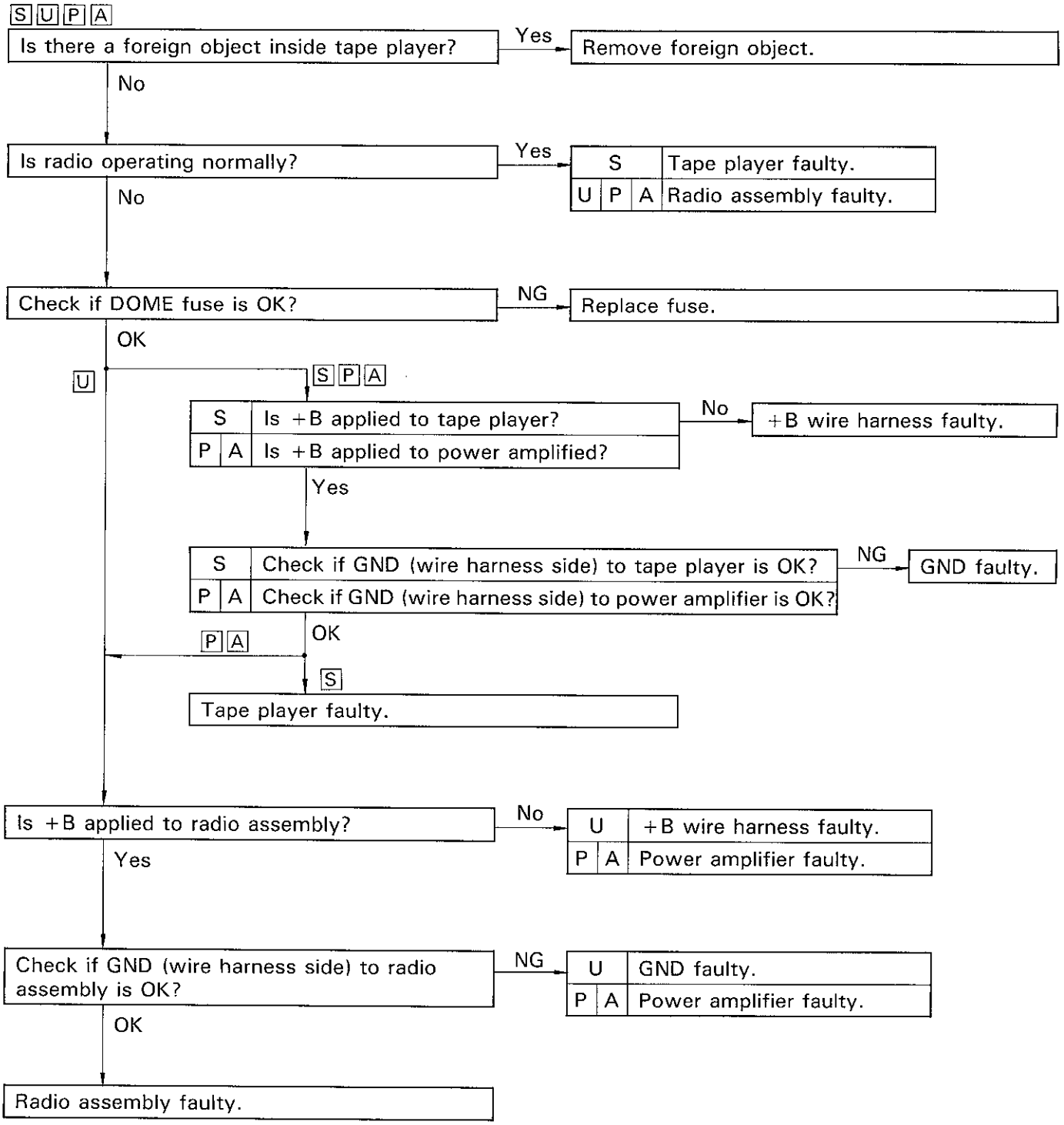
8	Radio	CANNOT SET STATION SELECT BUTTON, PRESET MEMORY DISAPPEARS

[R] : Radio [S] : Radio + Tape Player [U] : Radio — Tape Player (Built-in Power Amplifier)
[P] : Radio — Tape Player (Separate Power Amplifier)
[A] : Radio — Tape Player (Separate Power Amplifier) + CD Auto Changer



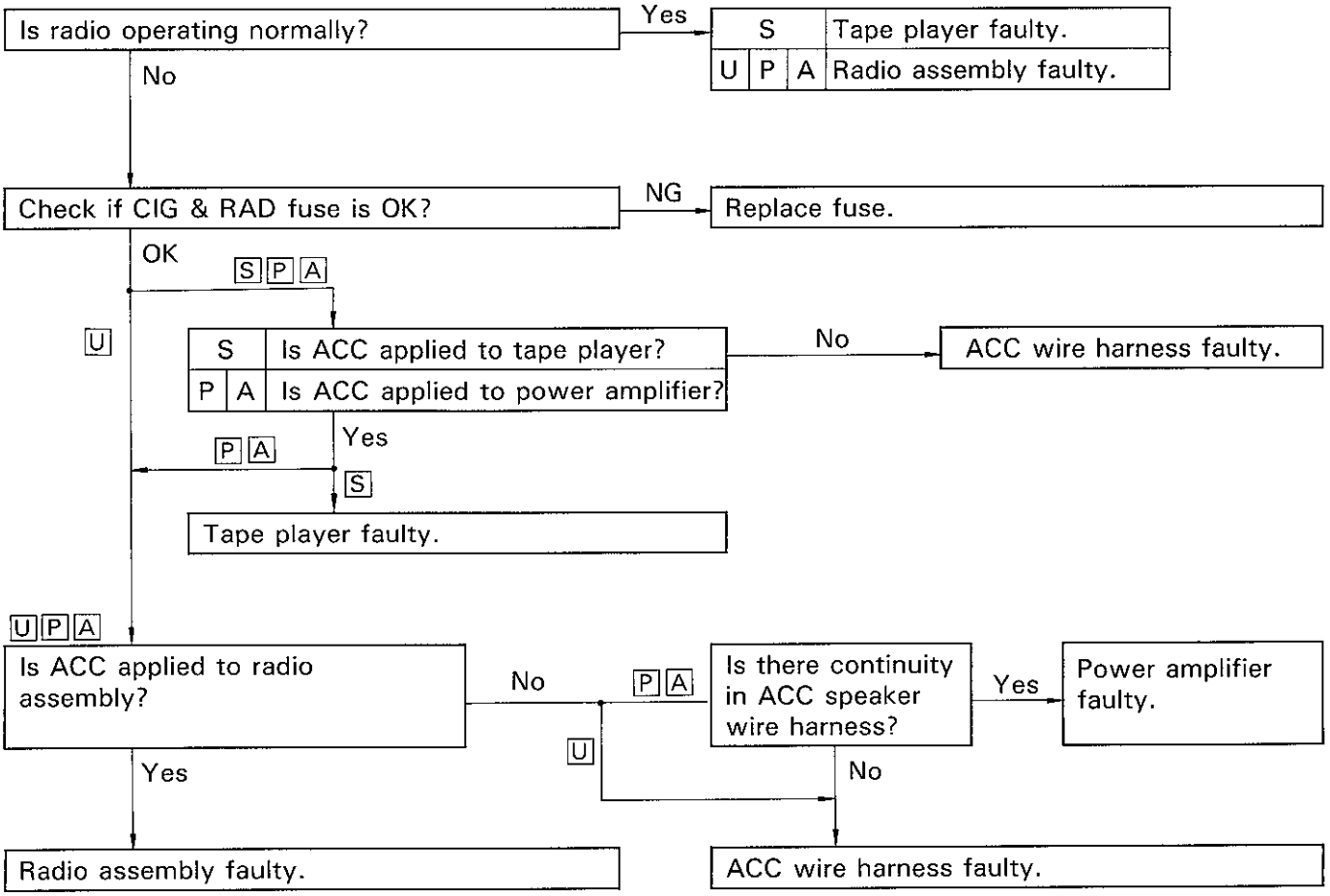
9 Tape Player — CASSETTE TAPE CANNOT BE INSERTED

[S] : Radio + Tape Player [U] : Radio—Tape Player (Built-in Power Amplifier)
[P] : Radio—Tape Player (Separate Power Amplifier)
[A] : Radio—Tape Player (Separate Power Amplifier) + CD Auto Changer



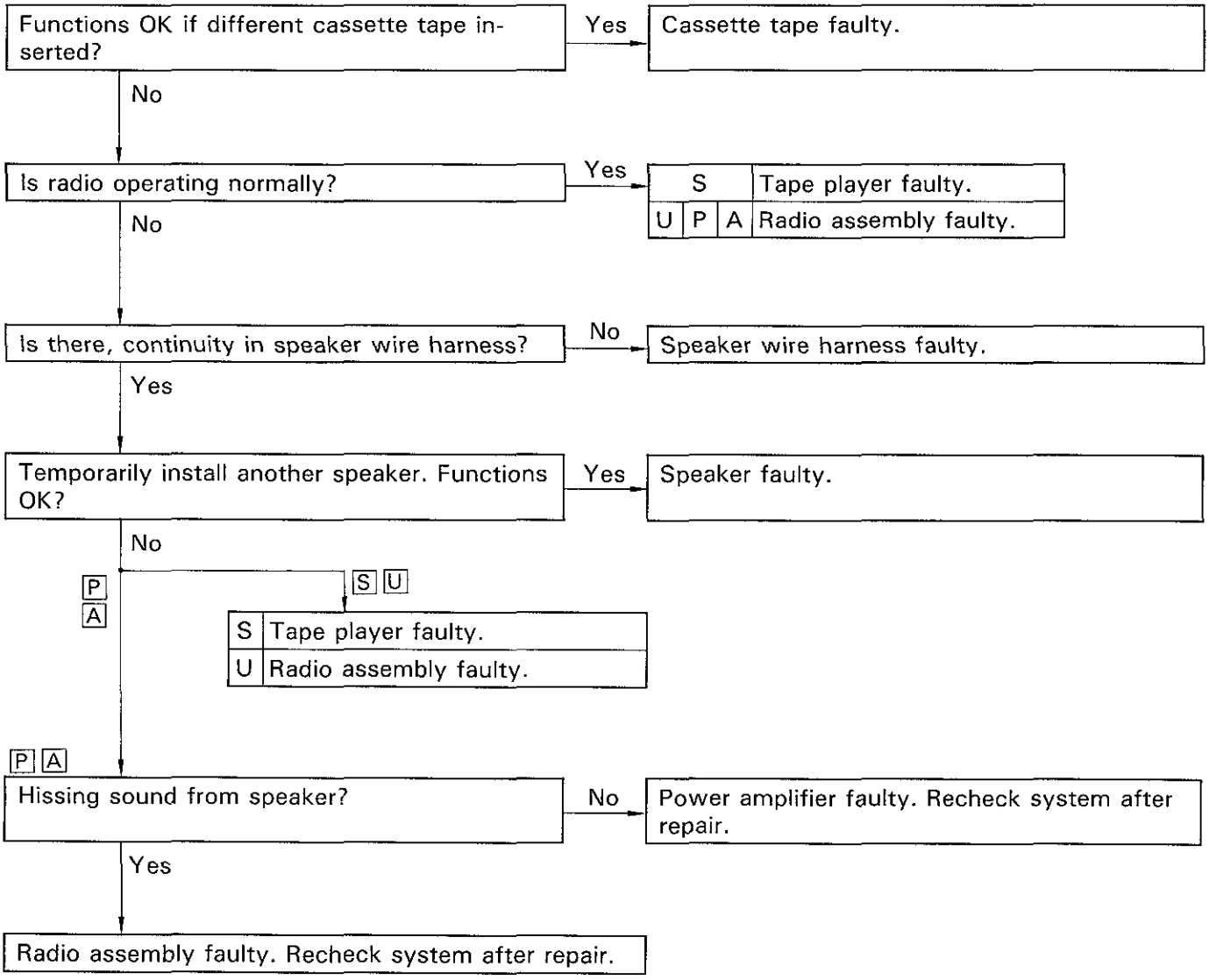
10	Tape Player	CASSETTE TAPE INSERTS, BUT NO POWER

