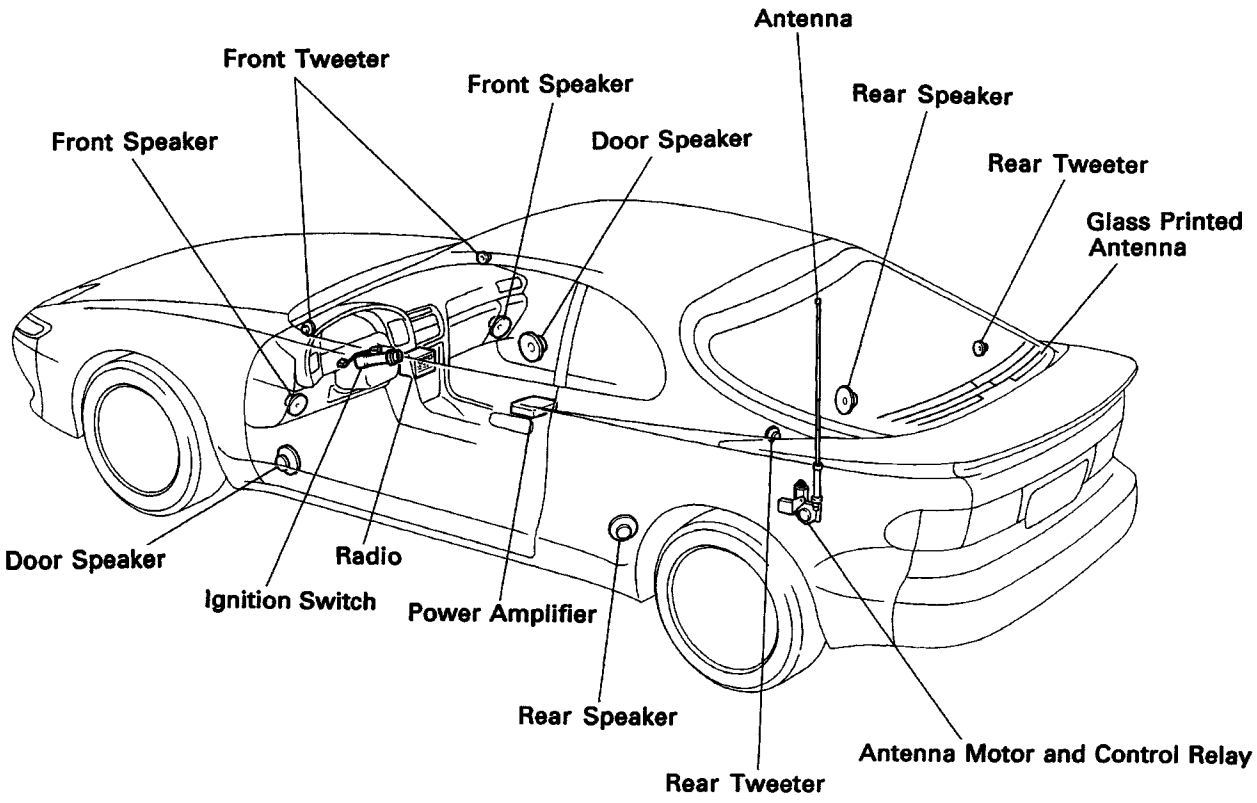
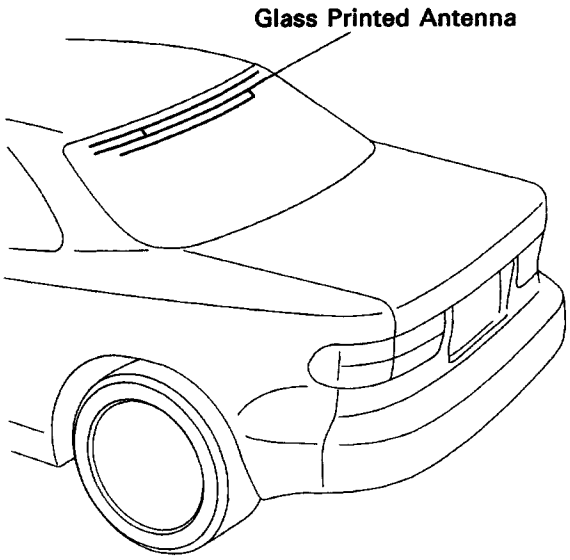
AUDIO SYSTEM

PARTS LOCATION

Liftback



Coupe



BE5773
BE4121

SYSTEM DESCRIPTION

RADIO WAVE BAND

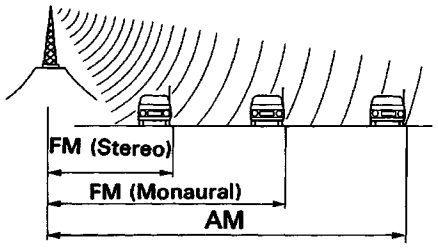
The radio wave bands used in radio broadcasting are as follows:

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

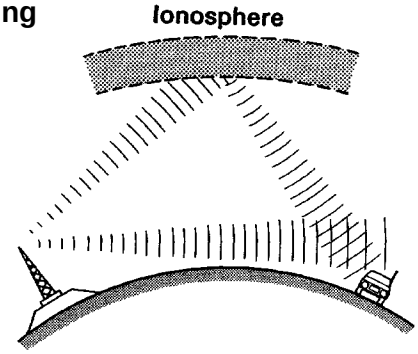
RECEPTION PROBLEMS

Besides the problem of static, there are also the prob–lems 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”. Multipath

Fading

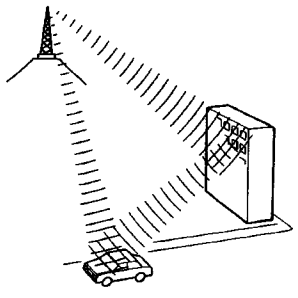


BE2819

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.

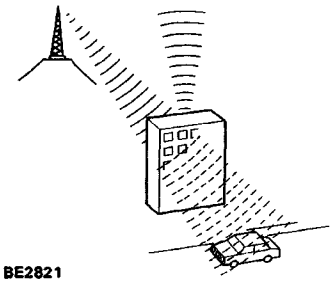
Multipath


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”.

Fade Out


BE2821

COMPACT DISC PLAYER

Compact Disc (hereafter called “CD”) players use a laser beam pick–up 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

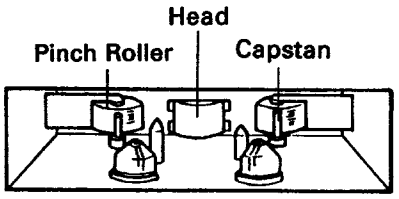
(Tape Player)

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.

Example:



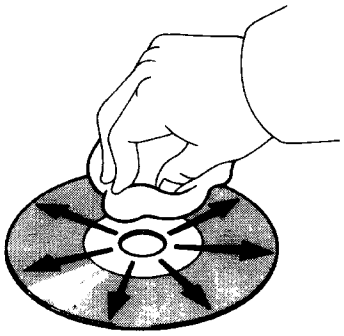
N02560

(CD Player)

Disc Cleaning

If the Disc gets dirty, clean the Disc by wiping the sur–faces 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.

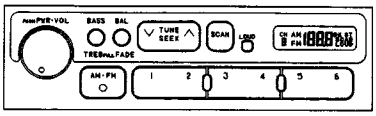


BE4331

AUDIO TYPES

Example:

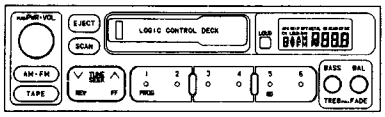
Radio w/o Tape Player



(Symbol: R)

N02887

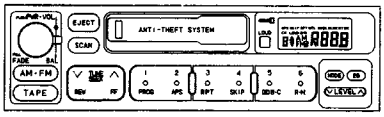
Radio – Type Player Unit



(Symbol: U)

N02888

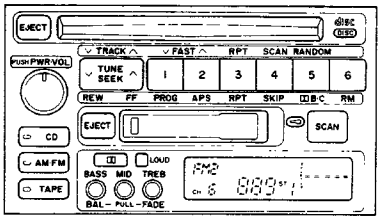
Radio – Tape Player (Separate)



(Symbol: S)

N02889

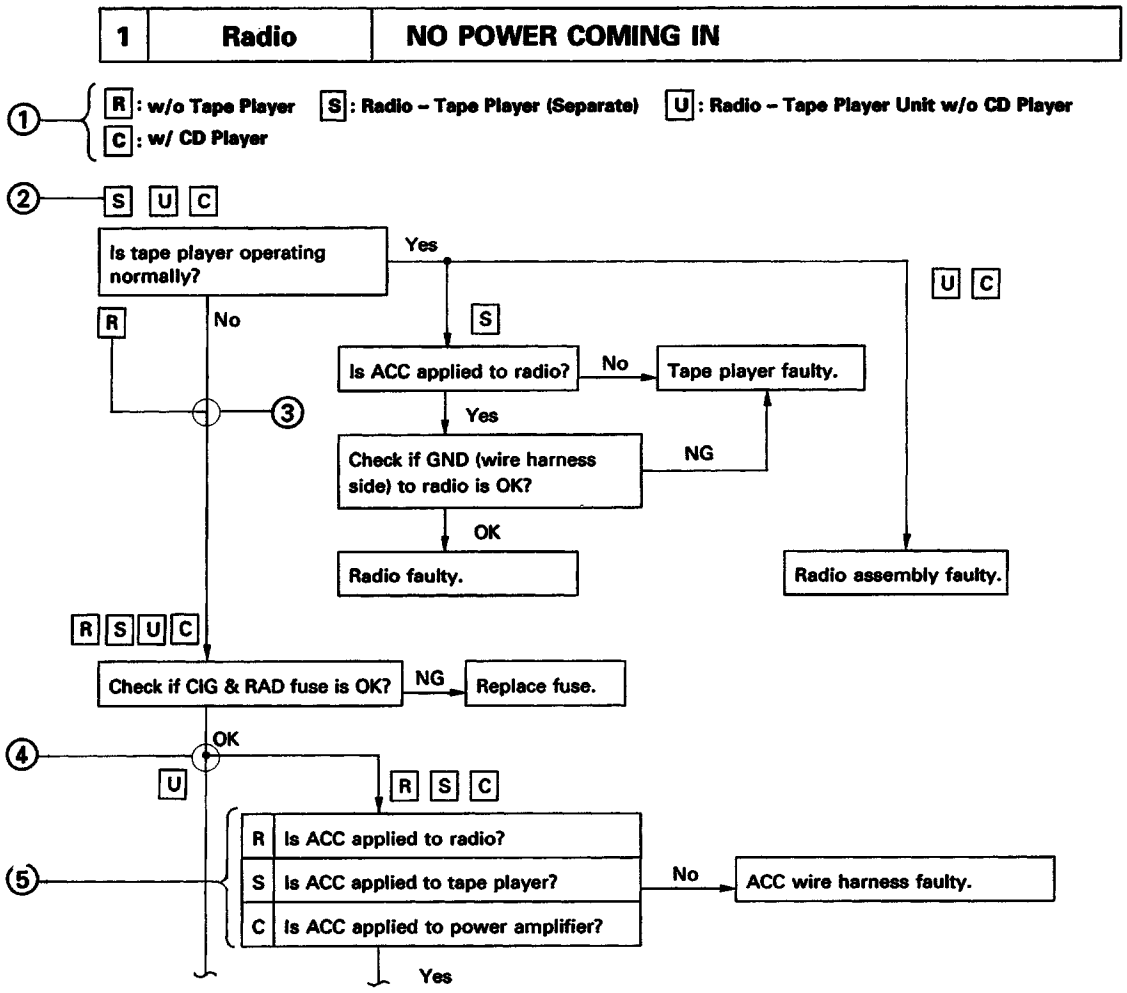
Radio – Tape Player – CD Player Unit



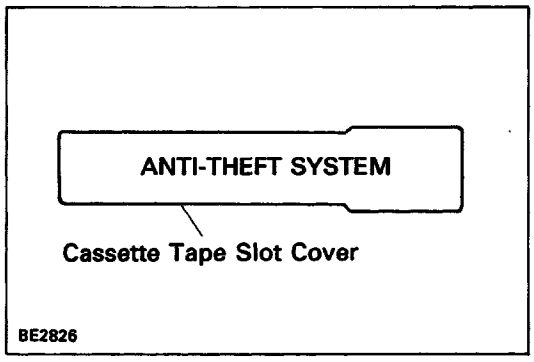
(Symbol: C)

