

# FAULTY? CHECK THE FOLLOWING BEFORE REMOVING AUDIO SYSTEM.

## TROUBLES RELATING TO THE WHOLE SYSTEM

- Be sure to use specified screws.
- Battery should be powerful enough.
- Make sure that the wiring is correct.

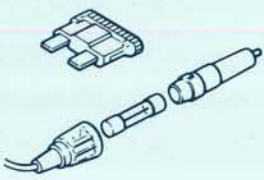

Wire colors specified for Pioneer products.

Power source: orange (back-up), red (ACC), yellow (illumination), black (ground),

Speaker lines: green (left speaker ⊕), green/black (left speaker ⊖),






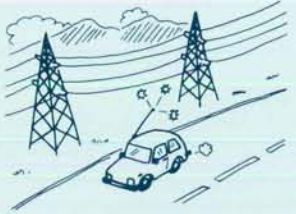

gray (right speaker ⊕), gray/black (right speaker ⊖)

Apr., 1990

MAIN CAUSES	SYMPTOMS	CHECK POINTS	REMARKS
<p><b>Fuse blown</b></p> 	<ul style="list-style-type: none"> <li>• Does not function</li> <li>• No sound</li> <li>• Motor does not rotate</li> <li>• Cassette tape or CD unloadable</li> </ul>	<ul style="list-style-type: none"> <li>• Check the car's fuse box and the fuses for the car radio. If the fuse is blown, replace it with new one. (If the unit operates normally, it is normal.)</li> <li>• If the fuse still blows after replacement, check the wiring to determine if it composes a short circuit. If there is nothing wrong with the wiring, the cause will be inside the unit.</li> </ul>	<ul style="list-style-type: none"> <li>• Use a fuse of the same amperage as the original.</li> <li>• The wiring may be pinched by the console or the driver's seat.</li> </ul>
<p><b>Wiring</b></p>	<ul style="list-style-type: none"> <li>• Same symptoms as above all the time or sometimes</li> <li>• Noise</li> </ul>	<p>Check poor contacts.</p> <ul style="list-style-type: none"> <li>• Move wires and connectors.</li> <li>• Tighten grounding wire terminals.</li> <li>• Change the grounding point.</li> </ul>	<ul style="list-style-type: none"> <li>• The grounding terminal should be securely fastened to the metal chassis with a screw.</li> <li>• Are there pinched wires, loose connectors or rusted grounding terminals?</li> </ul>
<p><b>Noise sources</b></p> <ul style="list-style-type: none"> <li>• Ignition coil</li> <li>• Alternator</li> <li>• Voltage regulator</li> <li>• Fuel pump</li> <li>• Oil pressure gauge</li> <li>• Fuel gauge</li> <li>• Thermometer</li> <li>• Horn</li> <li>• Flasher</li> <li>• Wipers</li> </ul>	<ul style="list-style-type: none"> <li>• Noise</li> </ul>	<ul style="list-style-type: none"> <li>• Turn off the engine and turn the ignition key to ACC ON. If the noise stops, the radio is OK. The cause is in car's electrical system.</li> <li>• Operate wipers, flashers, horn, etc. by turn to locate noise source.</li> </ul>	<p><b>Noise sources</b></p> <ul style="list-style-type: none"> <li>• Ignition: Sputtering noise increases in proportion to engine revolution.</li> <li>• Alternator: Whining noise also synchronizes with engine revolution.</li> <li>• Voltage regulator: Irregular grating noise.</li> <li>• Fuel pump: Harsh rasping noise.</li> <li>• Oil pressure gauge: Grinding noise synchronous with engine revolution.</li> <li>• Fuel gauge: Irregular popping and grating noise on rough roads.</li> <li>• Thermometer: Popping noise when the ignition key is turned on even when the engine is off.</li> <li>• Horn: Buzzing noise while sounding the horn. Popping noise with horn button on-off.</li> <li>• Flasher: Crackling noise synchronous with its blinking.</li> <li>• Wipers: Rasping noise synchronous with its movement.</li> </ul> <p><b>Noise suppression</b></p> <ul style="list-style-type: none"> <li>• Add a noise filter.</li> <li>• Move wires or change the distribution routes.</li> <li>• Change grounding points.</li> </ul>
<p><b>Speakers</b></p> 	<ul style="list-style-type: none"> <li>• No sound</li> <li>• Flopping noise</li> <li>• Distorted sound</li> </ul>	<ul style="list-style-type: none"> <li>• Measure its resistance with a multimeter. It should be close to 4Ω.</li> <li>• Check the wiring from the radio to the speaker, shorted or opened.</li> <li>• Check if speaker terminals are touching chassis.</li> <li>• Check if speaker screws are loose.</li> <li>• Replace the speaker with good one and compare the sound.</li> </ul>	<ul style="list-style-type: none"> <li>• The plus and minus and right and left terminals of the speaker should be independently wired in Balanced Power-transformerless (BPTL) system.</li> <li>• Refer to speaker wiring diagram for speaker installation.</li> </ul>