[S]: Radio + Tape Player [U]: Radio—Tape Player (Built-in Power Amplifier)
[P]: Radio—Tape Player (Separate Power Amplifier)
[A]: Radio—Tape Player (Separate Power Amplifier) + CD Auto Changer



11 Tape Player — POWER COMING IN, BUT TAPE PLAYER NOT OPERATING

[S] : Radio + Tape Player [U] : Radio—Tape Player (Built-in Power Amplifier)
[P] : Radio—Tape Player (Separate Power Amplifier)
[A] : Radio—Tape Player (Separate Power Amplifier) + CD Auto Changer



12	Tape Player	EITHER SPEAKER DOES NOT WORK

[S]: Radio + Tape Player [U]: Radio—Tape Player (Built-in Power Amplifier)
[P]: Radio—Tape Player (Separate Power Amplifier)
[A]: Radio—Tape Player (Separate Power Amplifier) + CD Auto Changer

Is radio operating normally?

Yes →

S			Tape player faulty.
U	P	A	Radio assembly faulty.

No ↓

Is hiss produced by non-functioning speaker?

Yes →

S		Tape player faulty.
U		Radio assembly faulty.
P	A	Radio assembly faulty. Recheck system after repair.

No ↓

Is there continuity in speaker wire harness?

No → Speaker wire harness faulty.

Yes ↓

Temporarily install another speaker. Functions OK?

OK → Speaker faulty.

NG ↓

S		Tape player faulty.
U		Radio assembly faulty.
P	A	Radio assembly faulty. Recheck system after repair.

13 Tape Player — SOUND QUALITY POOR (VOLUME FAINT)

[S]: Radio+Tape Player [U]: Radio—Tape Player (Built-in Power Amplifier)
[P]: Radio—Tape Player (Separate Power Amplifier)
[A]: Radio—Tape Player (Separate Power Amplifier) + CD Auto Changer

Functions OK if different cassette tape inserted? — Yes → Cassette tape faulty.
↓ No
Operates normally after cleaning the heads? (See page BE-48) — Yes → Head dirty.
↓ No
Is radio operating normally? — Yes → Radio assembly faulty.
↓ No
Is speaker properly installed? — No → Install properly.
↓ Yes
Temporarily install another speaker. Functions OK? — Yes → Speaker faulty.
↓ No

S		Tape player faulty.
U		Radio assembly faulty.
P	A	Radio assembly faulty. Recheck system after repair.

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

[S]: Radio+Tape Player [U]: Radio—Tape Player (Built-in Power Amplifier)
[P]: Radio—Tape Player (Separate Power Amplifier)
[A]: Radio—Tape Player (Separate Power Amplifier) + CD Auto Changer

Functions OK if different tape (less than 120 mins.) is inserted? — Yes → Cassette tape faulty.
↓ No
Is there a foreign object inside tape player? — Yes → Remove foreign object.
↓ No
Operates normally after cleaning the heads? (See page BE-48) — Yes → Head dirty.
↓ No

S			Tape player faulty.
U	P	A	Radio assembly faulty.

15 Tape Player — APS, SKIP, RPT BUTTONS NOT OPERATING

[S] : Radio+Tape Player [U] : Radio—Tape Player (Built-in Power Amplifier)
[P] : Radio—Tape Player (Separate Power Amplifier)
[A] : Radio—Tape Player (Separate Power Amplifier) + CD Auto Changer

Functions OK if different cassette tape inserted?
- No → Radio assembly faulty.
- Yes → Cassette tape faulty. (Less than 3 secs. of silence between songs (APS, RPT). Less than 15 secs. of silence (SKIP).)

16 Tape Player — CASSETTE TAPE WILL NOT EJECT

[S] : Radio+Tape Player [U] : Radio—Tape Player (Built-in Power Amplifier)
[P] : Radio—Tape Player (Separate Power Amplifier)
[A] : Radio—Tape Player (Separate Power Amplifier) + CD Auto Changer

Is tape player operating normally?
- No → Cassette tape jammed.
- Yes →

Is radio operating normally?
- Yes →

S	Tape player faulty.
U P A	Radio assembly faulty.

- No →

Check if DOME fuse is OK?
- NG → Replace fuse.
- OK →

[P] [A] Is +B applied to power amplifier?
- No → +B wire harness faulty.
- Yes →

[S] [U]

S	Is +B applied to tape player?
U P A	Is +B applied to radio assembly?

- No → [P] [A] Is there continuity in +B wire harness between power amplifier and radio assembly?
  - Yes → Power amplifier faulty.
  - No → +B wire harness faulty.
- Yes →

S	Tape player faulty.
U P A	Radio assembly faulty.

17 CD Player — CD CANNOT BE INSERTED

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

- Is CD already inserted? — Yes → Eject CD.
- No → Is auto search button of radio operating normally? — Yes → Is +B applied to CD player? — No → Radio assembly faulty.
- Is +B applied to CD player? — Yes → Check if GND (wire harness side) to CD player is OK? — NG → Radio assembly faulty.
- Check if GND (wire harness side) to CD player is OK? — OK → CD player faulty.
- Is auto search button of radio operating normally? — No → Check if DOME fuse is OK. — NG → Replace fuse.
- Check if DOME fuse is OK. — OK → Is +B applied to power amplifier? — No → +B wire harness faulty.
- Is +B applied to power amplifier? — Yes → Check if GND (wire harness side) to power amplifier is OK? — NG → GND faulty.
- Check if GND (wire harness side) to power amplifier is OK? — OK → Is +B applied to radio assembly? — No → Power amplifier faulty.
- Is +B applied to radio assembly? — Yes → Check if GND (wire harness side) to radio assembly is OK? — NG → Power amplifier faulty.
- Check if GND (wire harness side) to radio assembly is OK? — OK → Radio assembly faulty.

18 CD Player — CD INSERTS, BUT NO POWER

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

- Is radio operating normally? — Yes → Is ACC applied to CD player? — No → Radio assembly faulty.
- Is ACC applied to CD player? — Yes → CD player faulty.
- No → Check if CIG & RAD fuse is OK? — NG → Replace fuse.
- Check if CIG & RAD fuse is OK? — OK → Is ACC applied to power amplifier? — No → ACC wire harness faulty.
- Is ACC applied to power amplifier? — Yes → Is ACC applied to radio assembly? — No → Is there continuity in ACC wire harness between the radio assembly and the power amplifier? — No → ACC wire harness faulty.
- Is there continuity in ACC wire harness between the radio assembly and the power amplifier? — Yes → Power amplifier faulty.
- Is ACC applied to radio assembly? — Yes → Radio assembly faulty.

19 CD Player — POWER COMING IN, BUT CD PLAYER NOT OPERATING

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

- Is CD inserted correct side up?
  - No → Insert correctly.
  - Yes ↓
- Functions OK if different CD inserted?
  - Yes → CD faulty.
  - No ↓
- Is radio operating normally?
  - Yes → Is temperature inside cabin hot?
    - Yes → Protective circuit in operation.
    - No ↓ Has sudden temperature change occurred inside cabin?
      - Yes → Formation of condensation due to temp. change.
      - No ↓ CD player faulty.
  - No ↓
- Is there continuity in speaker wire harness?
  - No → Speaker wire harness faulty.
  - Yes ↓
- Temporarily install another speaker. Functions OK?
  - Yes → Speaker faulty.
  - No ↓
- Hissing sound from speaker?
  - No → Power amplifier faulty. Recheck system after repair.
  - Yes ↓

Radio assembly faulty. Recheck system after repair.

20 CD Player — SOUND JUMPS

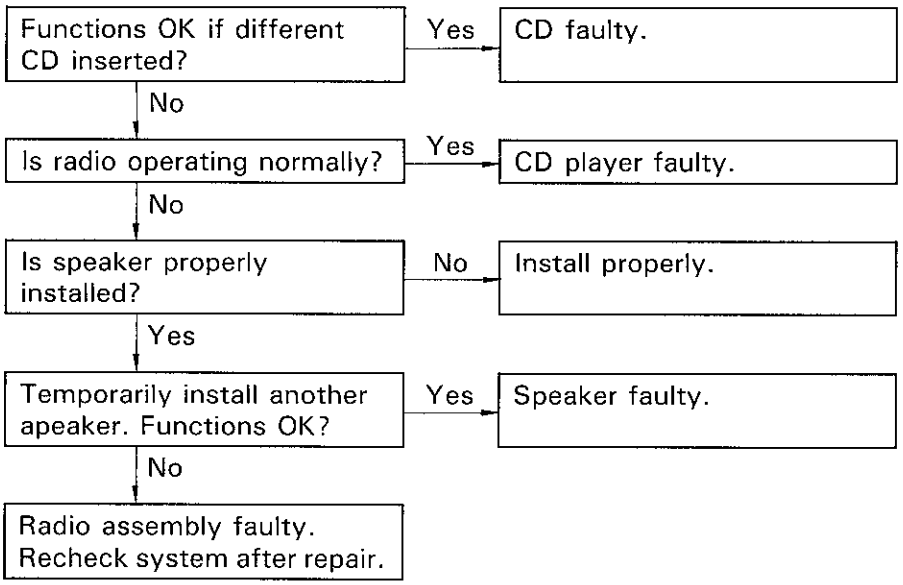
[P]: Radio—Tape Player (Separate Power Amplifier)

- Does sound jump only during strong vibration?
  - Yes → Jumping caused by vibration.
  - No ↓
- Is CD player properly installed?
  - No → Install properly.
  - Yes ↓
- Functions OK if different CD inserted?
  - Yes → CD faulty.
  - No ↓
- Has sudden temperature change occurred inside cabin?
  - Yes → Formation of condensation due to temp. change.
  - No ↓

CD player faulty.