BE5779

HOW TO USE DIAGNOSTIC CHART



(1) Audio system type and symbol used.
HINT: Confirm the applicable type of audio system. (See page **BE–126**).
(2) Symbol for type of audio system the question applies to.
HINT: If the audio system type is not applicable, proceed to next question below.
(3) Junction without black circle.
HINT: Proceed to next question below.
(4) Junction with black circle.
HINT: Proceed to question for applicable audio system type.
(5) HINT: Select question for applicable audio system type.



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 display–ed 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.

1. 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 section, “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).

HINTS: 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 corning 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

Turn ignition key from LOCK position to ACC position.

Display A:
ID Number is set.

"SEC" display disappears after 1 seconds.

No

Yes

Radio switch ON.

OK

Normal operation.

NG

Cancel ID number, refer to each malfunction item.

Display E:
ANTI–THEFT SYSTEM operation condition (ID number input error 10 times or more.)

Take to designated radio service station.

Display B

Radio switch ON.

Display B

Refer to each malfunction item.

Display D

Normal operation.

ANTI–THEFT SYSTEM operation condition.
(ID number input error 9 times or less.)
Input ID number to cancel ANTI–THEFT SYSTEM, and check display.

Display A → B

Radio switch ON.

Display D

ANTI–THEFT SYSTEM cancelled, check audio system again.

OK

Normal operation.

NG

Cancel ID number, refer to each malfunction item.

Display B

Refer to each malfunction item.

Display E

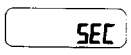
Take to designated radio service station.

Display C → A

ANTI–THEFT SYSTEM not cancelled. OD number input error 9 times or less.)

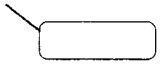
(Liquid Crystal Display (LCD) for Audio System)

Display "A"



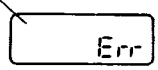
BE2814

Display "B"
Blank, No Illumination



BE2815

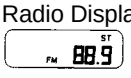
Display "C"
Error Times



BE5776

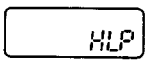
Display "D" Example:

Radio Display



BE2817

Display "E"



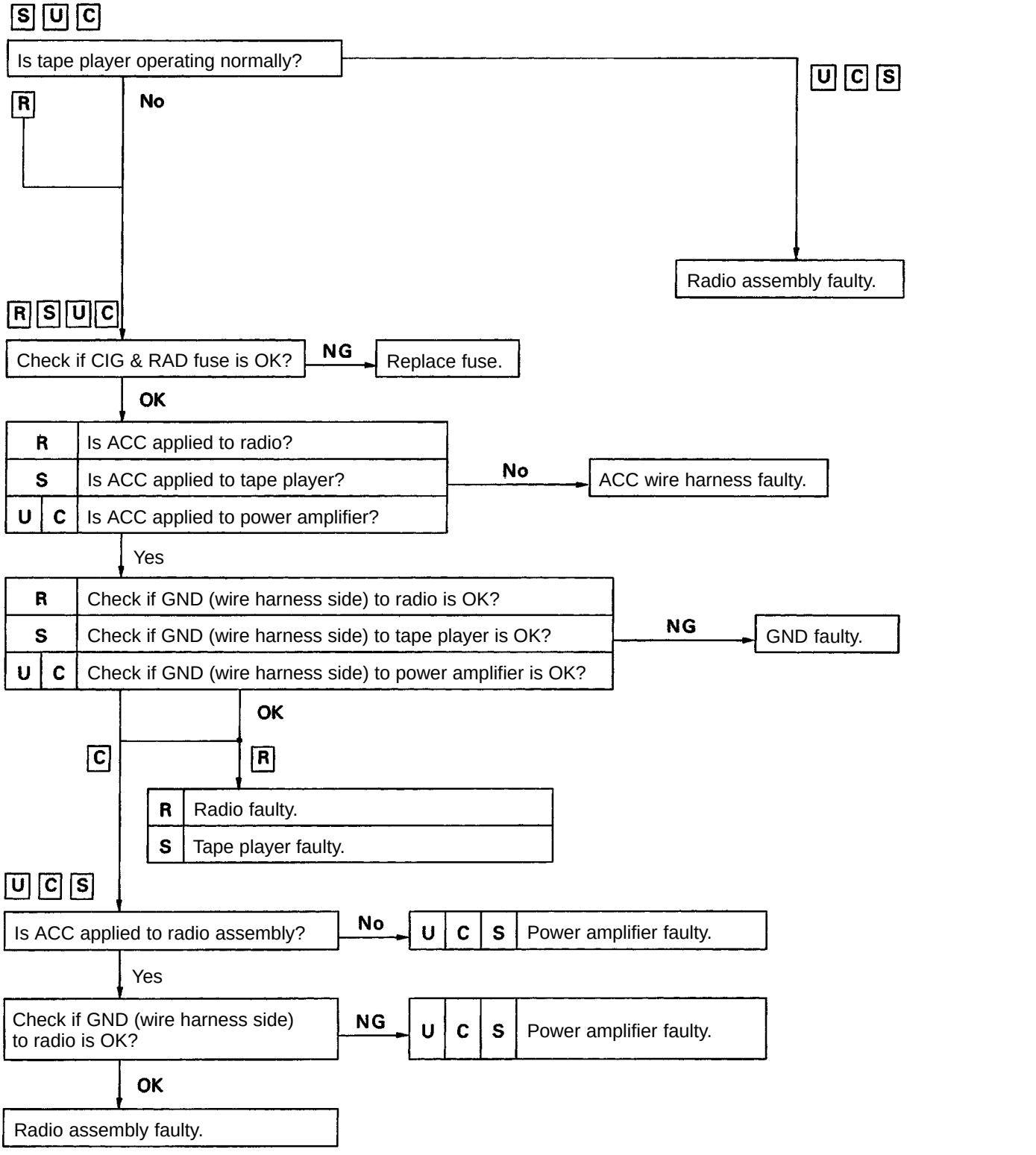
BE5777

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.

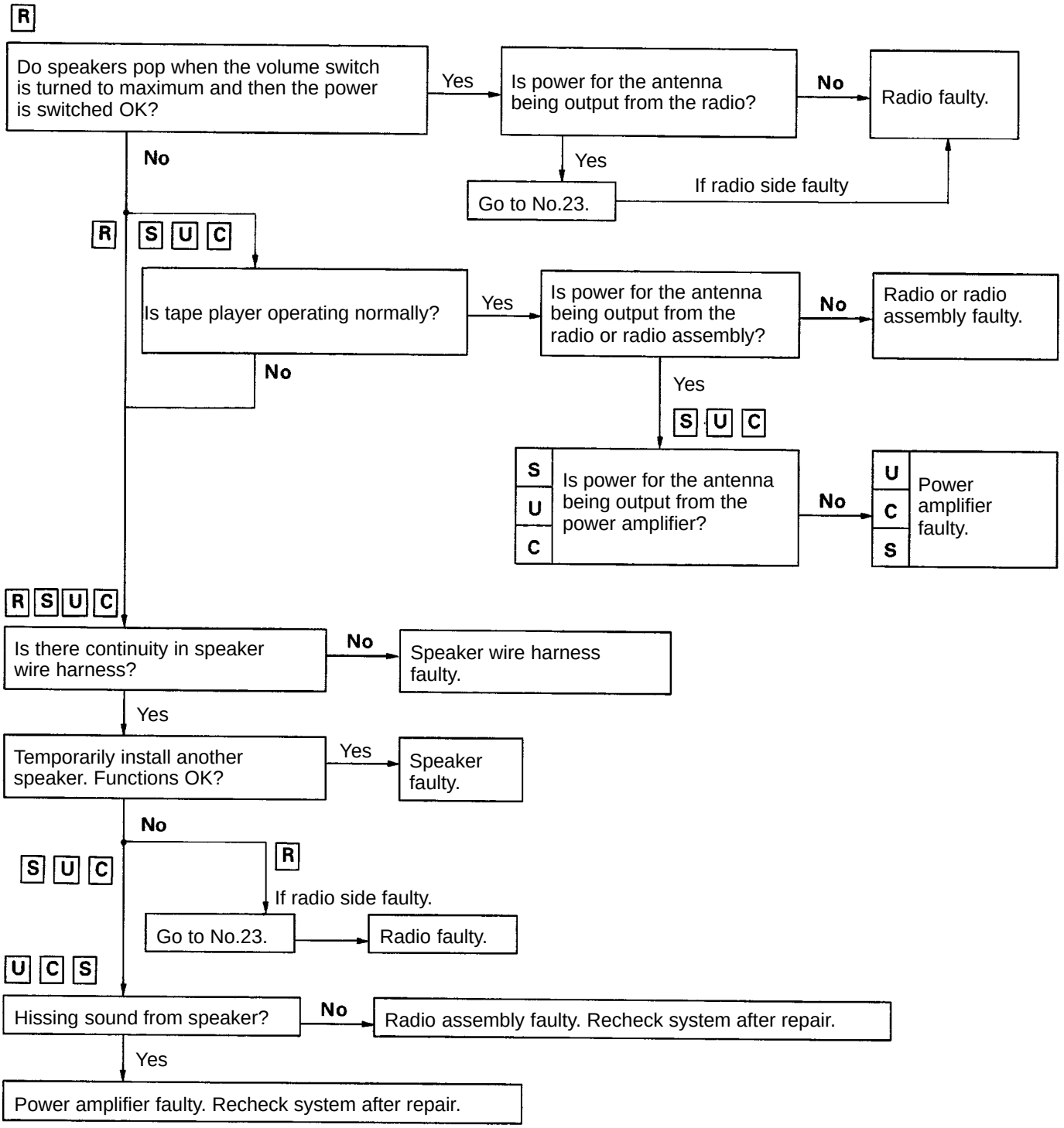
1 Radio — NO POWER COMING IN

R : w/o Tape Player **S : Radio – Tape Player (Separate)** **U : Radio – Tape Player Unit**
C : Radio – Tape Player – CD Player Unit