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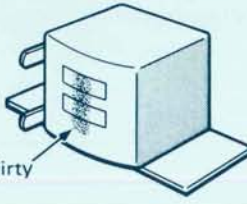


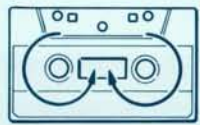



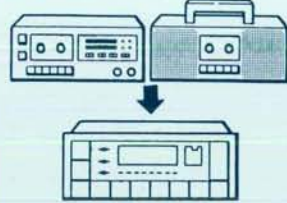
- TUNER**
- The antenna should be fully extended.
  - The window antenna should always be kept clean.
  - Spare antenna is recommended for locating faulty component (either antenna or tuner).

MAIN CAUSES	SYMPTOMS	CHECK POINTS	REMARKS
<p><b>Antenna</b></p> 	<ul style="list-style-type: none"> <li>• AM not receivable</li> <li>• FM not receivable</li> <li>• AM and FM unreceivable</li> <li>• Poor sensitivity</li> </ul>	<ul style="list-style-type: none"> <li>• Replace antenna.</li> <li>• Antenna amp (booster) is also suspected with a window antenna.</li> <li>• Move the car off the buildings or valley and check again.</li> </ul>	<ul style="list-style-type: none"> <li>• Check if the power has been supplied to the antenna amp.</li> <li>• Dirty window antenna decreases the sensitivity.</li> <li>• The sensitivity depends on the course of the car due to the antenna's directivity.</li> </ul>
<p><b>Night AM reception</b></p> 	<ul style="list-style-type: none"> <li>• Tweeting noise</li> <li>• Radio interference</li> </ul>	<ul style="list-style-type: none"> <li>• If they occur in the nighttime only, there is nothing wrong with the tuner.</li> </ul>	<ul style="list-style-type: none"> <li>• At night, AM waves from remote stations interfere local waves.</li> </ul>
<p><b>Dead spots (Weak field strength)</b></p>  <p>Behind buildings or in a valley</p>  <p>Behind a highway</p>  <p>In a tunnel</p> <p><b>Sources of static</b></p>  <p>High-tension cables</p>  <p>Motorcycles</p>	<ul style="list-style-type: none"> <li>• Excessive noise</li> <li>• Occasional noise</li> <li>• Occasional poor reception</li> <li>• Occasional loss of reception</li> </ul>	<ul style="list-style-type: none"> <li>• May not be able to simulate because it only occurs in particular areas.</li> </ul>	<p><b>Other spots of weak field strength.</b></p> <ul style="list-style-type: none"> <li>• In the area remote from the broadcasting station. In the areas where radio signal is weak, sound is masked by ordinary noises which create complaints such as "Excessive noise" and "Occasional noise".</li> </ul> <p><b>Other noise sources</b></p> <ul style="list-style-type: none"> <li>• Arc welding machine</li> <li>• Automatic doors (in operation)</li> <li>• Traffic signals and outdoor transformers, etc.</li> </ul> <p><b>Multi-path</b></p> <ul style="list-style-type: none"> <li>• Flapping or simmering noise may be heard in FM reception while driving. This is peculiar to FM when the direct signal from the broadcasting station and the reflected one from a building or a hill reach the car antenna at the same time.</li> </ul>

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## CASSETTE DECK


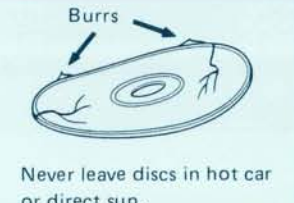
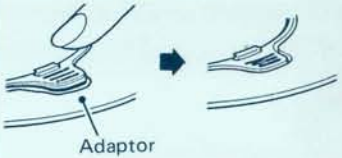


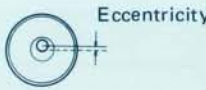

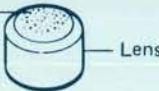
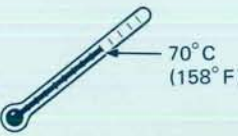

- Keep tapes in their cases out of direct sunlight.
- Avoid using very thin C-120 tapes, or they may be chewed by the deck.
- A normally prerecorded tape (available on the market) is required for checking the deck.