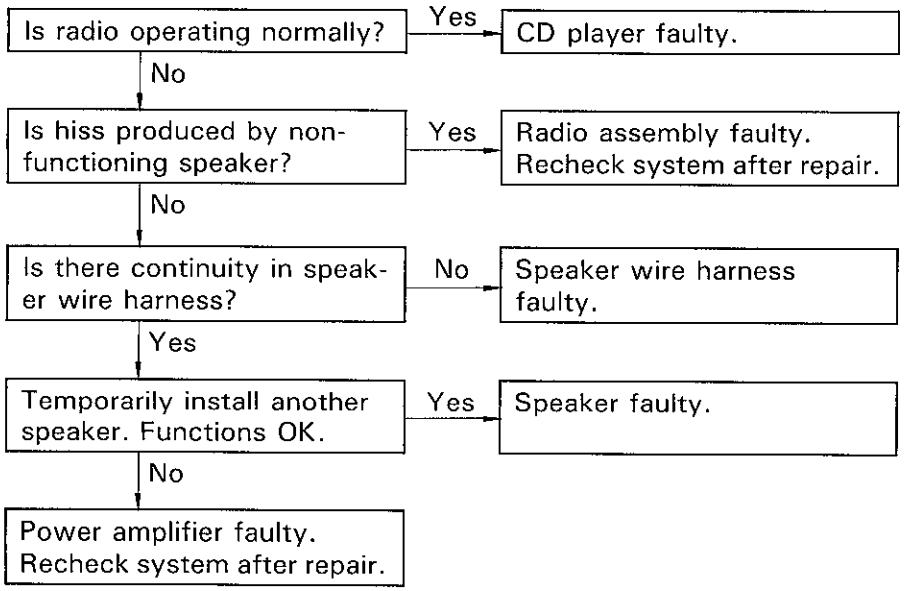
21 CD Player — SOUND QUALITY POOR (VOLUME FAINT)

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



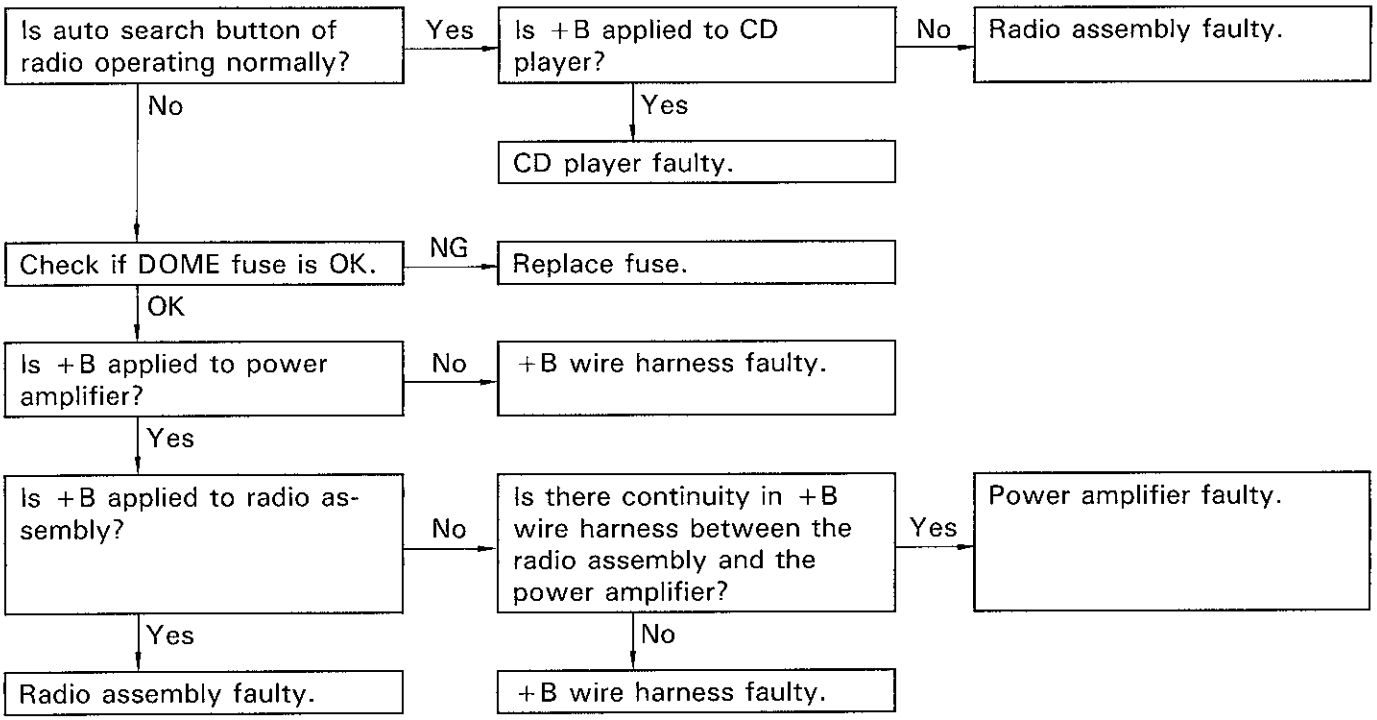
22 CD Player — EITHER SPEAKER DOES NOT WORK

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



23 CD Player — CD WILL NOT EJECT

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



24	CD Auto Changer	MAGAZINE CANNOT BE INSERTED INTO CD AUTO CHANGER

[A]: Radio—Tape Player (Separate Power Amplifier) + CD Auto Changer

Is Magazine already inserted? — Yes → Eject Magazine.

No

Is auto search button of radio operating normally? — Yes → Go to step 24-A.

No

Check if CIG & RAD and DOME Fuse are OK? — No → Replace fuse.

Yes

Is +B applied to power amplifier. — No → +B wire harness faulty.

Yes

Check if GND (wire harness side) to power amplifier is OK? — Yes → Go to step 24-A.

No

GND wire harness faulty.

24-A.

Is +B applied to radio assembly? — No → +B wire harness faulty.

Yes

Is ACC applied to radio assembly? — No → ACC wire harness faulty.

Yes

Check if GND (wire harness side) to radio assembly is OK? — No → GND wire harness faulty.

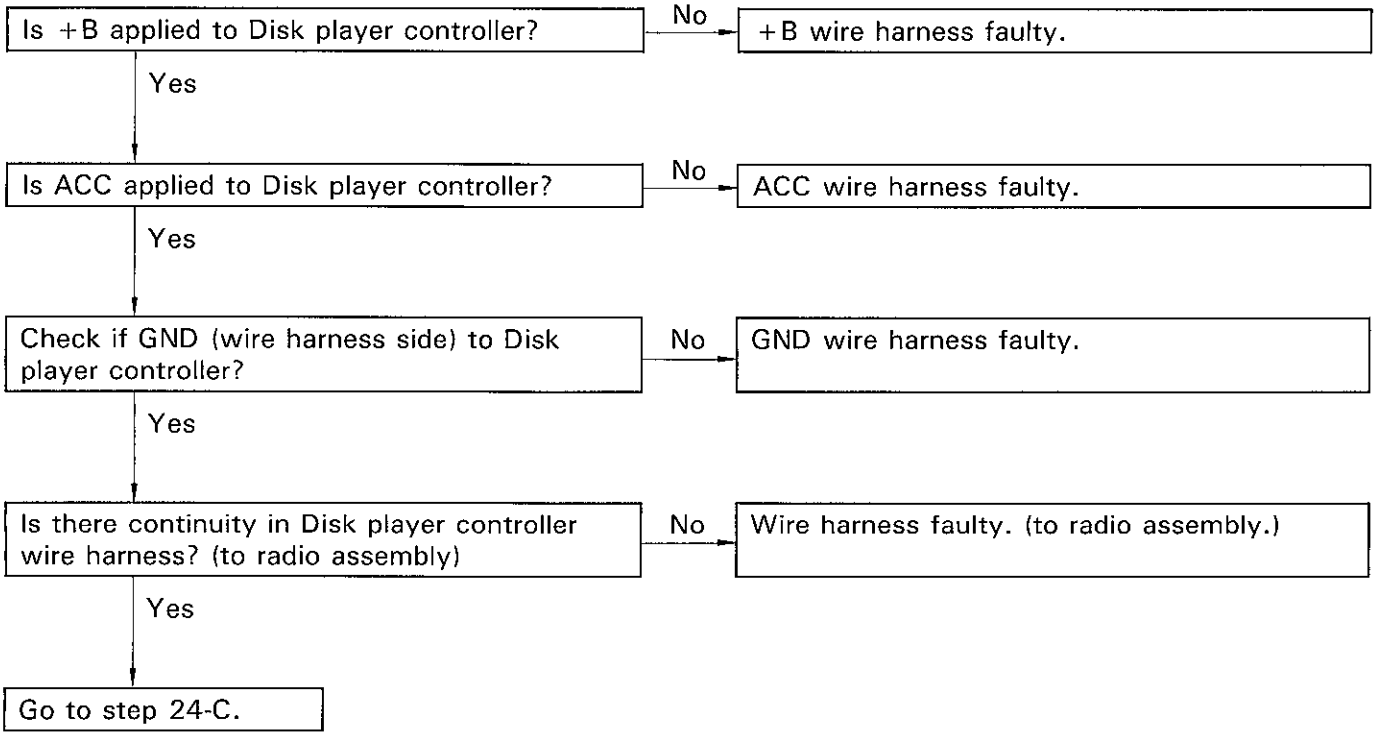
Yes

Is there continuity radio assembly wire harness? (to power amplifier) — No → Wire harness faulty. (to power amplifier.)

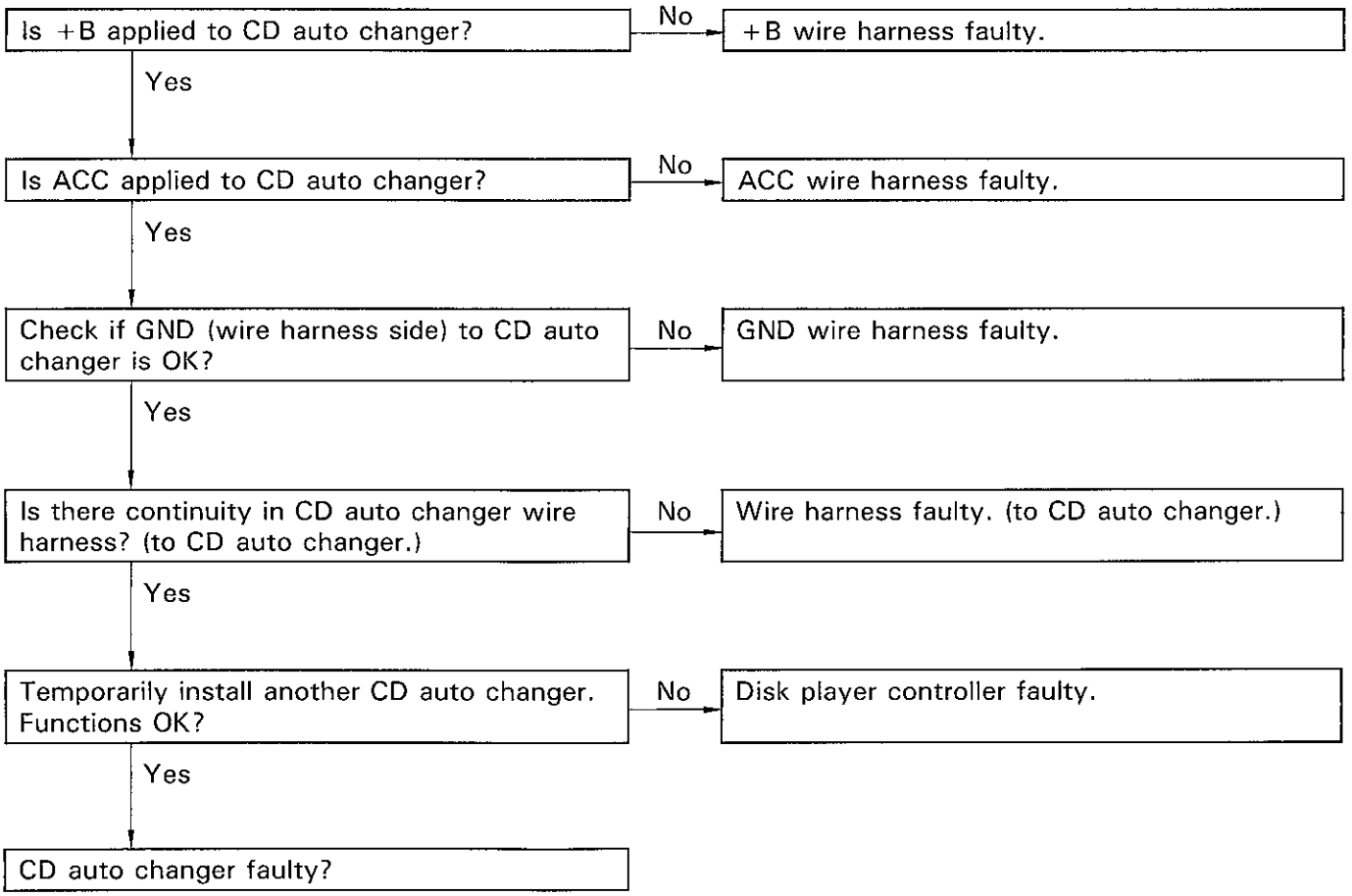
Yes

Go to No. 24-B.