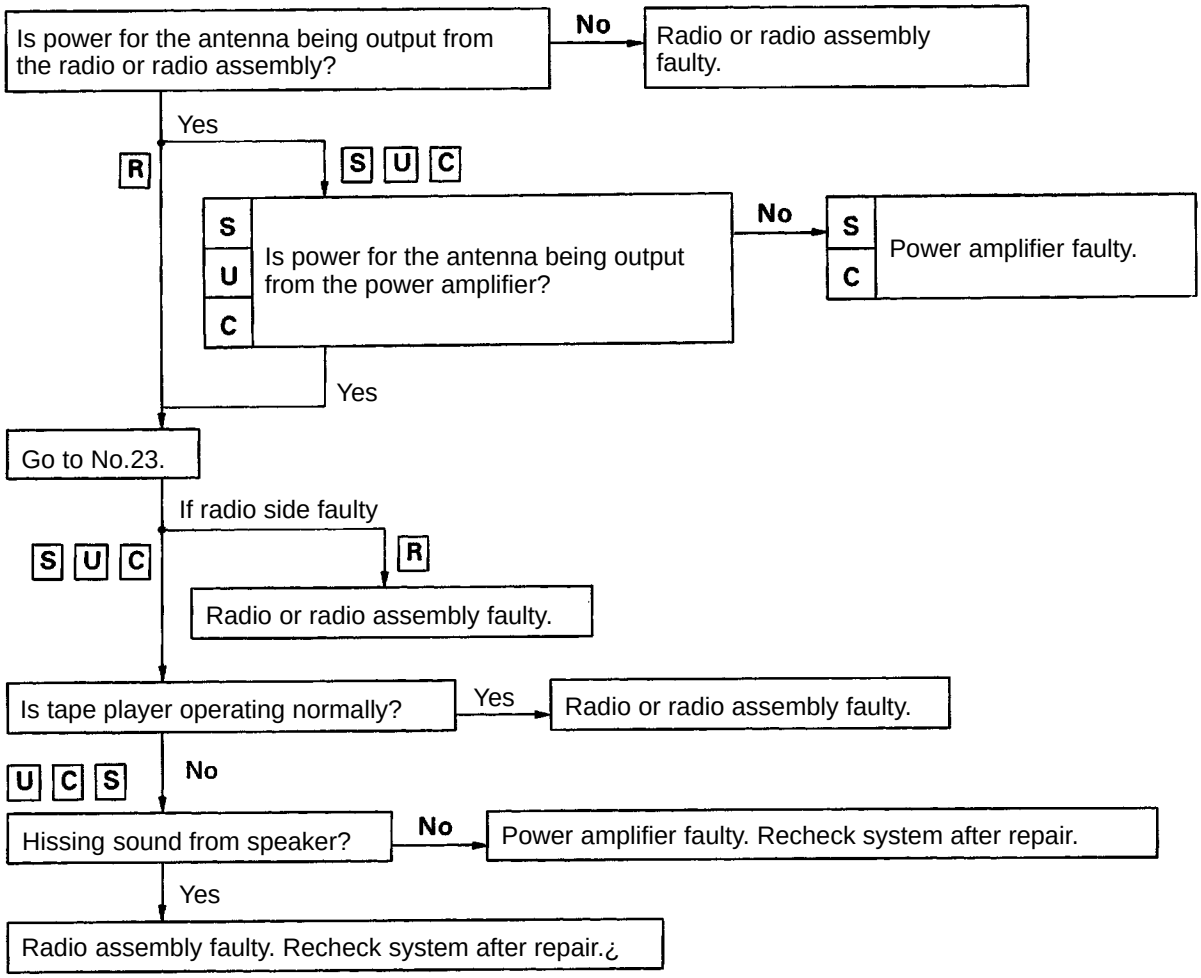
2 Radio — POWER COMING IN, BUT RADIO NOT OPERATING

R : w/o Tape Player **S : Radio – Tape Player** **U : Radio – Tape Player Unit**
C : Radio – Tape Player – CD Player Unit



3 Radio — NOISE PRESENT, BUT AM–FM NOT OPERATING

R : w/o Tape Player **S : Radio – Tape Player** **U : Radio – Tape Player Unit**
C : Radio – Tape Player – CD Player Unit



4 Radio — EITHER SPEAKER DOES NOT WORK

R : w/o Tape Player **[S] : Radio – Tape Player** **U : Radio – Tape Player unit**
C : Radio – Tape Player – CD Player Unit

S U C

Is tape player operating normally? — Yes → Radio or radio assembly faulty.

NO

R S U C

Is hiss produced by non–functioning speaker? — Yes →

R	Radio faulty.
S, U	Radio assembly faulty.
C	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	Radio faulty.
S, U	Radio assembly faulty.
C	Radio amplifier faulty. Recheck system after repair.

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

R : w/o Tape Player **S : Radio – Tape Player** **U : Radio – Tape Player Unit**
C : Radio – Tape Player – CD Player Unit

Problem with radio wave signals or location? (See page BE–125) — Yes → Poor signals, poor location.

No

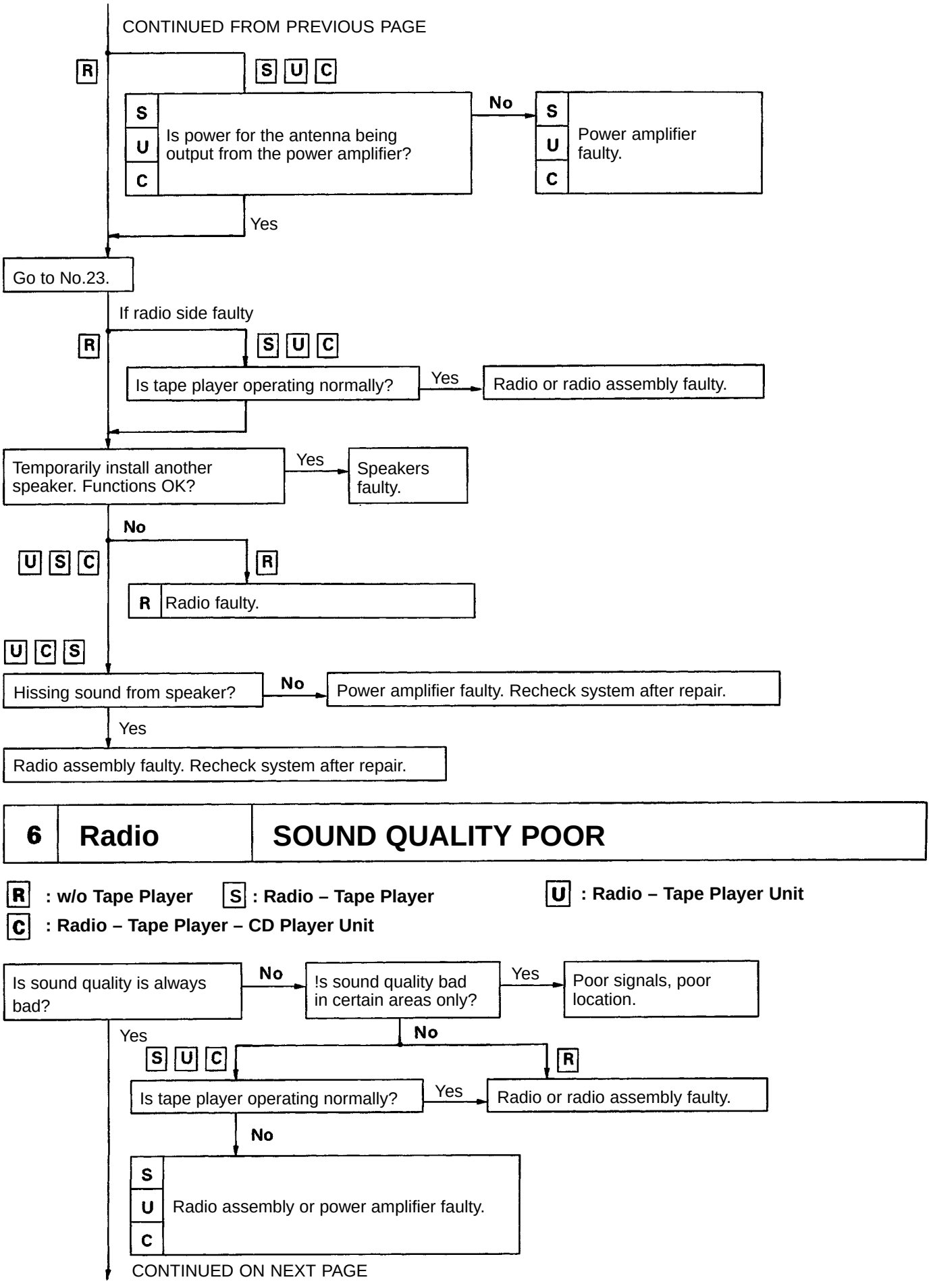
Are both AM and FM defective? — No → Radio or radio assembly faulty.

Yes

Is power for the antenna being output from the radio or radio assembly? — No → Radio or radio assembly faulty.