MAIN CAUSES	SYMPTOMS	CHECK POINTS	REMARKS
<b>Tape head dirty</b> 	<ul style="list-style-type: none"> <li>• Weak treble sound</li> <li>• Dull sound</li> <li>• Poor sound</li> <li>• Right (R) or Left (L) sound dead or weak</li> <li>• Sound quality differs between sides A and B.</li> <li>• Squeaking noise</li> </ul>	<ul style="list-style-type: none"> <li>• Clean the head with Cleaning Tape from time to time.</li> </ul>	<ul style="list-style-type: none"> <li>• Slightly dirty head decreases treble.</li> <li>• Very dirty head decreases all treble, mid and bass sound.</li> <li>• Head is liable to become dirty in rainy season.</li> </ul>
<b>Tape curled on</b> Both sides  One side only 	<ul style="list-style-type: none"> <li>• Slows down</li> <li>• Sound quality varies.</li> <li>• Poor sound</li> <li>• Sound wow/flutterers</li> </ul>	<ul style="list-style-type: none"> <li>• Tape curled?</li> <li>• Compare it with normally recorded new tapes.</li> </ul>	<ul style="list-style-type: none"> <li>• C-120 tape is liable to be curled.</li> <li>• All tapes wear out and curl with use.</li> <li>• Deck may be faulty if new tapes are curled.</li> </ul>
<b>Wound tightly</b> 	<ul style="list-style-type: none"> <li>• Slows down</li> <li>• Wow/flutterers</li> <li>• Reverses unexpectedly</li> </ul>	<ul style="list-style-type: none"> <li>• Tape should be turned with a pencil smoothly.</li> </ul> 	<ul style="list-style-type: none"> <li>• Turn it in Takeup direction only.</li> <li>• Fast Forward/Rewind will solve it.</li> </ul>
<b>Cassette warped</b> 	<ul style="list-style-type: none"> <li>• Ejects right after loading</li> <li>• Unloadable</li> <li>• Unejectable</li> </ul>	<ul style="list-style-type: none"> <li>• Try other tapes.</li> </ul>	<ul style="list-style-type: none"> <li>• Never leave tapes on the dashboard or rearboard.</li> </ul>
<b>Label peeled off</b> 	<ul style="list-style-type: none"> <li>• Ejects right away</li> <li>• Unloadable</li> <li>• Unejectable</li> <li>• Reverses unexpectedly</li> </ul>	<ul style="list-style-type: none"> <li>• Glue label in place.</li> <li>• Peeled label in the mechanism?</li> </ul>	<ul style="list-style-type: none"> <li>• Never leave tapes on the dashboard or rearboard.</li> </ul>
<b>Home-recorded tapes Improper recording level and modes</b> 	<ul style="list-style-type: none"> <li>• Hissing noise</li> <li>• Weak sound</li> <li>• Automatic Program Search (APS) impossible</li> <li>• Poor sound</li> <li>• Dull sound</li> </ul>	<ul style="list-style-type: none"> <li>• Check with normally recorded tapes.</li> </ul>	<ul style="list-style-type: none"> <li>• Low recording level. Weak sound is masked by noises.</li> <li>• APS becomes impossible if recorded level is low.</li> <li>• Keep 4sec-nonrecorded-space between music pieces.</li> <li>• Poorly adjusted recording deck, dirty head, or improper button setting may be the cause.</li> </ul>
<b>Misoperation</b>	<ul style="list-style-type: none"> <li>• One channel weak or dead</li> <li>• Dull sound</li> <li>• Poor sound</li> <li>• Weak sound</li> </ul>	<ul style="list-style-type: none"> <li>• Adjust balance control.</li> <li>• Dolby button set properly?</li> <li>• Release ATTenuator.</li> <li>• Adjust remote control volume level.</li> </ul>	<ul style="list-style-type: none"> <li>• Balance depends on listener's seating position.</li> <li>• Treble decreases if non-Dolby tapes are played with Dolby ON.</li> <li>• ATT ON attenuates sound level by 1/10.</li> </ul>
<b>Static interference by car electric system</b>	<ul style="list-style-type: none"> <li>• APS impossible</li> </ul>	<ul style="list-style-type: none"> <li>• Stop the engine, turn ACC ON, then check it.</li> </ul>	<ul style="list-style-type: none"> <li>• Refer to page 1.</li> </ul>

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## COMPACT DISC PLAYER

- Keep CD's in their cases and out of direct sunlight.
- Keep a clean scratchless disc for comparing sound.