24-B.


Is +B applied to Disk player controller?
No
+B wire harness faulty.
Yes
Is ACC applied to Disk player controller?
No
ACC wire harness faulty.
Yes
Check if GND (wire harness side) to Disk player controller?
No
GND wire harness faulty.
Yes
Is there continuity in Disk player controller wire harness? (to radio assembly)
No
Wire harness faulty. (to radio assembly.)
Yes
Go to step 24-C.

24-C.


Is +B applied to CD auto changer?
No
+B wire harness faulty.
Yes
Is ACC applied to CD auto changer?
No
ACC wire harness faulty.
Yes
Check if GND (wire harness side) to CD auto changer is OK?
No
GND wire harness faulty.
Yes
Is there continuity in CD auto changer wire harness? (to CD auto changer.)
No
Wire harness faulty. (to CD auto changer.)
Yes
Temporarily install another CD auto changer. Functions OK?
No
Disk player controller faulty.
Yes
CD auto changer faulty?

25	CD Auto Changer	MAGAZINE INSERTS, BUT NO POWER

[A]: Radio—Tape Player (Separate Power Amplifier) + CD Auto Changer

Is radio operating normally?
- Yes → Go to 25-A.
- No ↓

Check if CIG & RAD and DOME fuse are OK?
- No → Replace fuse.
- Yes ↓

Is ACC applied to power amplifier?
- No → ACC wire harness faulty.
- Yes ↓

Is ACC applied to radio assembly?
- Yes → Radio assembly faulty.
- No ↓

Is there continuity in ACC wire harness between the radio assembly and the power amplifier?
- No → ACC wire harness faulty.
- Yes ↓

Power amplifier faulty.

25-A.

Is +B applied to Disk player controller?
- No → +B wire harness faulty.
- Yes ↓

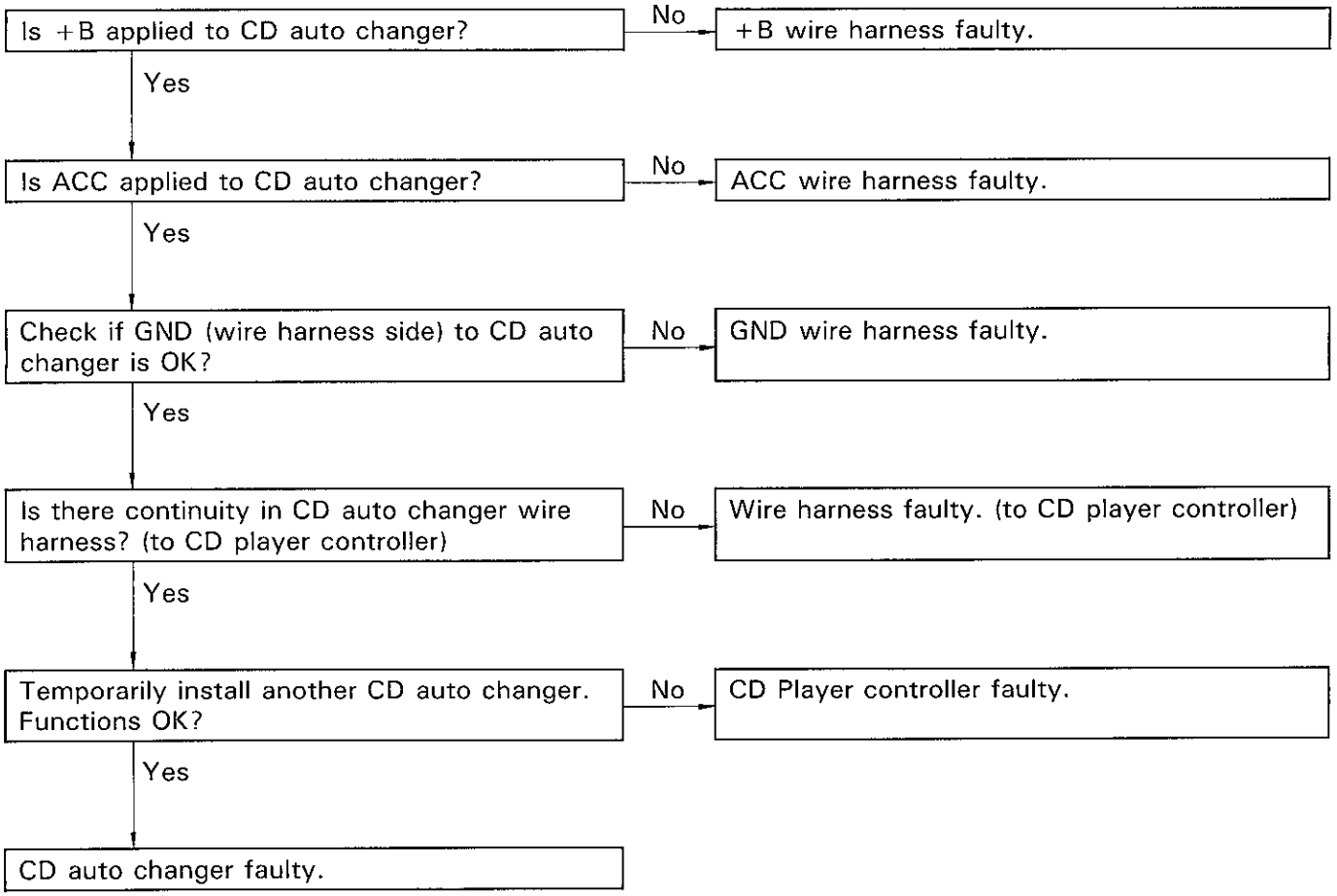
Is ACC applied to Disk player controller?
- No → ACC wire harness faulty.
- Yes ↓

Check if GND (wire harness side) to Disk player controller?
- No → GND wire harness faulty.
- Yes ↓

Is there continuity in Disk player controller wire harness? (to radio assembly)
- No → Wire harness faulty. (to radio assembly.)
- Yes ↓

Go to 25-B.

25-B.


Is +B applied to CD auto changer?
No
+B wire harness faulty.
Yes
Is ACC applied to CD auto changer?
No
ACC wire harness faulty.
Yes
Check if GND (wire harness side) to CD auto changer is OK?
No
GND wire harness faulty.
Yes
Is there continuity in CD auto changer wire harness? (to CD player controller)
No
Wire harness faulty. (to CD player controller)
Yes
Temporarily install another CD auto changer. Functions OK?
No
CD Player controller faulty.
Yes
CD auto changer faulty.

26	CD Auto Changer	POWER COMING IN, BUT CD AUTO CHANGER NOT OPERATING

[A]: Radio—Tape Player (Separate Power Amplifier) + CD auto changer

Is CD or Magazine inserted correct side up? — No → Insert correctly.

Yes

Functions OK if different CD inserted? — Yes → CD faulty.

No

Is radio operating normally? — No → Go to step 26-C.

Yes

Is temperature inside luggage compartment hot? — Yes → Protective circuit in operation.

No

Has sadden temperature change occurred inside luggage compartment? — Yes → Formation of condensation due to temp. change.

No

Go to step 26-A.

26-A.

Is +B applied to Disk player controller? — No → +B wire harness faulty.

Yes

Is ACC applied to Disk player controller? — No → ACC wire harness faulty.

Yes

Check if GND (wire harness side) to Disk player controller is OK? — No → GND wire harness faulty.

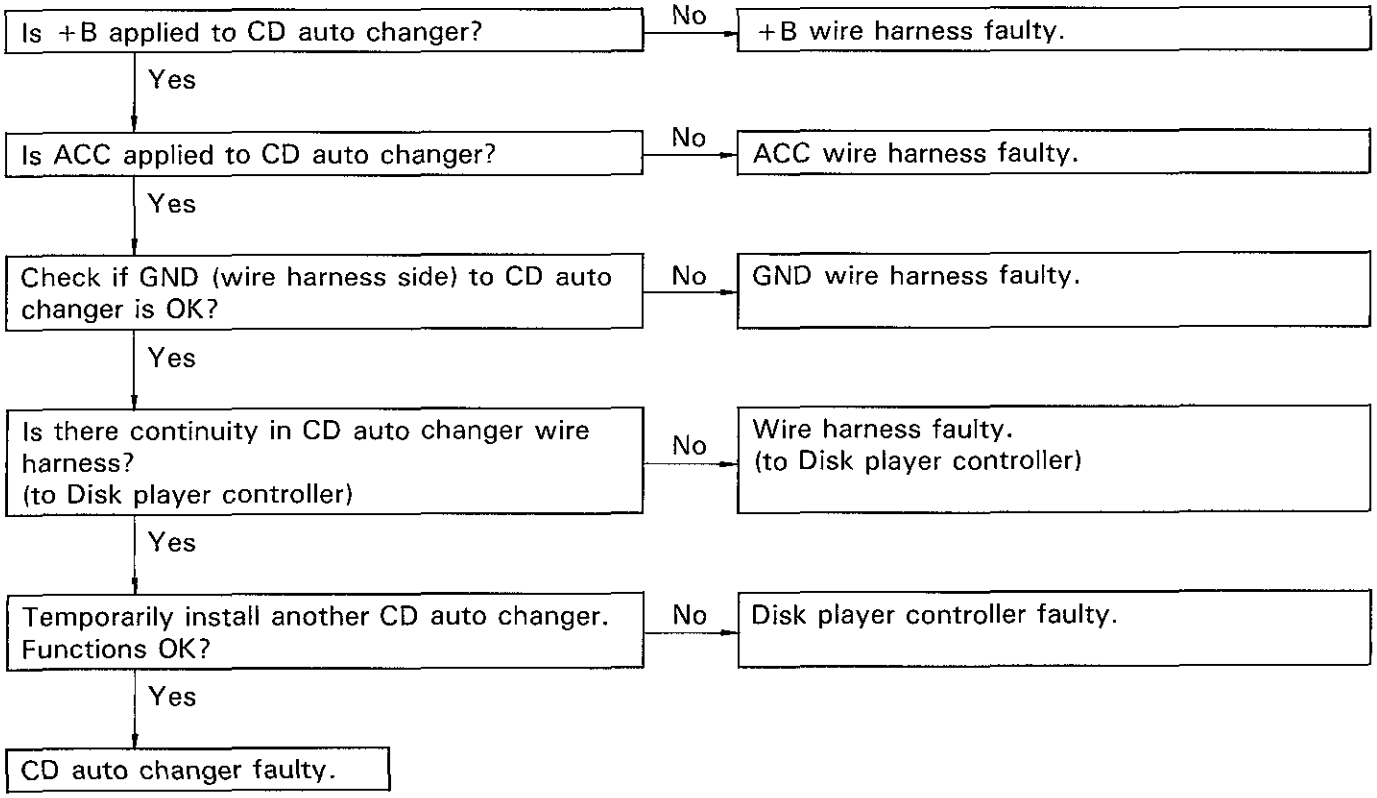
Yes

Is there continuity in Disk player controller wire harness? (to radio assembly) — No → Wire harness faulty. (to radio assembly)