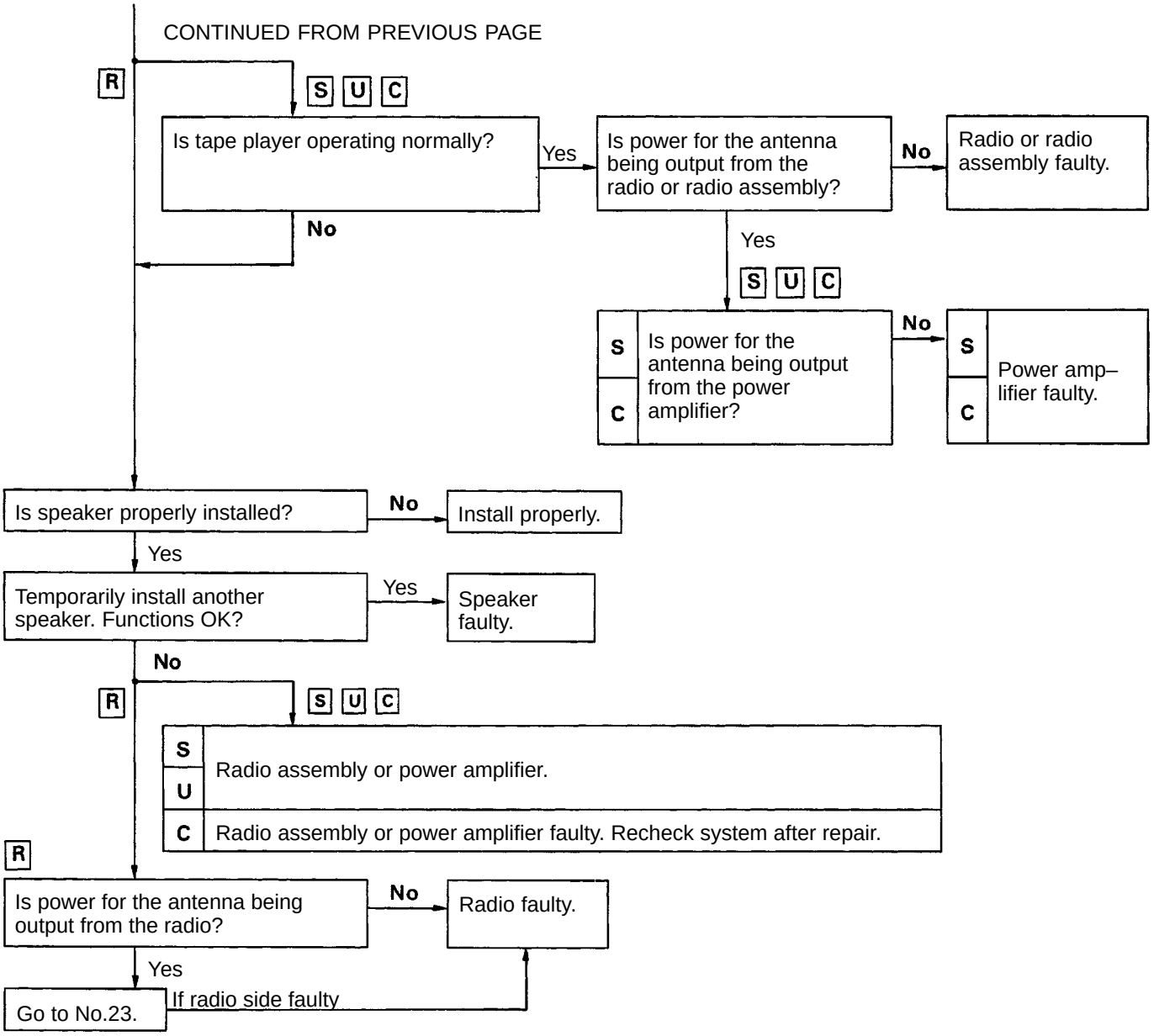
Yes

CONTINUED ON NEXT PAGE



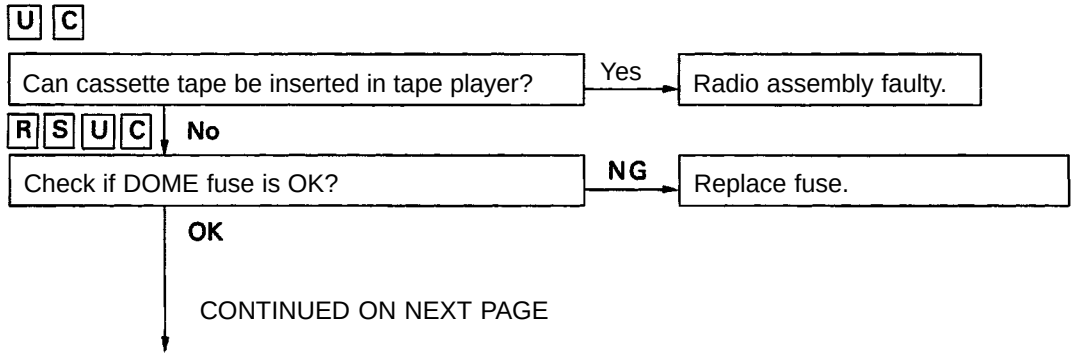
6 Radio — SOUND QUALITY POOR

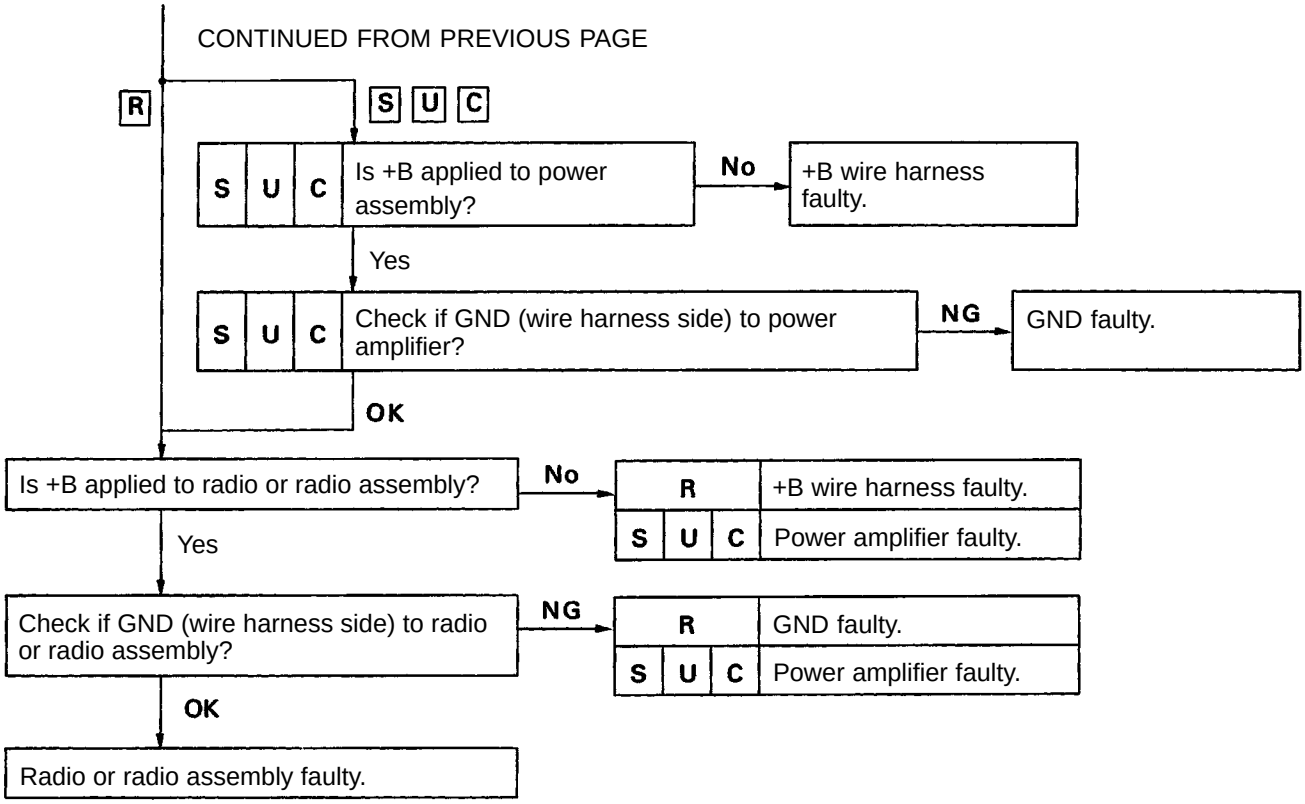
R : w/o Tape Player **S : Radio – Tape Player** **U : Radio – Tape Player Unit**
C : Radio – Tape Player – CD Player Unit



7 Radio — CANNOT SET STATION SELECT BUTTON, PRESET MEMORY DISAPPEARS

R : w/o Tape Player **S : Radio – Tape Player** **U : Radio – Tape Player Unit**
C : Radio – Tape Player – CD Player Unit