MAIN CAUSES	SYMPTOMS	CHECK POINTS	REMARKS
<b>Dirt or scratches</b> 	<ul style="list-style-type: none"> <li>• Skipping sound</li> <li>• Ejects unexpectedly</li> <li>• Ejects right after loading</li> <li>• Intermittent muting</li> </ul>	<ul style="list-style-type: none"> <li>• Check the dirt or scratches on the disc.</li> <li>• Wipe the dirt off with soft cloth in the radial direction. Avoid using chemical cleaning cloth, benzine, thinner, spray, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid touching the signal surface of the disc because thick fingerprints and scratches will interrupt the readout. Scratches on label side affect sound also.</li> </ul>
<b>Cracked or warped</b> 	<ul style="list-style-type: none"> <li>• Ejects right after loading</li> <li>• Mechanical noise</li> </ul> <p>NOTE: Never use discs with cracked or warped surface</p>	<ul style="list-style-type: none"> <li>• Check the disc. Remove burrs.</li> <li>• In case of 8 cm (3-inch) disc. has the disc been installed on the adaptor properly?</li> <li>• Have the hooks been pressed in the right position?</li> <li>• A 6-disc magazine is recommended for 8-cm discs.</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid using cracked or deformed discs.</li> <li>• Also avoid 8 cm (3 inch) adaptors with the hooks broken.</li> </ul> 
<b>Pinhole</b> 	<ul style="list-style-type: none"> <li>• Skipping</li> <li>• Ejects unexpectedly</li> <li>• Intermittent muting</li> </ul>	<ul style="list-style-type: none"> <li>• Pinholes can be detected by holding the disc in the light.</li> </ul> 	<ul style="list-style-type: none"> <li>• Holes in aluminum film.</li> <li>• Many discs have pinholes yet play normally. This is not always cause for skipping.</li> </ul>
<b>Eccentric disc</b> 	<ul style="list-style-type: none"> <li>• Ejects right after loading. Player is incapable of reading Table of Contents recorded at the head of program.</li> </ul>	<ul style="list-style-type: none"> <li>• Check by comparing with another disc.</li> </ul>	<ul style="list-style-type: none"> <li>• Those discs with a large center hole causes the same symptom. Out of specification eccentricity may be difficult to see.</li> </ul>
<b>Disc loaded upside-down</b> 	<ul style="list-style-type: none"> <li>• Ejects right after loading</li> </ul>	<ul style="list-style-type: none"> <li>• Load the disc the label-side up. (Label-side down with a 6-disc magazine in a Multi-play player)</li> </ul>	<ul style="list-style-type: none"> <li>• Data found only on non-label side.</li> </ul>
<b>Condensation</b> 	<ul style="list-style-type: none"> <li>• Ejects right after loading</li> </ul>	<ul style="list-style-type: none"> <li>• Wait to play for about 60 minutes till the dew dries up after turning the heater on.</li> </ul>	<ul style="list-style-type: none"> <li>• This occurs for the same reason as with eyeglasses that fog up when we get in a warm room in winter.</li> </ul>
<b>Temperature rises</b> 	<ul style="list-style-type: none"> <li>• The display reads HHHH and the player stops.</li> </ul>	<ul style="list-style-type: none"> <li>• If the unit plays normally when the temperature in car decreases down to moderate, the unit has no problem.</li> </ul>	<ul style="list-style-type: none"> <li>• To protect laser diode, the player shuts off the power automatically when it is heated up to 70°C (158°F) after hours of play. Avoid installing it in front of the heater's vent.</li> </ul>
<b>Snowy or rough road Joints on a highway</b> 	<ul style="list-style-type: none"> <li>• Skipping</li> </ul>	<ul style="list-style-type: none"> <li>• Check the road conditions. Skipping can result from momentary vibration.</li> </ul>	<ul style="list-style-type: none"> <li>• This is liable to occur on cars with hard suspension although it depends on the car model because hard suspension cannot absorb quick vibration.</li> </ul>