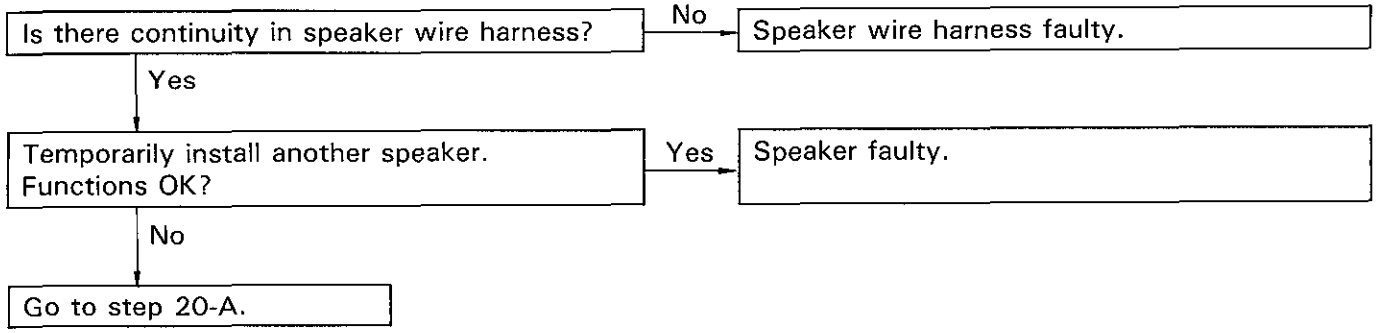
Yes

Go to No.26-B.

26-B.

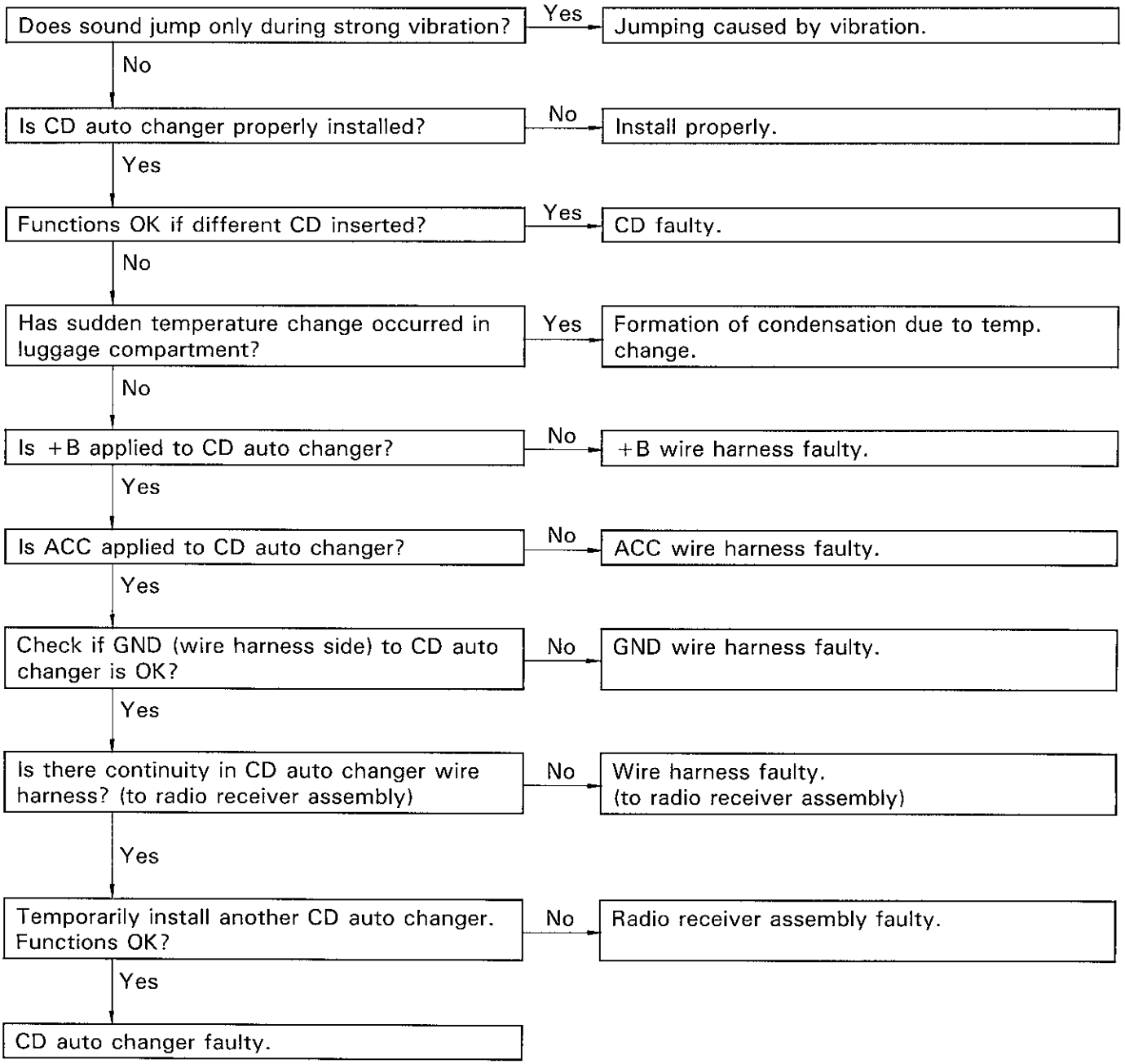

Is +B applied to CD auto changer?
No
+B wire harness faulty.
Yes
Is ACC applied to CD auto changer?
No
ACC wire harness faulty.
Yes
Check if GND (wire harness side) to CD auto changer is OK?
No
GND wire harness faulty.
Yes
Is there continuity in CD auto changer wire harness?
(to Disk player controller)
No
Wire harness faulty.
(to Disk player controller)
Yes
Temporarily install another CD auto changer. Functions OK?
No
Disk player controller faulty.
Yes
CD auto changer faulty.

26-C.


Is there continuity in speaker wire harness?
No
Speaker wire harness faulty.
Yes
Temporarily install another speaker. Functions OK?
Yes
Speaker faulty.
No
Go to step 20-A.

27	CD Auto Changer	SOUND JUMPS

[A]: Radio—Tape Player (Separate Power Amplifier) + CD Auto Changer



28	CD Auto Changer	SOUND QUALITY POOR (VOLUME FAINT)

[A]: Radio—Tape Player (Separate Power Amplifier) + CD Auto Changer

Functions OK if different CD inserted? — Yes → CD faulty.
↓ No
Is radio operating normally? — Yes → Go to No.28-A.
↓ No
Is speaker properly installed? — No → Install properly.
↓ Yes
Temporarily install another speaker. Functions OK? — Yes → Speaker faulty.
↓ No
Go to 28-A.

28-A.

Is +B applied to Disk player controller? — No → +B wire harness faulty.
↓ Yes
Is ACC applied to Disk player controller? — No → ACC wire harness faulty.
↓ Yes
Check if GND (wire harness side) to Disk player controller is OK? — No → GND wire harness faulty.
↓ Yes
Is there continuity in Disk player controller wire harness? (to radio assembly) — No → Wire harness faulty. (to radio assembly)
↓ Yes
Go to No.28-B.

28-B.

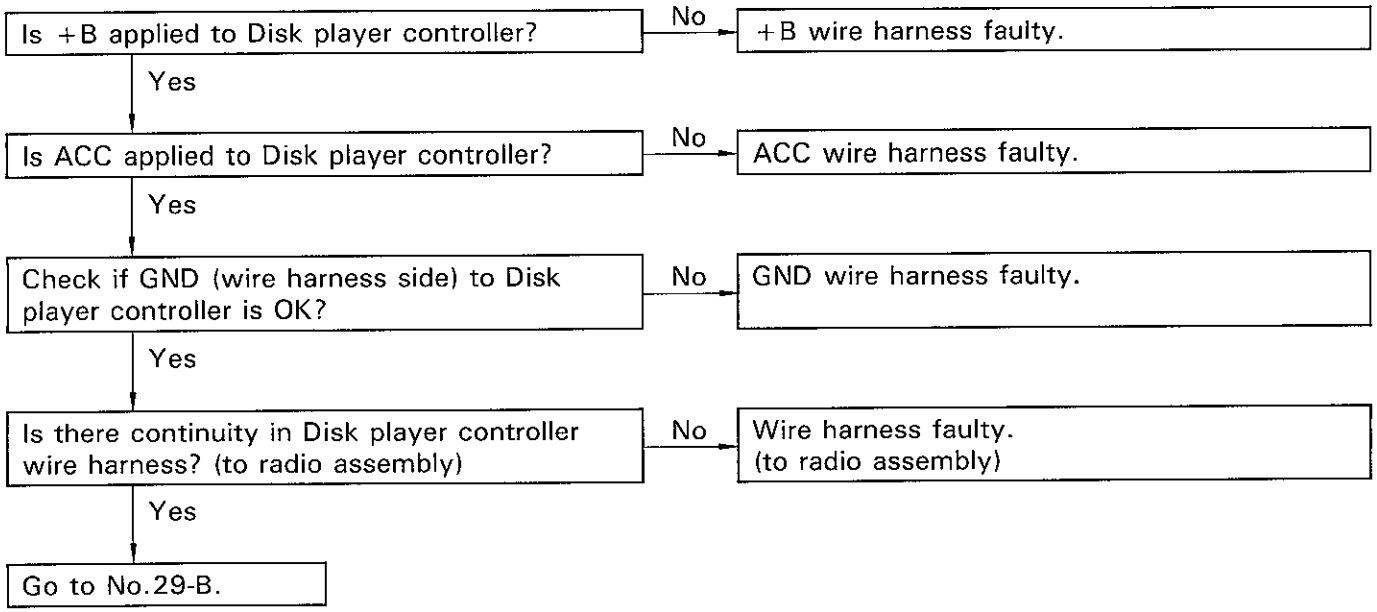
- Is +B applied to CD auto changer? — No → +B wire harness faulty.
- Yes
- Is ACC applied to CD auto changer? — No → ACC wire harness faulty.
- Yes
- Check if GND (wire harness side) to CD auto changer is OK? — No → GND wire harness faulty.
- Yes
- Is there continuity in CD auto changer wire harness? (to Disk player controller) — No → Wire harness faulty. (to Disk player controller)
- Yes
- Temporarily install another CD auto changer. Functions OK? — No → Disk Player controller faulty.
- Yes
- CD auto changer faulty.

