



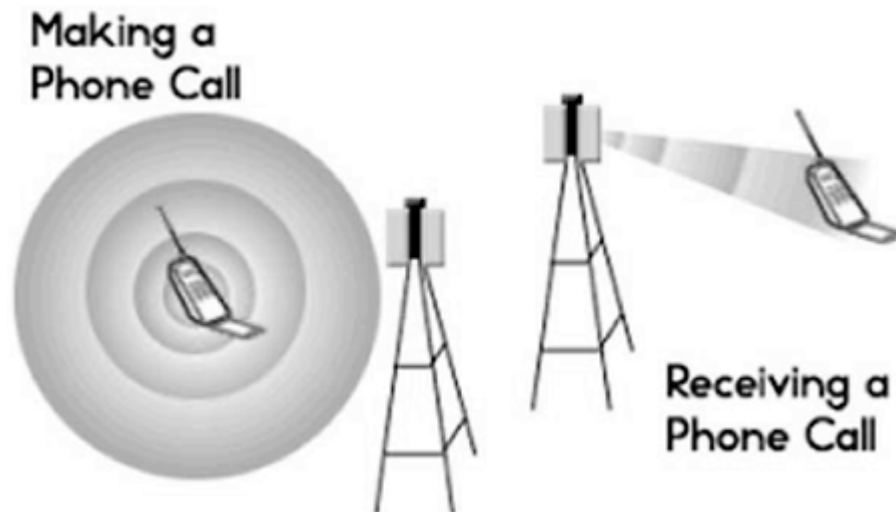
TECHNICAL SERVICE BULLETIN

	Group
	90 - ELECTRICAL
	Number
	03-90-001
Subject	Date
CLICKING NOISE FROM RADIO SPEAKERS CAUSED BY WIRELESS TELEPHONE INTERFERENCE	02-2003
	Model
	All Models 0

DESCRIPTION:

Some vehicles may experience an intermittent, faint clicking sound from the radio speakers. The noise may be described as either a clicking or popping sound from the dash area. This sound may be caused by radio frequency (RF) signals emitted by the vehicle occupant's wireless phone.

Wireless telephones are hand-held phones with built-in antennas, often called cell, mobile or PCS phones. Wireless telephones are two-way radios. When a person speaks into a wireless telephone, it picks up the person's voice and converts the sound to radio frequency energy (or radio waves). The radio waves travel through the air until they reach a receiver at a nearby base station. The base station then sends the call through the telephone network until it reaches the person you are calling.



When a person receives a call on his/her wireless telephone, the message travels through the telephone network until it reaches a base station close to his/her wireless phone. Then the base station sends out radio waves that are detected by a receiver in his/her telephone, where the signals are changed back into the sound of a voice.

Radio frequency energy from wireless phones can be picked up by electronic devices in the car such as:

- Radio Receiver
- Radio speakers
- External amplifiers (if equipped)

Some wireless telephone providers require the phone to check into nearby base stations periodically for voice mail messages and reception signals. In addition, it informs the cell site if the phone is in range.

The occupant may hear a clicking noise from the speakers when the following occurs:

- The occupant is making a call
- The occupant receives a call
- The wireless phone is checking into a nearby base station
- The wireless phone changes cell sites

Hyundai radios are designed to comply with Federal Communication Commission (FCC) rules, which state operation is subject to the following condition:

- This device (radio receiver) may not cause harmful interference
- This device must accept any interference received, including interference that may cause undesired operation

To minimize the interference of the radio receiver:

- Reorient or relocate the wireless phone (increase the separation between the wireless phone and the radio receiver/speakers/external amplifiers)
- This condition varies, depending on the wireless phone make and model, service provider and geographical area
- Drive with the wireless phone off to see if the clicking occurs