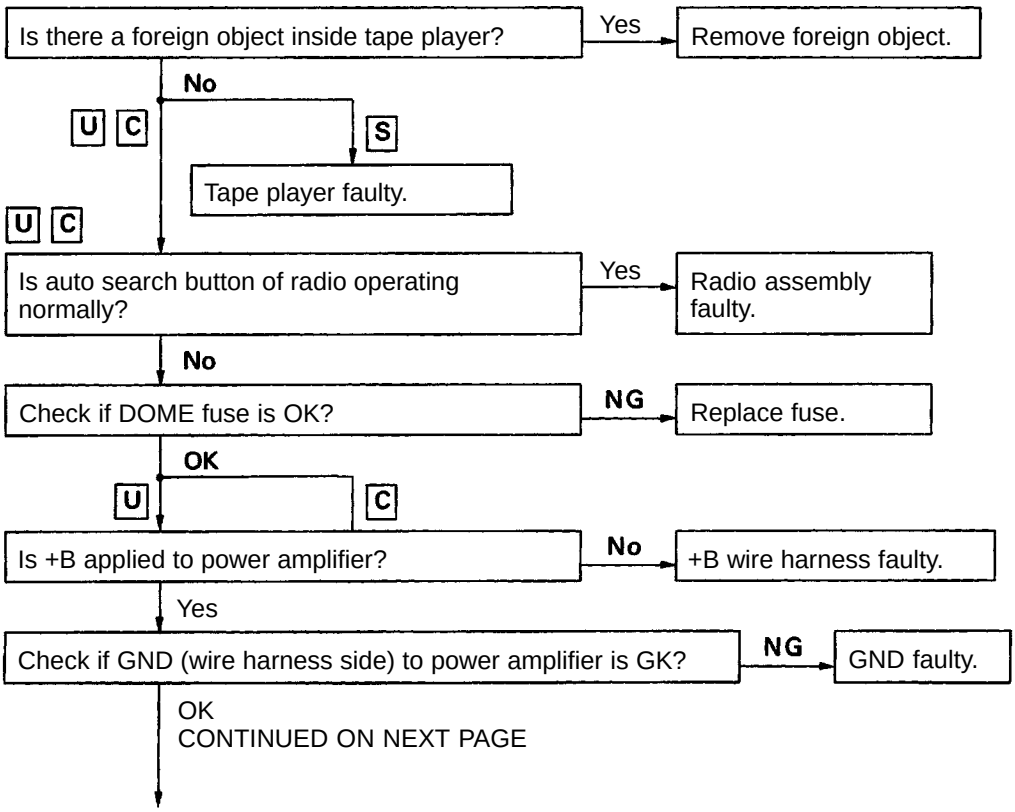


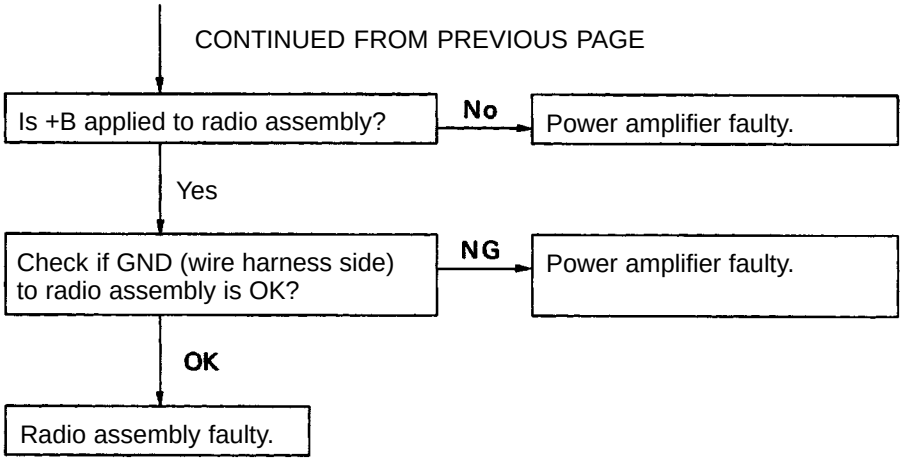


8 Tape Player CASSETTE TAPE CANNOT BE INSERTED

S : Radio – Tape Player **U : Radio – Tape Player Unit**

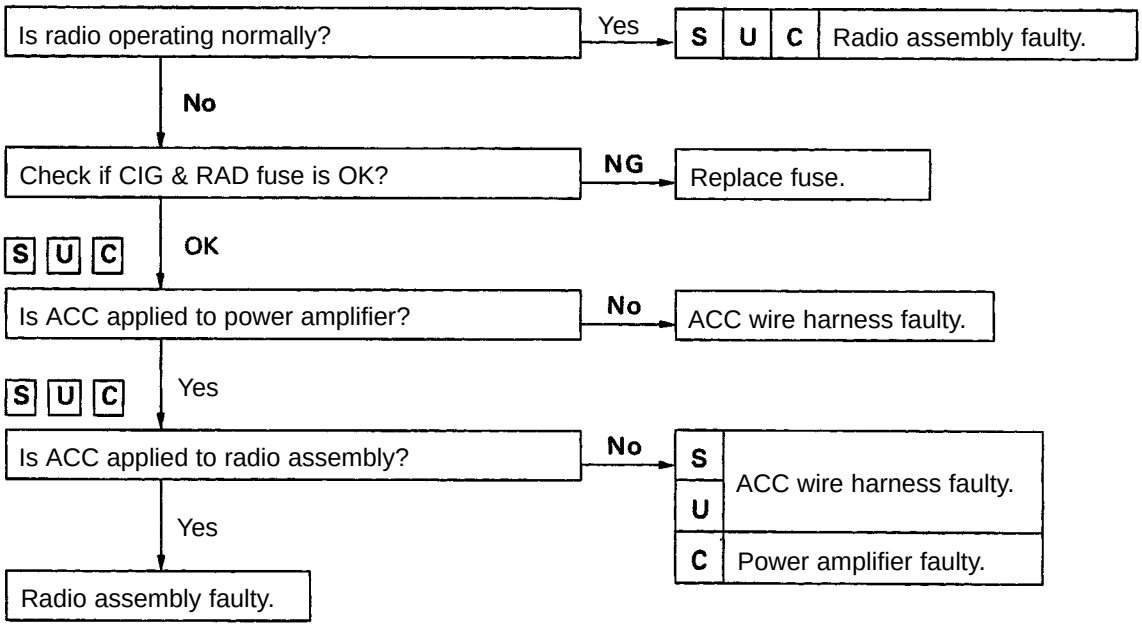
C : Radio – Tape Player – CD Player Unit





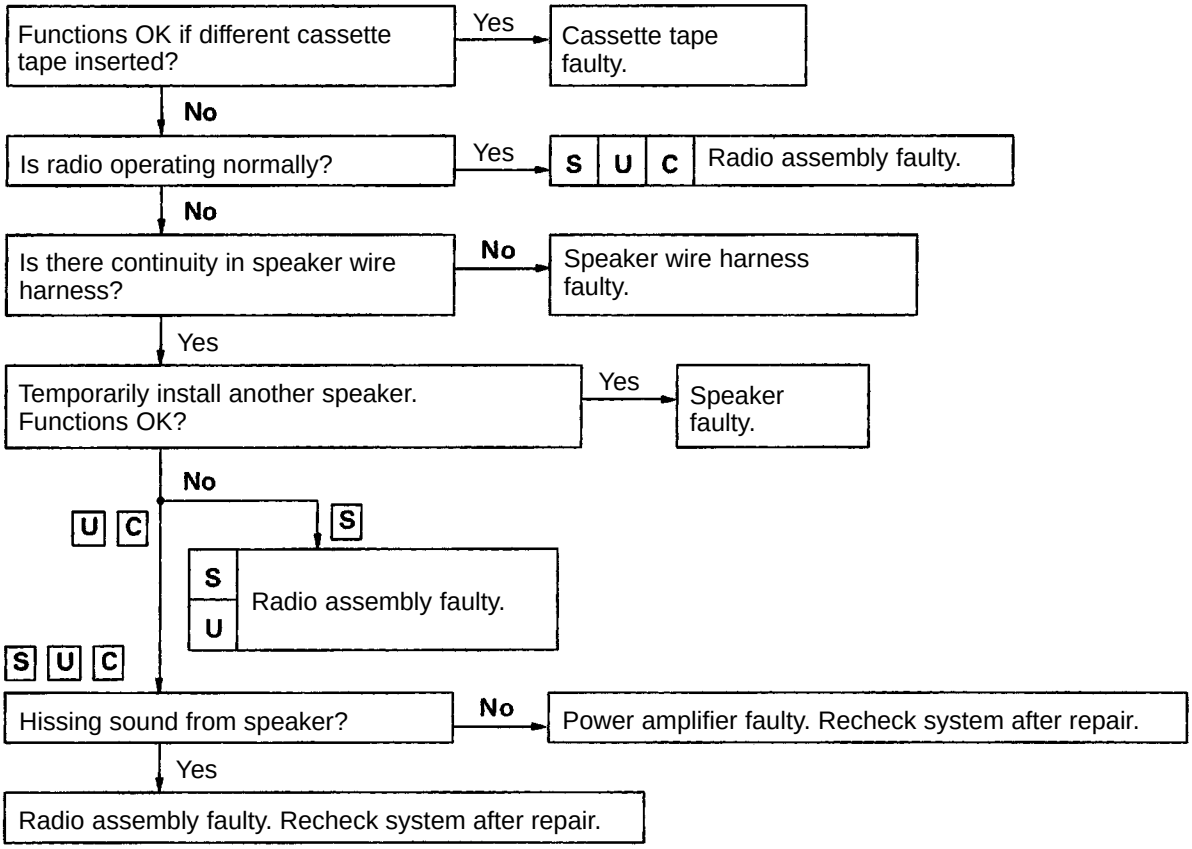
9 Tape Player — CASSETTE TAPE INSERTS, BUT NO POWER

S : Radio – Tape Player **U : Radio – Tape Player Unit**
C : Radio – Tape Player – CD Player Unit



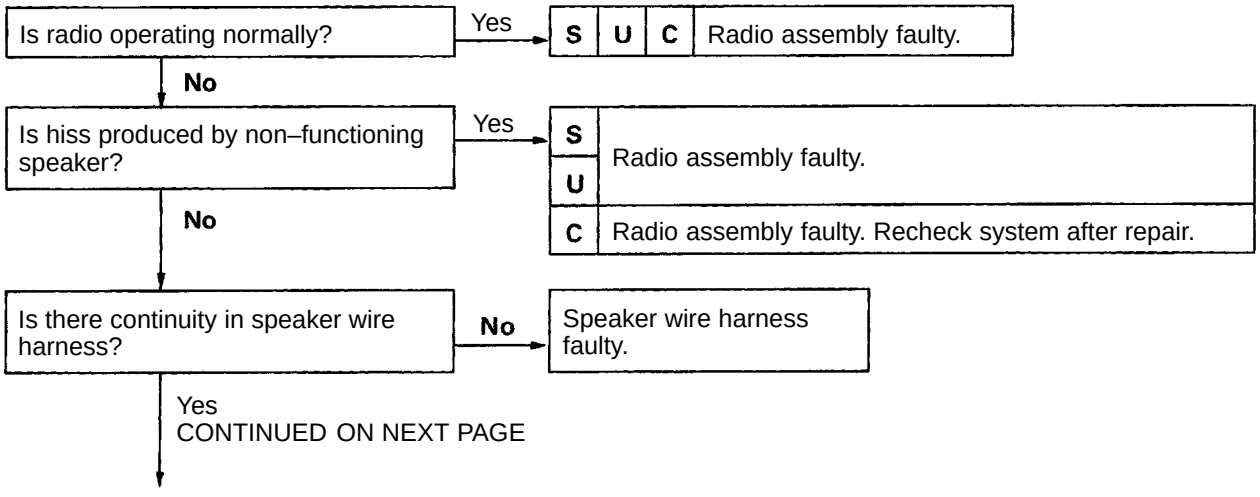
10 Tape Player — POWER COMING IN, BUT TAPE PLAYER NOT OPERATING

S : Radio – Tape Player **U : Radio – Tape Player Unit**
C : Radio – Tape Player – CD Player Unit



11 Tape Player — EITHER SPEAKER DOES NOT WORK

S : Radio – Tape Player **U : Radio – Tape Player Unit**
C : Radio – Tape Player – CD Player Unit



CONTINUED ON NEXT PAGE

CONTINUED FROM PREVIOUS PAGE

Temporarily install another speaker. Functions OK?
- Yes → Speaker faulty.
- No

S	Tape player faulty.
U	Radio assembly faulty.
C	Power amplifier faulty. Recheck system after repair.

12 Tape Player SOUND QUALITY POOR (VOLUME PAINT)

S : Radio – Tape Player **U : Radio – Tape Player Unit**
C : Radio – Tape Player – CD Player Unit

Function OK if different cassette tape inserted?
- Yes → Cassette tape faulty.
- No

Operates normally after cleaning the heads? (See page BE–126)
- Yes → Head dirty.
- No

Is radio operating normally?
- Yes → S U C Radio assembly faulty.
- No

Is speaker properly installed?
- No → Install properly.
- Yes

Temporarily install another speaker. Functions OK?
- Yes → Speaker faulty.
- No

S U	Radio assembly faulty.
C	Radio assembly or power amplifier faulty.

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

S : Radio – Tape Player **U : Radio – Tape Player Unit**
C : Radio – Tape Player – CD Player Unit

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–126) — Yes → Head dirty.
No
S U C → Radio assembly faulty.

14 Tape Player — APS, SKIP RPT BUTTONS NOT OPERATING

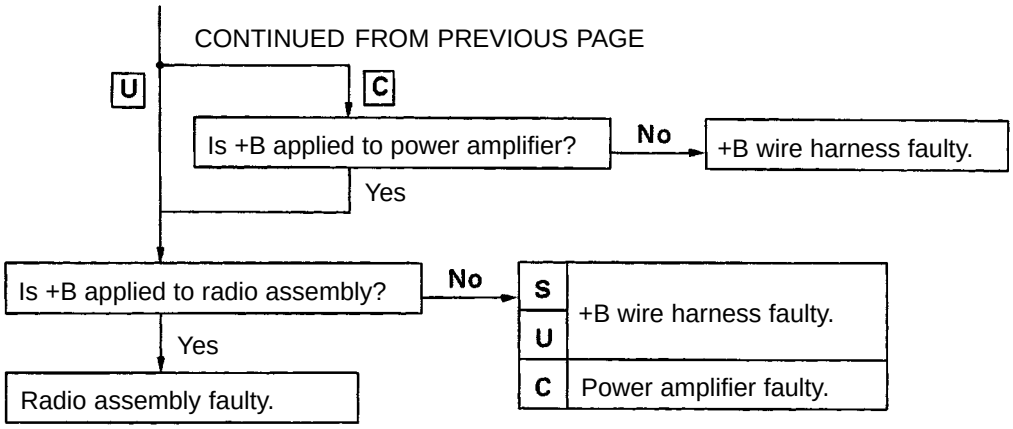
Functions OK if different cassette tape inserted? — **No** → Radio assembly faulty.
Yes
Cassette tape faulty. (Less than 3 secs. of silence between songs (APS, RPT). Less than 15 secs. of silence (SKIP).)