29	CD Auto Changer	ANY SPEAKER DOES NOT WORK

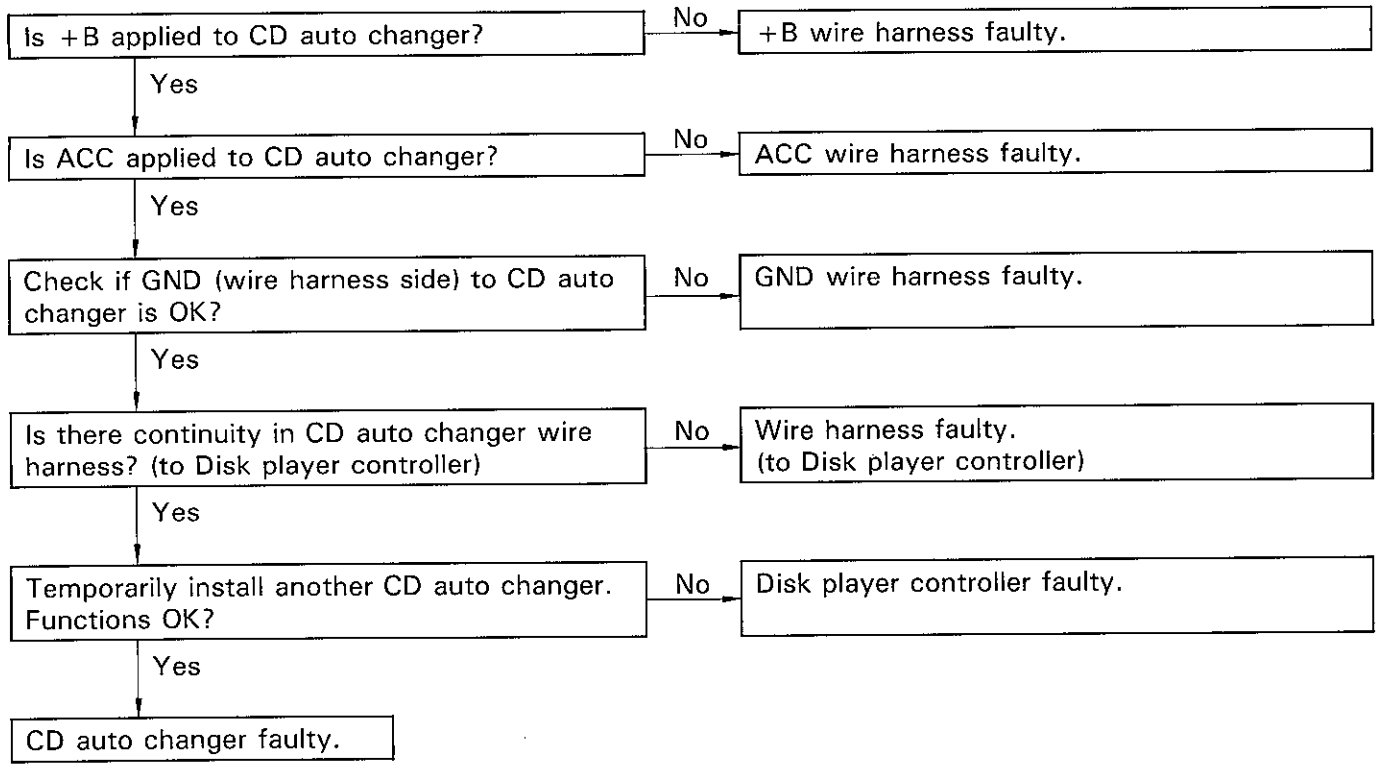
[A]: Radio—Tape Player (Separate Power Amplifier) + CD Auto Changer

- Is radio operating normally? — Yes → Go to step 29-A.
- No
- Is hiss produced by non-functioning speaker? — Yes → Go to step 29-A.
- No
- Is there continuity in speaker wire harness? — No → Speaker wire harness faulty.
- Yes
- Temporarily install another speaker. Functions OK? — Yes → Speaker faulty.
- No
- Go to No. 29-A.

29-A.

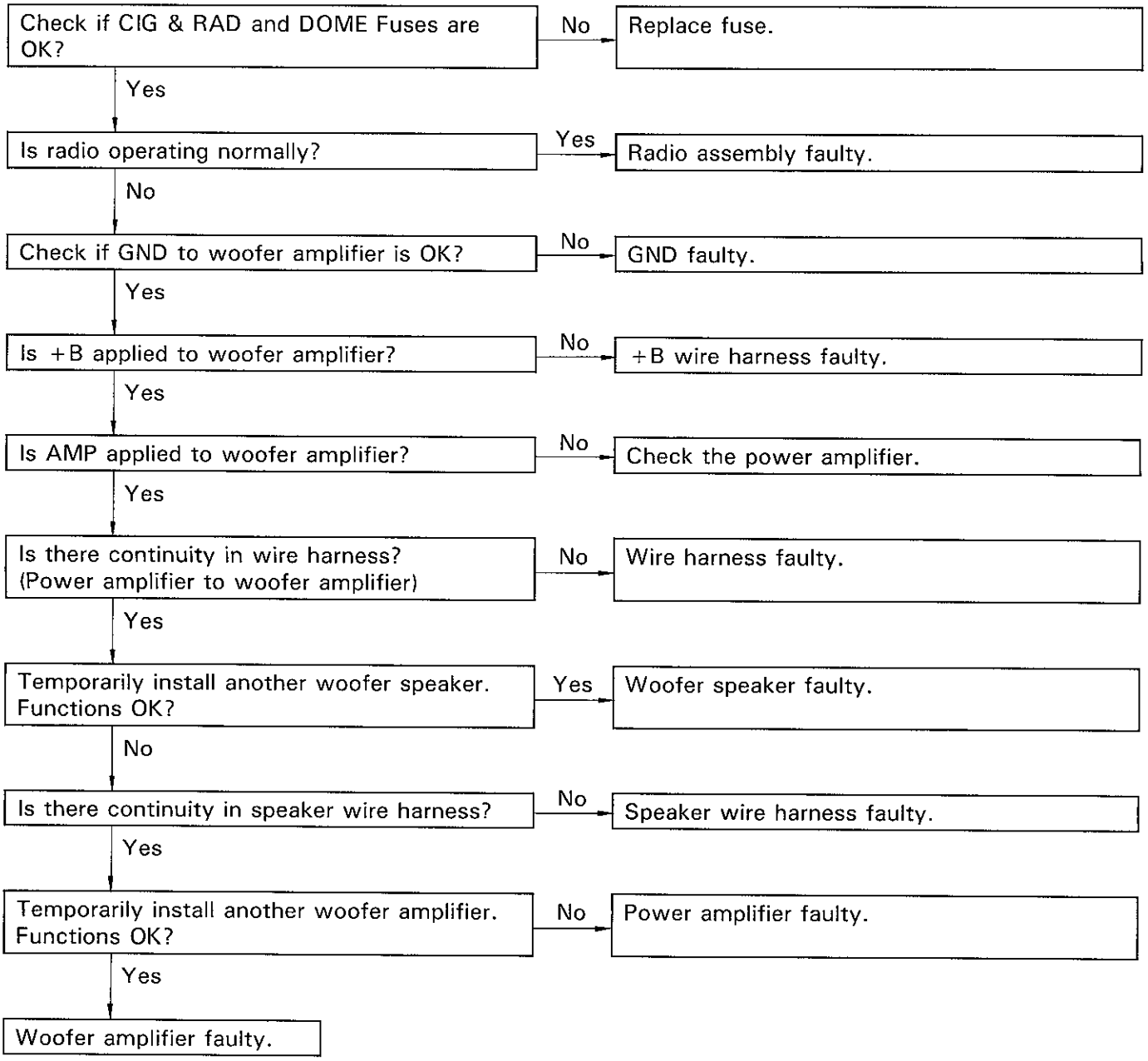

Is +B applied to Disk player controller?
No
+B wire harness faulty.
Yes
Is ACC applied to Disk player controller?
No
ACC wire harness faulty.
Yes
Check if GND (wire harness side) to Disk player controller is OK?
No
GND wire harness faulty.
Yes
Is there continuity in Disk player controller wire harness? (to radio assembly)
No
Wire harness faulty. (to radio assembly)
Yes
Go to No.29-B.

29-B.


Is +B applied to CD auto changer?
No
+B wire harness faulty.
Yes
Is ACC applied to CD auto changer?
No
ACC wire harness faulty.
Yes
Check if GND (wire harness side) to CD auto changer is OK?
No
GND wire harness faulty.
Yes
Is there continuity in CD auto changer wire harness? (to Disk player controller)
No
Wire harness faulty. (to Disk player controller)
Yes
Temporarily install another CD auto changer. Functions OK?
No
Disk player controller faulty.
Yes
CD auto changer faulty.

30	CD Auto Changer	WOOFER SPEAKER DOES NOT WORK

[A]: Radio-Tape Player (Separate Power Amplifier) + CD Auto Changer



31	CD Auto Changer	MAGAZINE WILL NOT EJECT

[A]: Radio—Tape Player (Separate Power Amplifier) + CD Auto Changer

Is auto search button of radio operating normally?
- Yes → Go to step 31-A.
- No →

Check if CIG & RAD and DOME Fuses are OK?
- NG → Replace fuse.
- OK →

Is +B applied to power amplifier?
- Yes → Go to step 31-A.
- No →

+B wire harness faulty.

31-A.

Is +B applied to radio assembly?
- No → +B wire harness faulty.
- Yes →

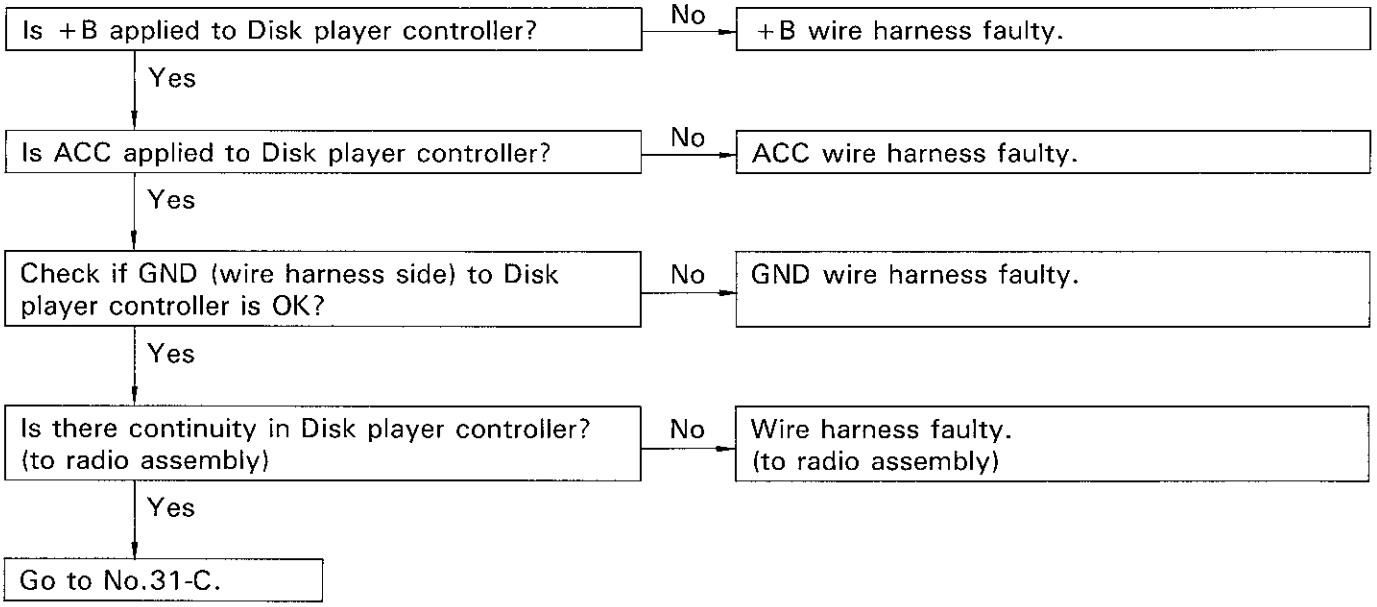
Is ACC applied to radio assemply?
- No → ACC wire harness faulty.
- Yes →

Check if GND (wire harness side) to radio assembly.
- No → GND wire harness faulty.
- Yes →

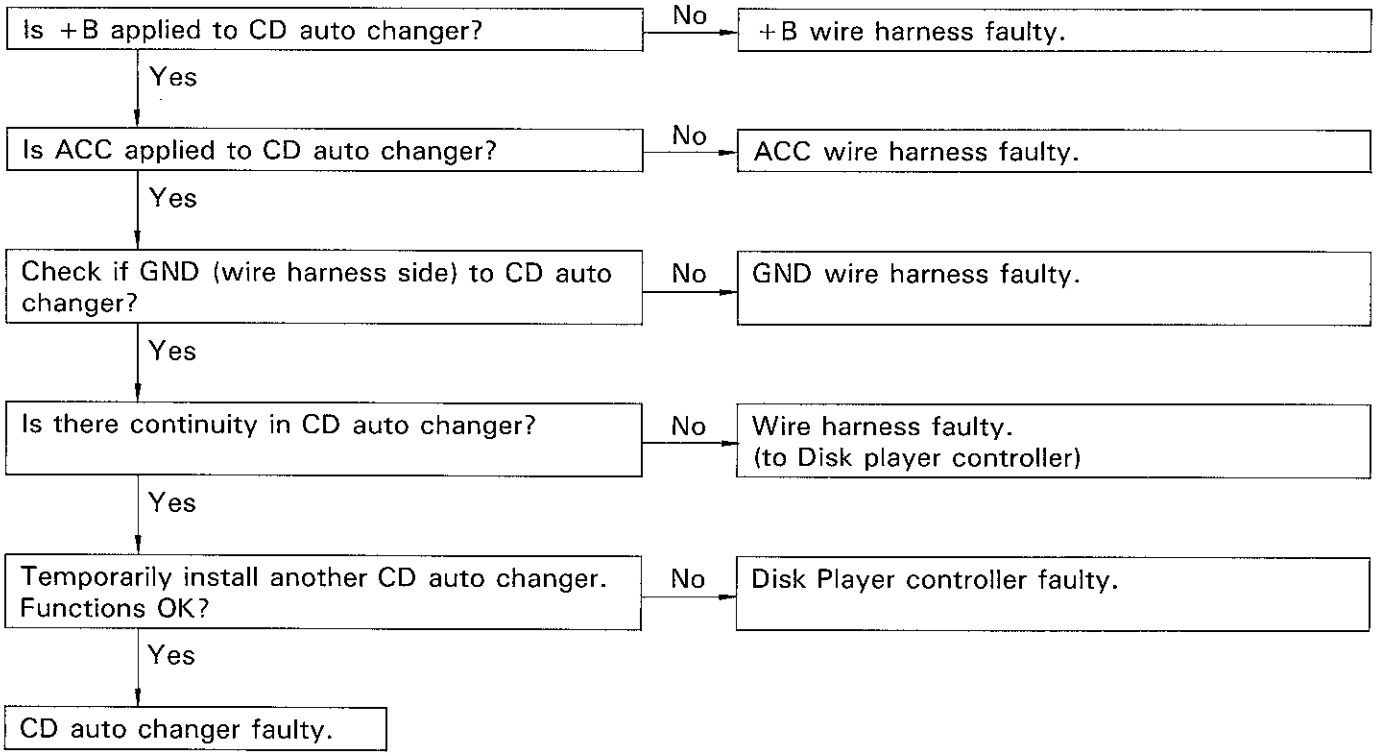
Is there continuity in radio assembly wire harness? (to Power amplifier)
- No → Wire harness faulty. (to Power amplifier.)
- Yes →

Go to 31-B.

31-B.

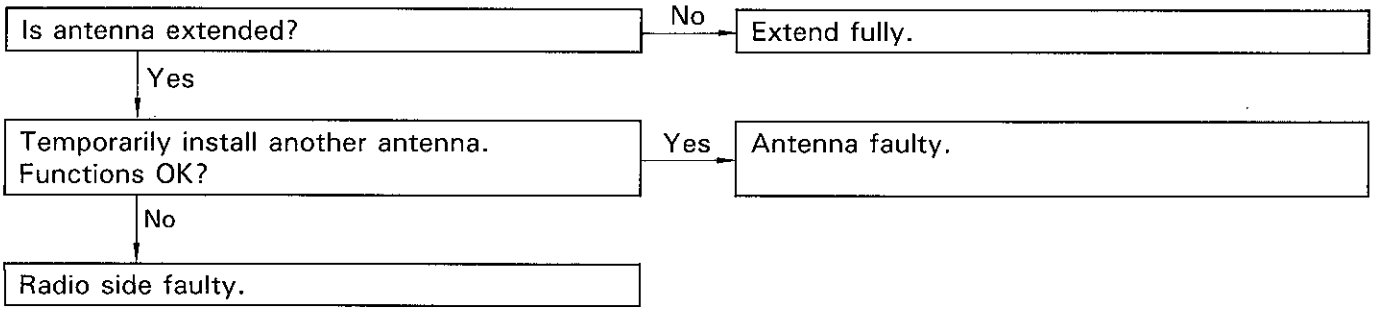

Is +B applied to Disk player controller?
No
+B wire harness faulty.
Yes
Is ACC applied to Disk player controller?
No
ACC wire harness faulty.
Yes
Check if GND (wire harness side) to Disk player controller is OK?
No
GND wire harness faulty.
Yes
Is there continuity in Disk player controller? (to radio assembly)
No
Wire harness faulty. (to radio assembly)
Yes
Go to No.31-C.

31-C.


Is +B applied to CD auto changer?
No
+B wire harness faulty.
Yes
Is ACC applied to CD auto changer?
No
ACC wire harness faulty.
Yes
Check if GND (wire harness side) to CD auto changer?
No
GND wire harness faulty.
Yes
Is there continuity in CD auto changer?
No
Wire harness faulty. (to Disk player controller)
Yes
Temporarily install another CD auto changer. Functions OK?
No
Disk Player controller faulty.
Yes
CD auto changer faulty.