15 Tape Player — CASSETTE TAPE WILL NOT EJECT

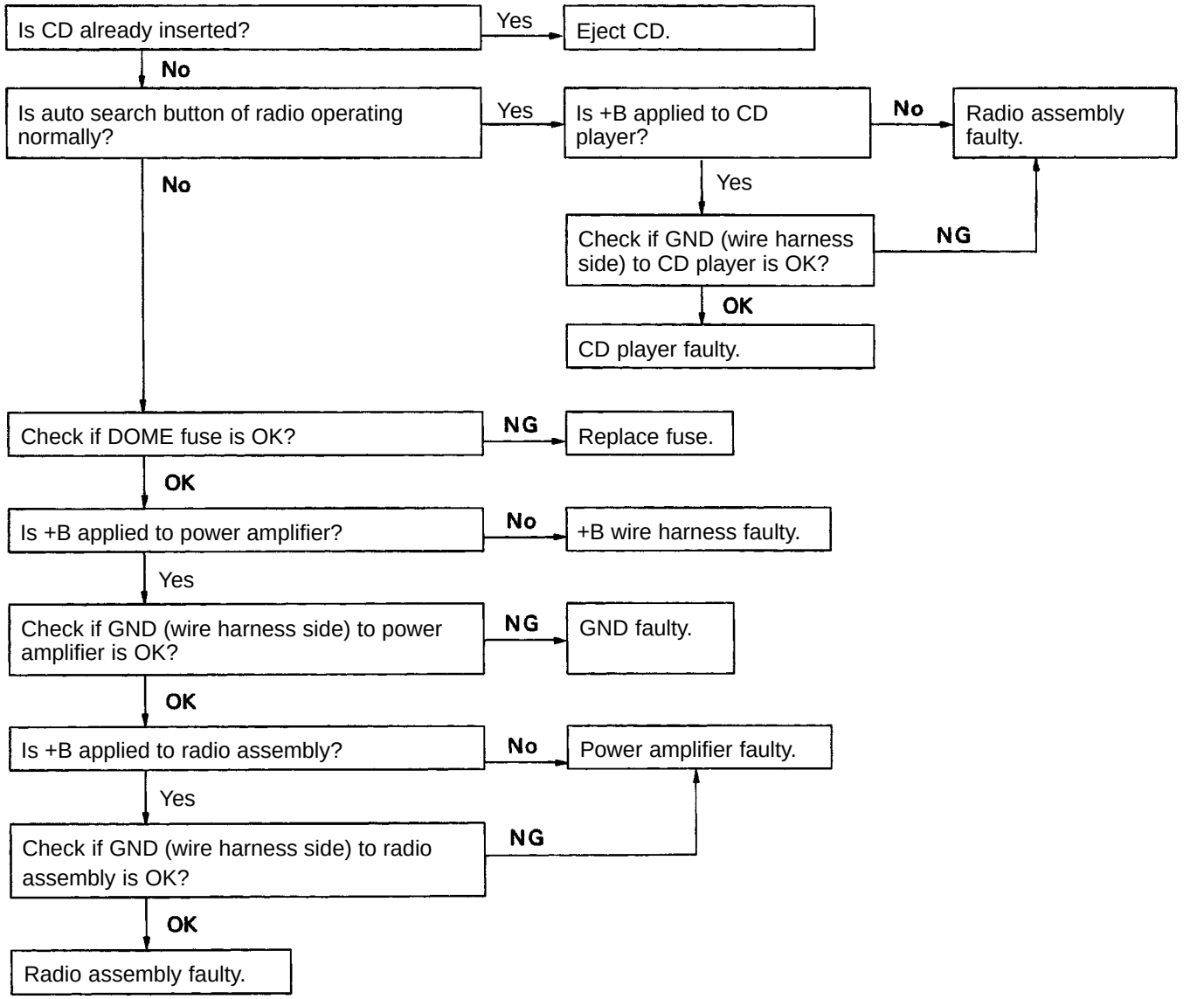
S : Radio – Tape Player **U : Radio – Tape Player Unit**
C : Radio – Tape Player – CD Player Unit

Is tape player operating normally? — **No** → Cassette tape jammed.
S U C — Yes
Is auto search button of radio operating normally? — Yes → Radio assembly faulty.
No
Check if DOME fuse is OK? — **NG** → Replace fuse.
OK

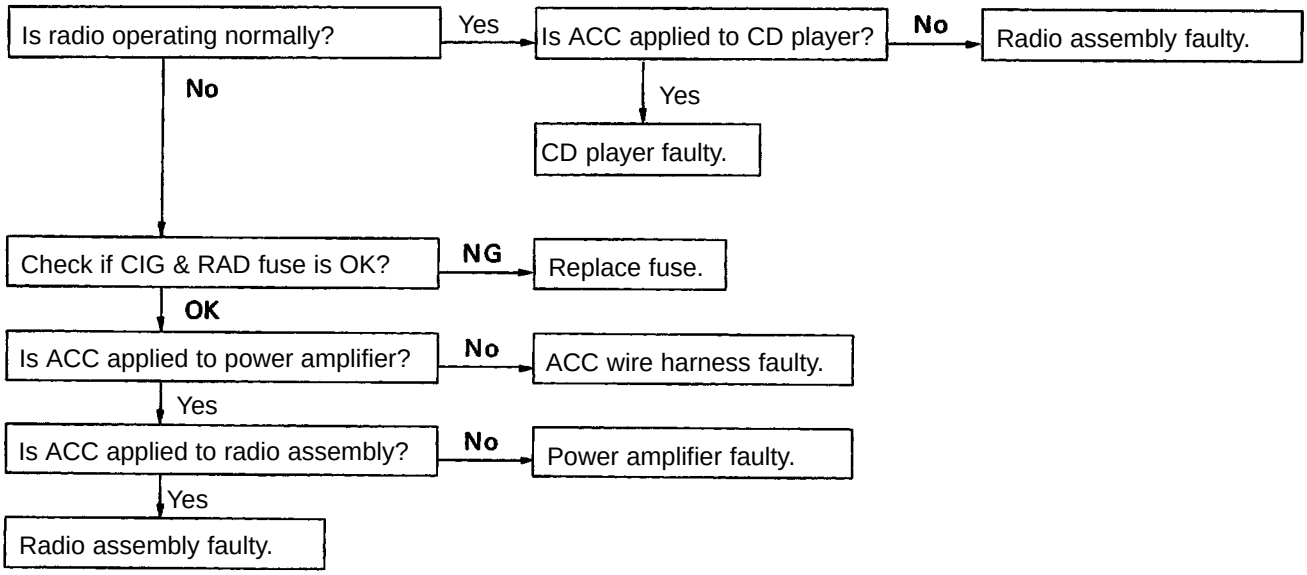
CONTINUED ON NEXT PAGE



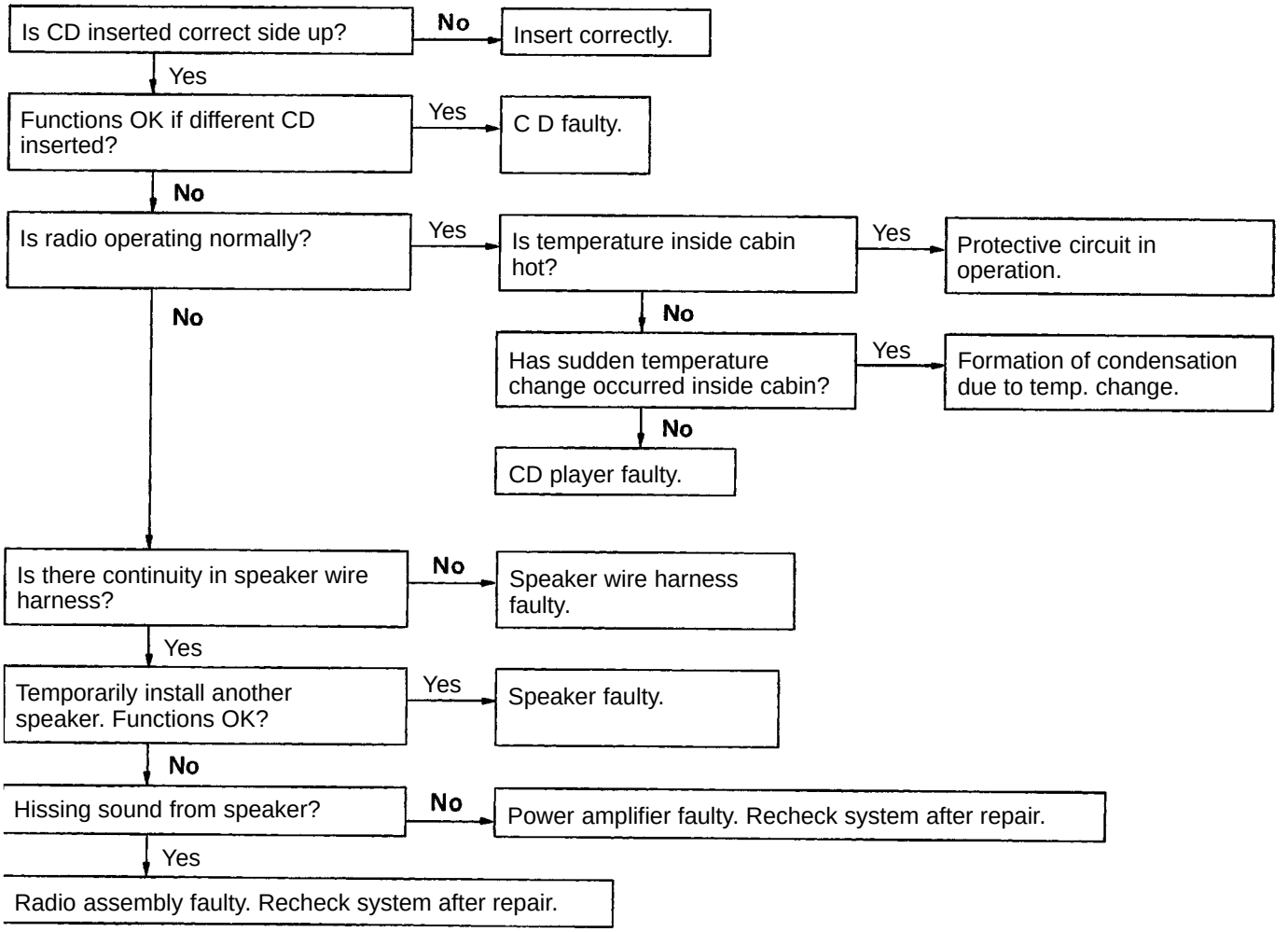
16 CD Player — CD CANNOT BE INSERTED



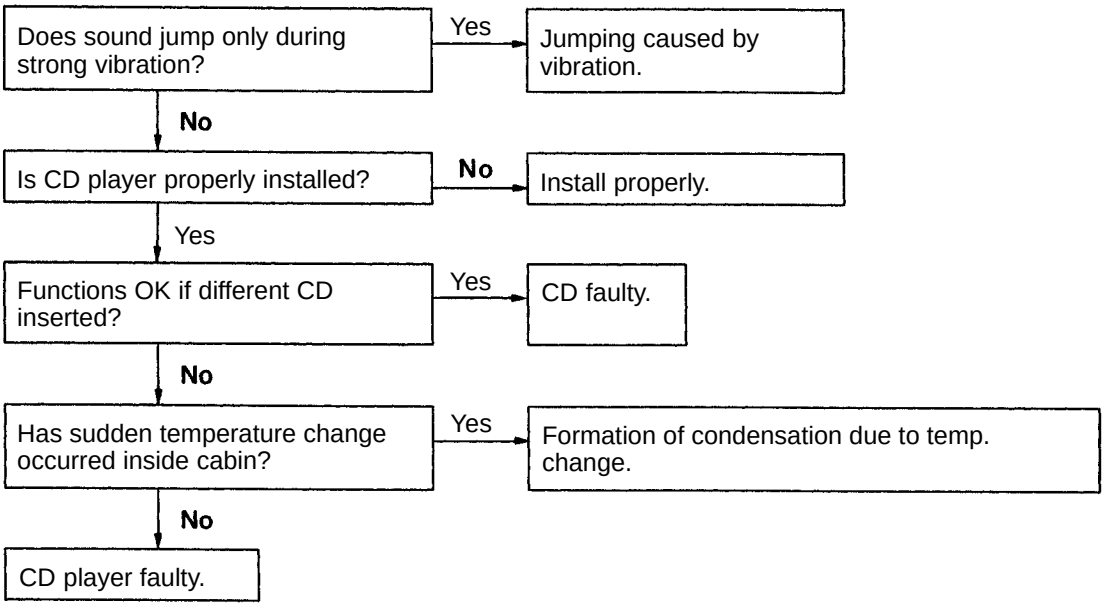
17 CD Player — CD INSERTS, BUT NO POWER



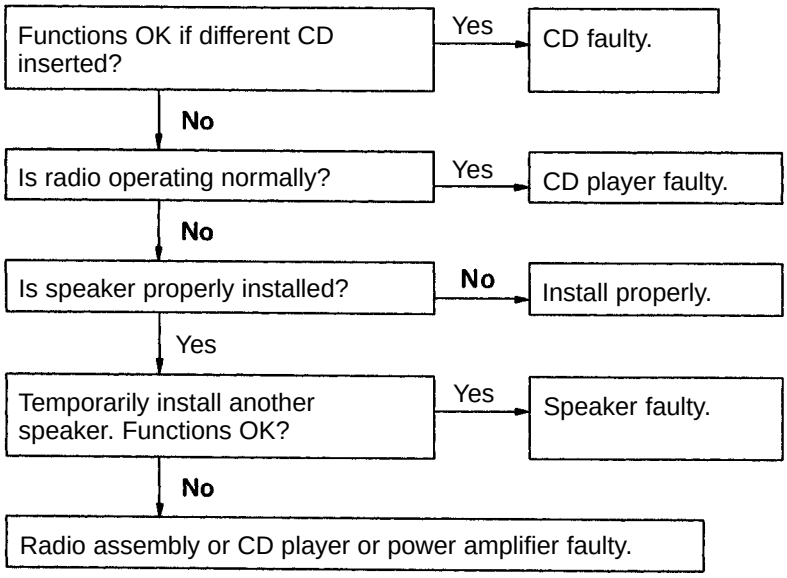
18 CD Player — POWER COMING IN, BUT CD PLAYER NOT OPERATING



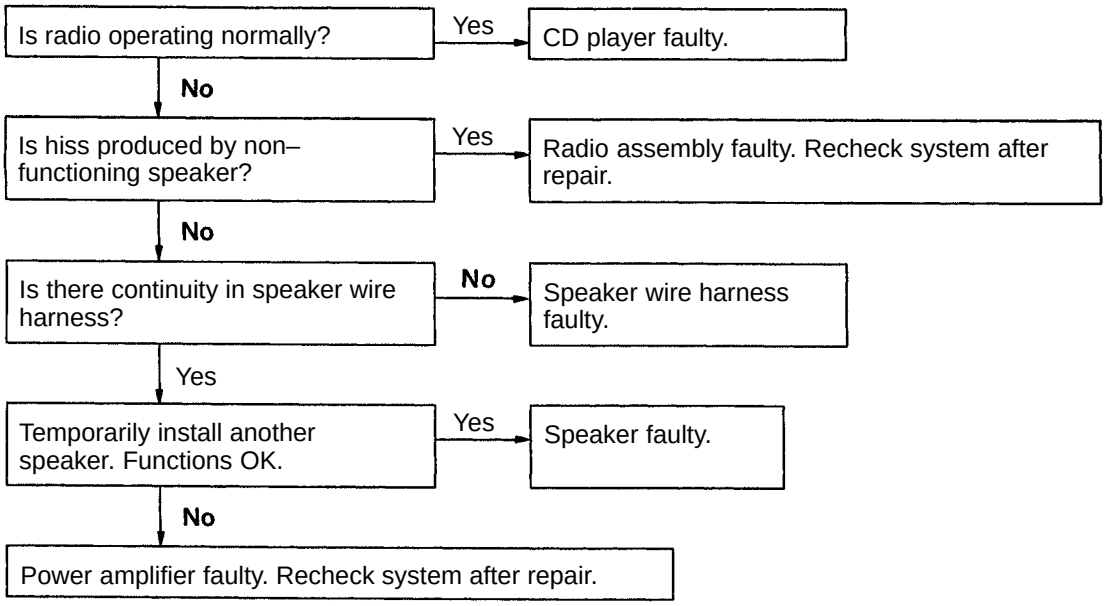
19 CD Player SOUND JUMPS



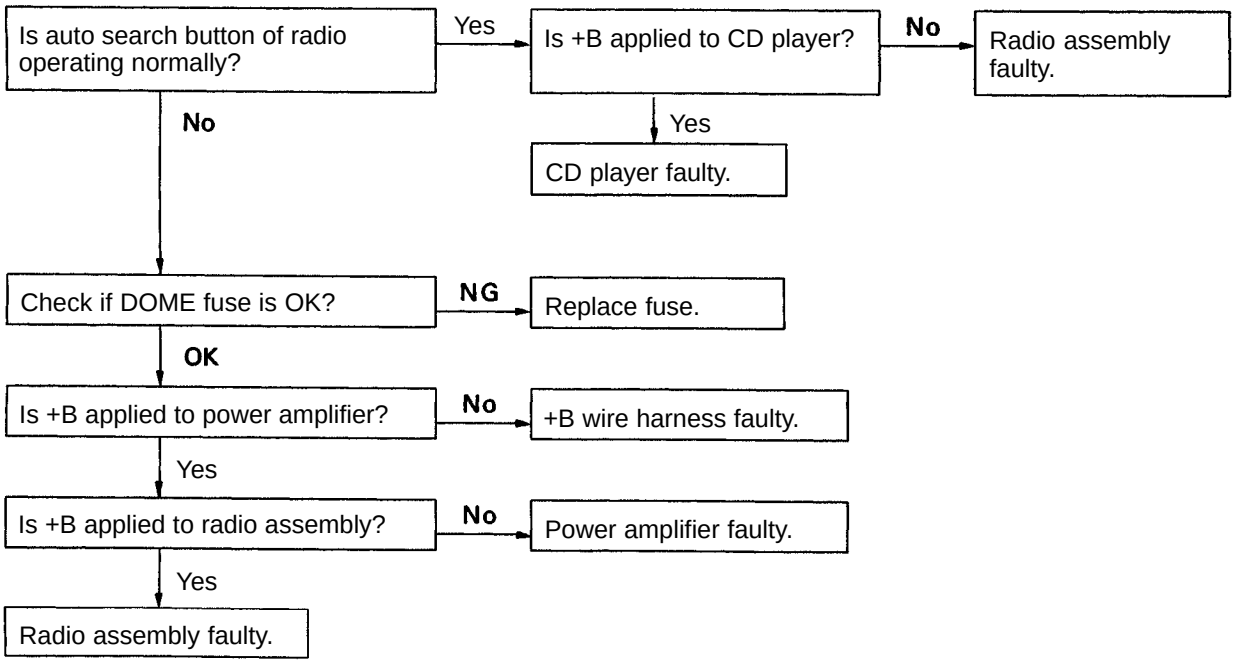
20 CD Player SOUND QUALITY POOR (VOLUME FAINT)