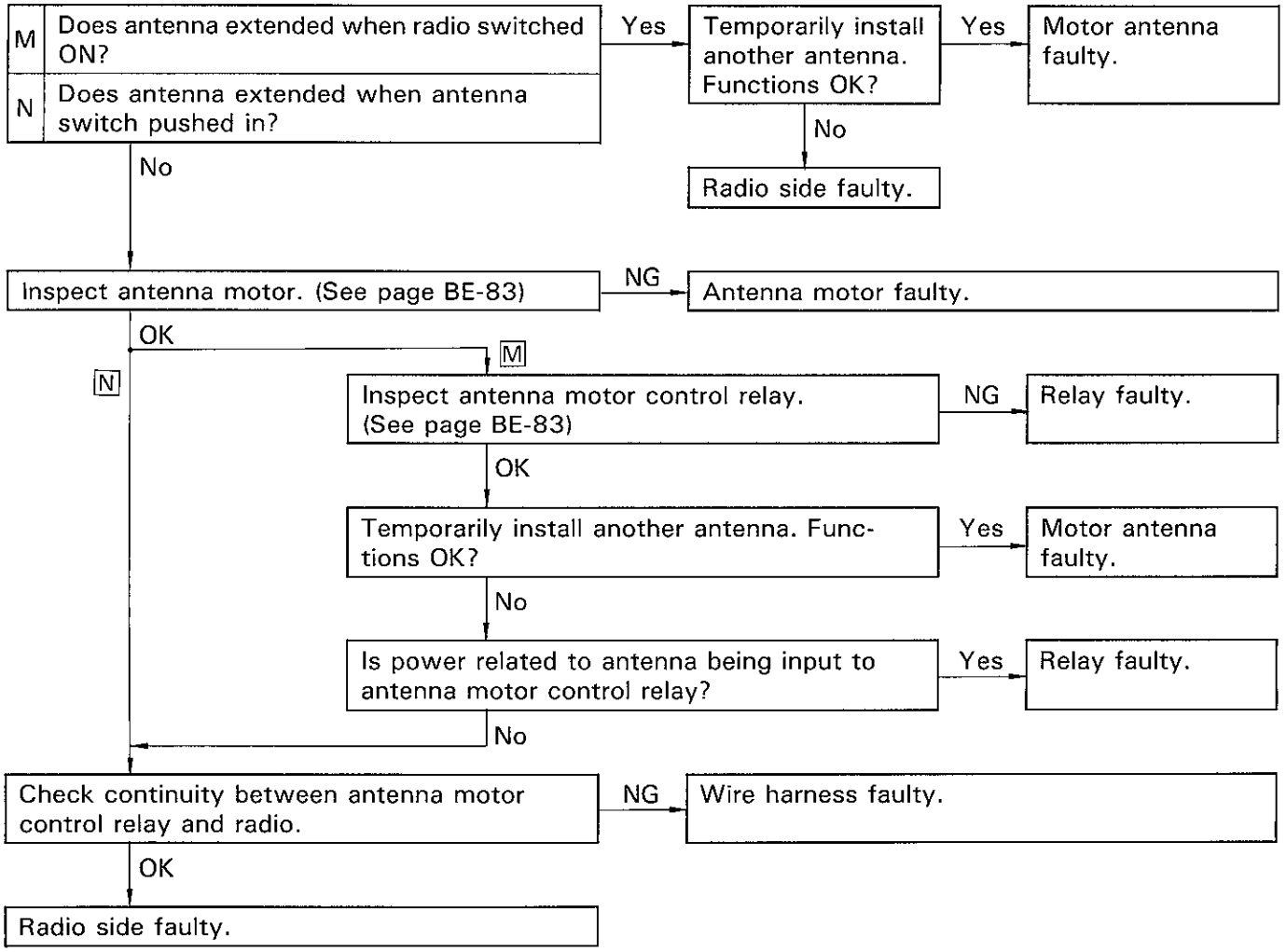
32	Antenna	ANTENNA-RELATED

32-a: Pole Antenna

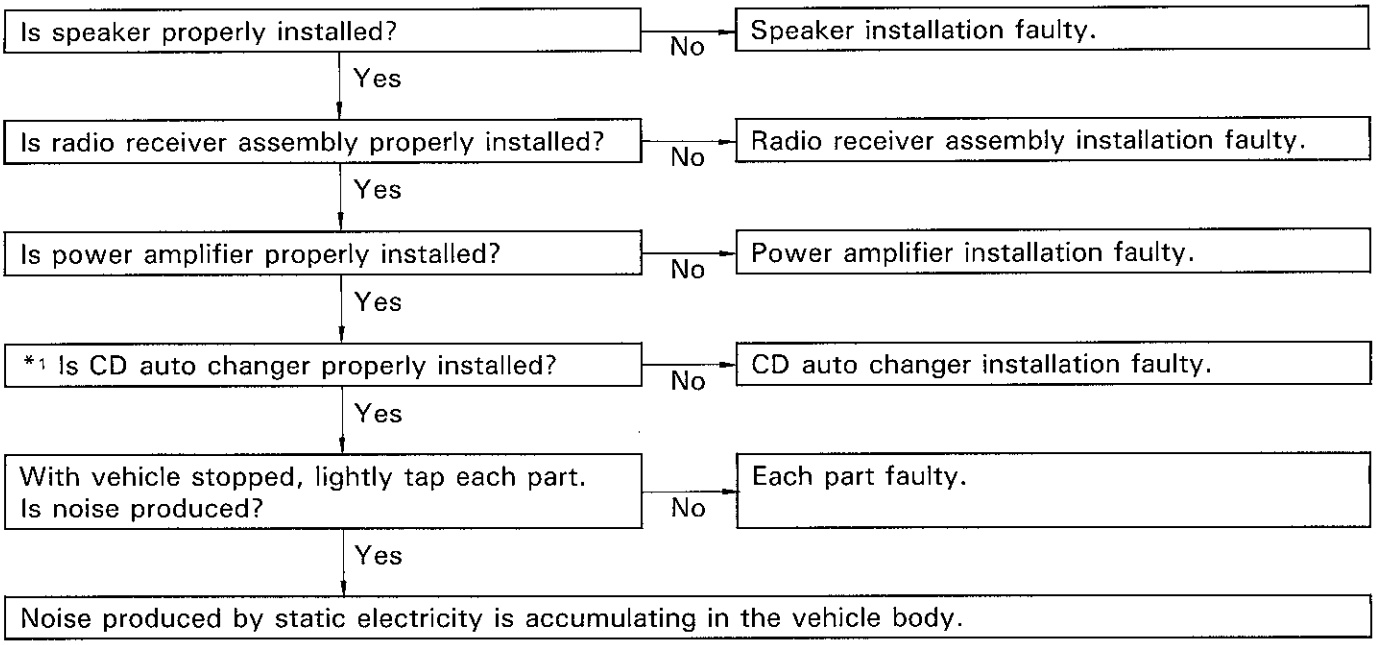


32-b: Motor Antenna

Ⓜ: Motor Antenna (Radio Linked Type) Ⓝ: Motor Antenna (Except Radio-Linked Type)

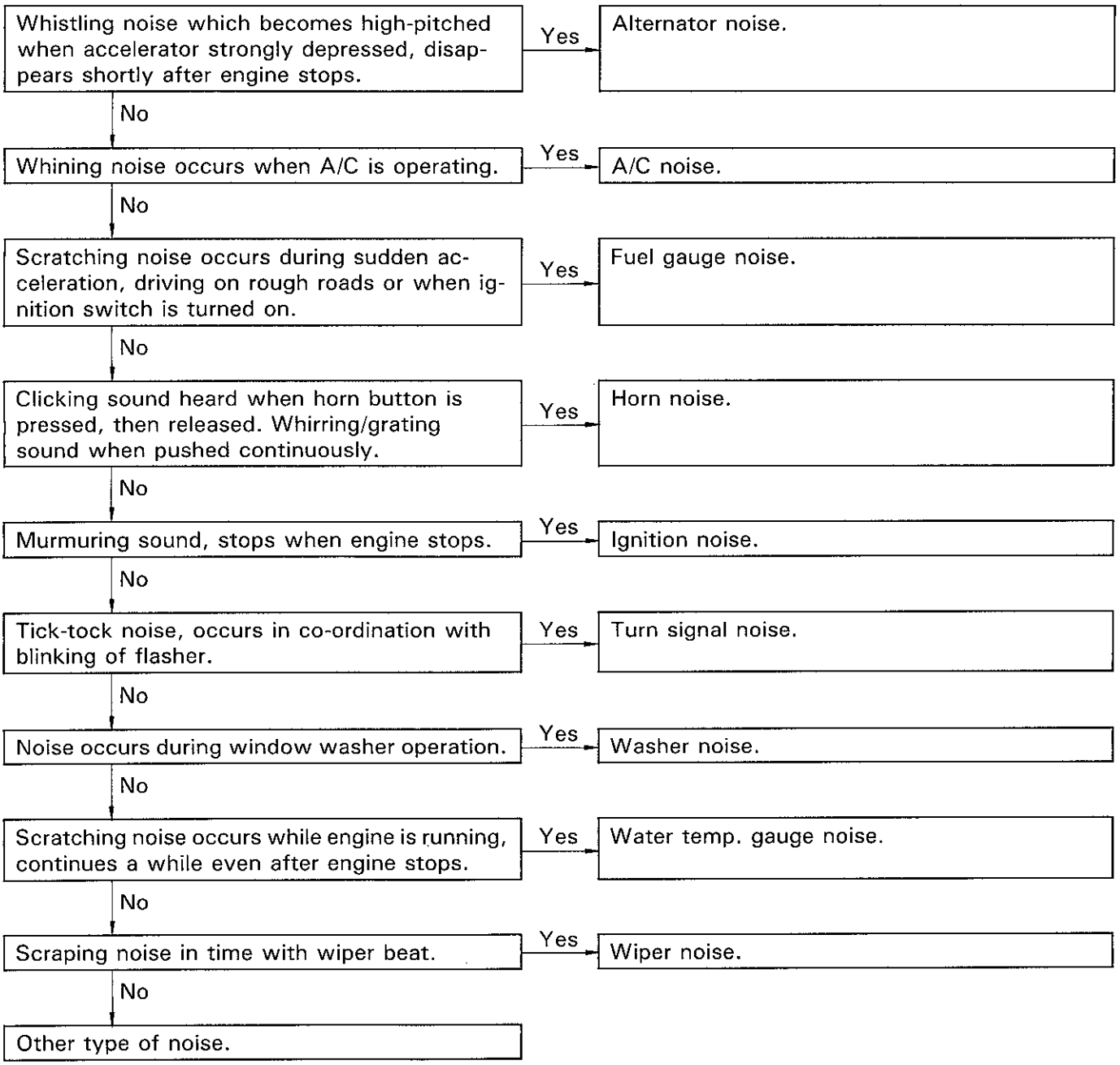


33	Noise	NOISE PRODUCED BY VIBRATION OR SHOCK WHILE DRIVING



*1: only for vehicles with CD player.

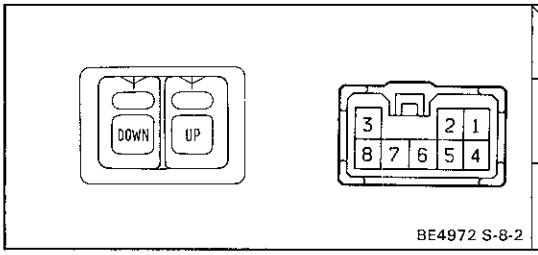
34	Noise	NOISE PRODUCED WHEN ENGINE STARTS



Parts Inspection

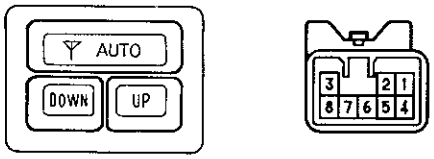
(with Motor Antenna)

1. INSPECT ANTENNA SWITCH
(w/o AUTO Switch Type/Continuity)



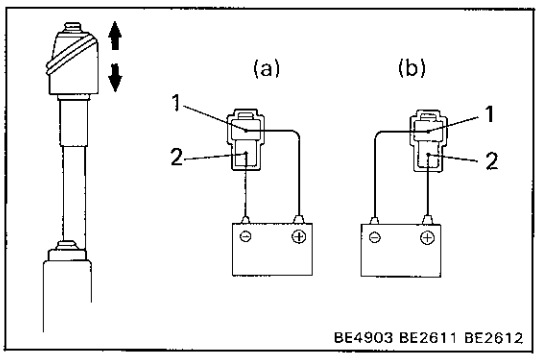
Switch position		Terminal 4	5	7	8	Illumination 1	2
UP Button	Free	○	○			○	○
	Pushed in		○	○			
DOWN Button	Free	○			○	○	○
	Pushed in			○	○		

(w/ AUTO Switch Type/Continuity)



Switch position AUTO	MANUAL	Terminal 4	5	6	7	8	Illumination 1	2
Free	OFF							
	UP	○	○				○	○
	DOWN			○	○			
Lock	OFF		○	○			○	○

If continuity is not as specified, replace the switch.

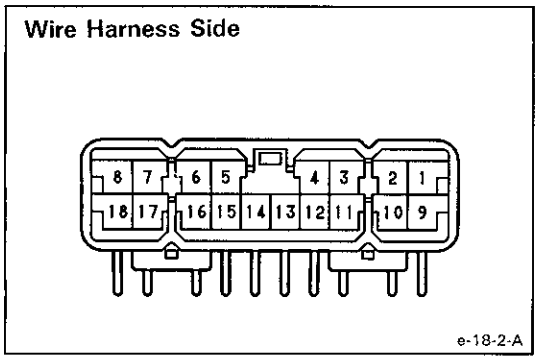


2. INSPECT ANTENNA MOTOR

(a) Connect the positive (+) lead from the battery to terminal 1 and the negative (—) lead to terminal 2, check that the motor turns (moves upward.)

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

If operation is not as specified, replace the motor.



3. INSPECT ANTENNA MOTOR CONTROL RELAY

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

Check for	Tester connetion	Condition		Specified value
Continuity	3 — 6	Constant		Continuity
	5 — Ground	Constant		Continuity
Voltage	4 — Ground	Constant		Battery voltage
	7 — Ground	Ignition switch position	LOCK or ACC	No voltage
			ON	Battery voltage
	17 — Ground	Ignition switch position	LOCK	No voltage
			ACC or ON	Battery voltage

Check for	Tester connection	Condition				Specified value
		Ignition SW	Radio SW	Radio band	Cassette	
Voltage	13 — Ground	LOCK	—	—	—	No voltage
		ACC or ON	OFF	—	OFF	No voltage
		ACC or ON	ON	—	—	Battery voltage
		ACC or ON	—	—	ON	Battery voltage
	14 — Ground	LOCK	—	—	—	No voltage
		ACC or ON	OFF	—	—	No voltage
		ACC or ON	ON	—	OFF	Battery voltage
		ACC or ON	ON	—	ON	No voltage
	15 — Ground	LOCK	—	—	—	No voltage
		ACC or ON	OFF	—	—	No voltage
		ACC or ON	ON	AM	OFF	Battery voltage
		ACC or ON	ON	AM	ON	No voltage
		ACC or ON	ON	FM	OFF	No voltage
	16 — Ground	LOCK	—	—	—	No voltage
		ACC or ON	OFF	—	—	No voltage
		ACC or ON	ON	—	OFF	Battery voltage
		ACC or ON	ON	—	ON	No voltage

If continuity is not as specified, replace the relay.