21 CD Player — EITHER SPEAKER DOES NOT WORK

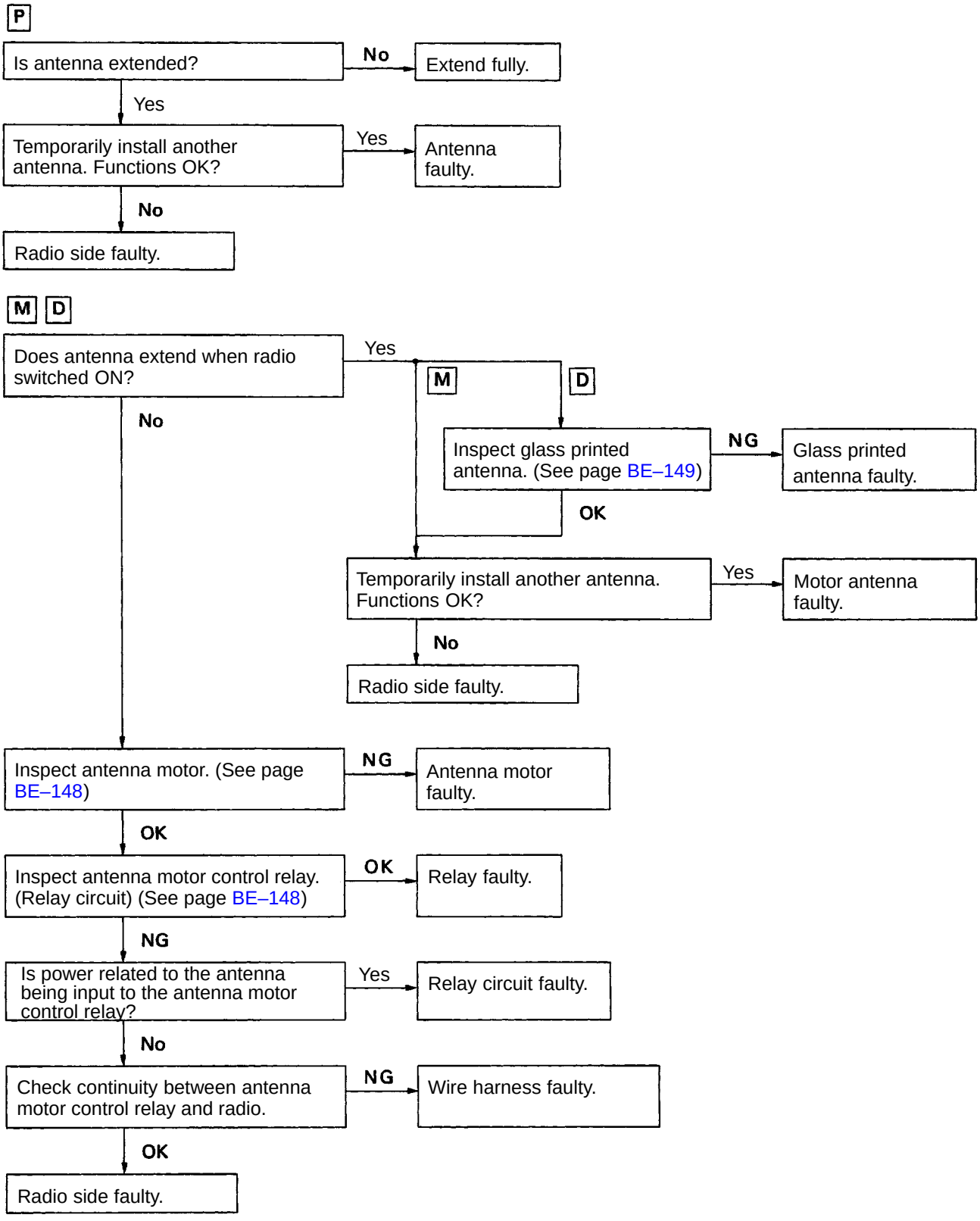


22 CD Player — CD WILL NOT EJECT



23	Antenna	ANTENNA–RELATED

P : Antenna w/o Motor **M : Motor Antenna** **[D]: Motor Antenna and Glass Printed Antenna**

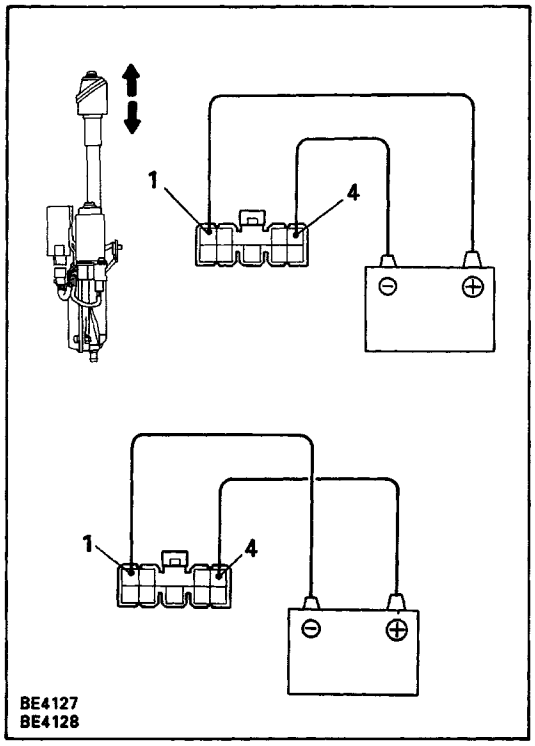


24 Noise — NOISE PRODUCED BY VIBRATION OR SHOCK WHILE DRIVING

- Is speaker properly installed?
  - No → Install properly.
  - Yes ↓
- Is each system correctly installed?
  - No → Install properly.
  - Yes ↓
- With vehicle stopped, lightly tap each system. Is noise produced?
  - Yes → Each system faulty.
  - No ↓
- Noise produced by static electricity accumulating in the vehicle body.

25 Noise — NOISE PRODUCED WHEN ENGINE STARTS

- Whistling noise which becomes high–pitched when accelerator strongly depressed, disappears shortly after engine stops.
  - Yes → Alternator noise.
  - No ↓
- Whining noise occurs when NC is operating.
  - Yes → A/C noise.
  - No ↓
- Scratching noise occurs during sudden acceleration, driving on rough roads or when ignition switch is turned on.
  - Yes → Fuel gauge noise.
  - No ↓
- Clicking sound heard when horn button is pressed, then released. Whirring/grating sound when pushed continuously.
  - Yes → Horn noise.
  - No ↓
- Murmuring sound, stops when engine stops.
  - Yes → Ignition noise.
  - No ↓
- Tick–tock noise, occurs in co–ordination with blinding of flasher.
  - Yes → Turn signal noise.
  - No ↓
- Noise occurs during window washer operation.
  - Yes → Washer noise.
  - No ↓
- Scratching noise occurs while engine is running, continues a while even after engine stops.
  - Yes → Engine coolant temp. gauge noise.
  - No ↓
- Scraping noise in time with wiper beat.
  - Yes → Wiper noise
  - No ↓
- Other type of noise.



ANTENNA MOTOR

ANTENNA MOTOR INSPECTION

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

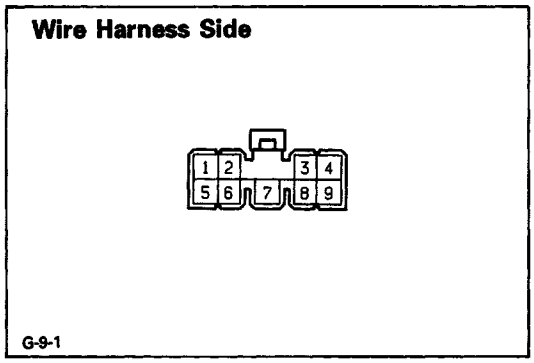
(b) Check that the motor turns (moves upward).

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 positive voltage
	5 – Ground	Ignition switch position	LOCK		No voltage
			ACC or ON		Battery positive 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 positive voltage
	8 – Ground	Ignition switch position	LOCK		No voltage
			ACC or ON.	Radio switch OFF cassette ON	No voltage
				Radio switch ON and cassette OFF	Battery positive voltage
	9 – Ground	Ignition switch position	LOCK or ACC		No voltage
			ON		Battery positive voltage

If circuit is as specified, replace the relay.

GLASS PRINTED ANTENNA

GLASS PRINTED ANTENNA INSPECTION

Use same procedure as for “INSPECT DEFOGGER WIRES” on page BE–64.

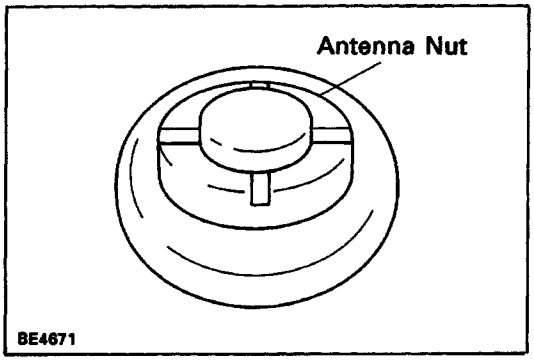
REPAIR GLASS PRINTED ANTENNA

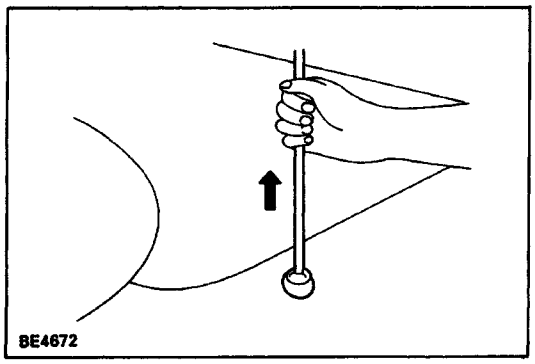
Use same procedure as for “REPAIR DEFOGGER WIRES” on page BE–64.

ANTENNA ROD

ANTENNA ROD REMOVAL AND INSTALLATION

REMOVE ANTENNA ROD





HINT: Perform this operation with the battery nega–tive H cable connected to the battery terminal.

(a) Turn the ignition switch to “LOCK” position.

(b) Remove the antenna nut.

(C–1) With CD player

Press the “AM, FM” buttons on the radio receiver, and simultaneously turn the ignition switch to “ACC” posi–tion.

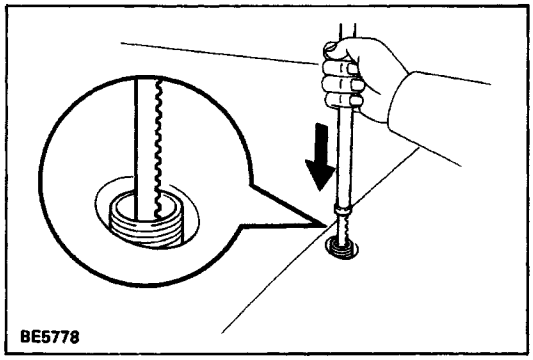
(C–2) Without CD player

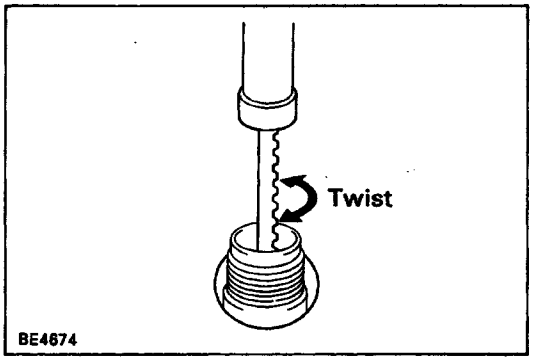
Press the “AM” button on the radio receiver, and simul–taneously turn the ignition switch to “ACC” position.

HINT:

- The rod will extend fully and be released from the motor antenna.
- After removing the antenna rod, leave the ignition switch at “ACC”.

NOTICE: To prevent body damage when the antenna rod is released, hole the rod while it comes out.





INSTALL ANTENNA ROD

(a) Insert the cable of the rod until it reaches the bottom.

HINT:

- When inserting the cable, the teeth on the cable must face toward the rear of the vehicle.
- Insert the antenna approx. 300 mm (1.18 in.).

(b) Wind the cable to retract the rod by turning the ignition switch to “LOCK” position.

HINT:

- If the ignition switch is already in “LOCK” position, perform step 1 (c) first, then turn the ignition switch to “ACC” position.
- In case the cable is not wound, twist it as shown in the illustration.
- Even if the rod has not retracted fully, install the antenna nut and inspect the antenna rod operation. It will finally retract fully.

(c) Inspect the antenna rod operation by pushing the radio wave band select buttons.