

## CIRCUIT OPERATION

Battery Voltage is provided to the radio at all times through the P wire. In addition to the anti-theft feature, this input voltage keeps the preset station memory alive. Whenever battery power to the unit is lost, the anti-theft code must be entered and the preset stations must be reprogrammed.

When the Radio (Z111) and the ignition are turned on, the voltage signal through the WK wire to the control head 'wakes up' the unit. The Radio (Z111) plays, the LCD display comes on and the control buttons illuminate. On some models, when the park lamps or headlamps are turned on, a voltage signal is sent through the RW wire to dim the LCD display and control buttons for night driving.

Radio (Z111) signals are received via a coaxial cable from the side screens and antenna amplifiers. The amplifiers filter and boost the signal from the side screen, using power supplied on WO wires, whenever the Ignition Switch (X274) is in position I or II.

The CD Changer (Z114) is permanently supplied with power through the P wire via the radio and a DIN cable.

For the new Range Rover, three levels of factory-fitted in-car entertainment are available.

The mid/low line radio has the following features: Electronically tuned AM/FM cassette radio (Z111), RH antenna amplifier (Z178) for AM/FM signals and 6, 8 or 10 speakers.

The high line (NAS/JAPAN) radio has the following features: Electronically tuned AM/FM cassette radio (Z111), RH antenna amplifier (Z178) for AM/FM signals, LH antenna amplifier (Z177) for FM signals only, 4 door speaker amplifiers (Z241, Z242, Z245, Z246), a subwoofer amplifier (Z176), a CD changer (Z114) and 10 speakers plus a subwoofer speaker (K146).

### Subwoofer

The subwoofer amplifies frequencies between 20 and 150 Hz to give an enhanced bass sound.

### Subwoofer Amplifier

The Subwoofer (K146) is supplied with power and ground from the Subwoofer Amplifier (Z176) via two separate channels which consist of 4 BW/B wires. The subwoofer amplifier (Z176) is permanently

supplied with power on the P wire, but it is only switched on when the radio supplies a signal on the SB wire.

### Speaker Amplifier

The Speaker Amplifiers (Z241, Z242, Z245, Z246) are situated in the 4 doors and are supplied with permanent power via the P wire. They are switched on when the radio sends a signal on the SB wire. The speaker amplifiers (Z241, Z242, Z245, Z246) have one channel for the bass speakers (K202, K203, K209, K220) and a second for the midrange speakers (K200, K201, K2111, K212) and tweeter speakers (K197, K198) (front doors only). The tweeter incorporates a capacitor to filter the signals.

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### **Side Screen Antenna**

The antenna is printed into the rear side screen. For NAS and Japan, the element is fitted in both rear side screens. This is referred to as a diversity antenna system. Other markets have a single element in the right hand screen only. Diversity reception means that as vehicle movement results in loss of signal due to reflections from buildings (known as multipath distortion), the radio will switch to the antenna receiving the strongest signal. This results in less interference and better stereo performance.

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### **Antenna Amplifier**

Antenna amplifiers are in the LH and RH side of the luggage compartment behind trim panel. The FM and AM amplifier would be located on the right hand side, and the FM only amplifier is located on the left hand side.

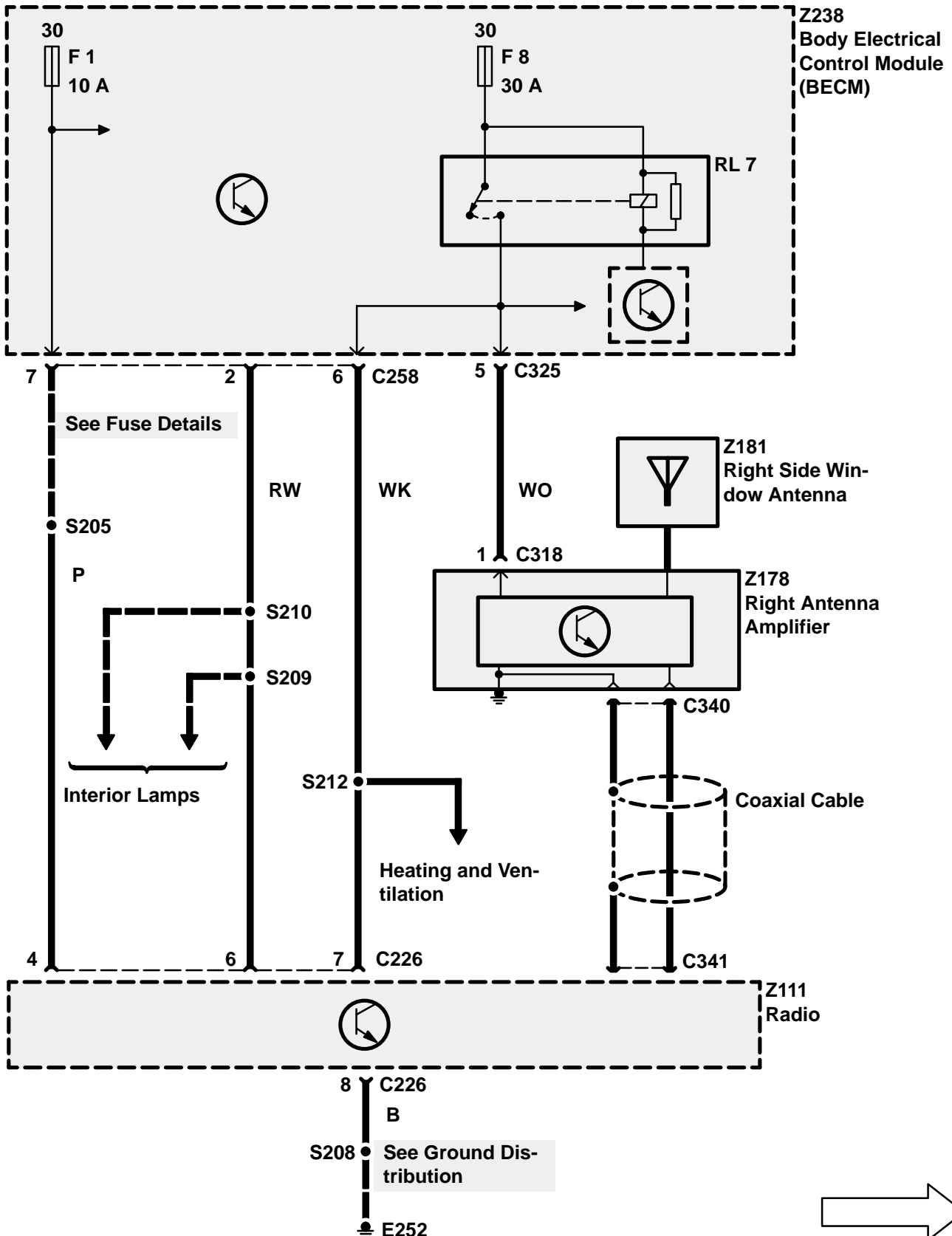
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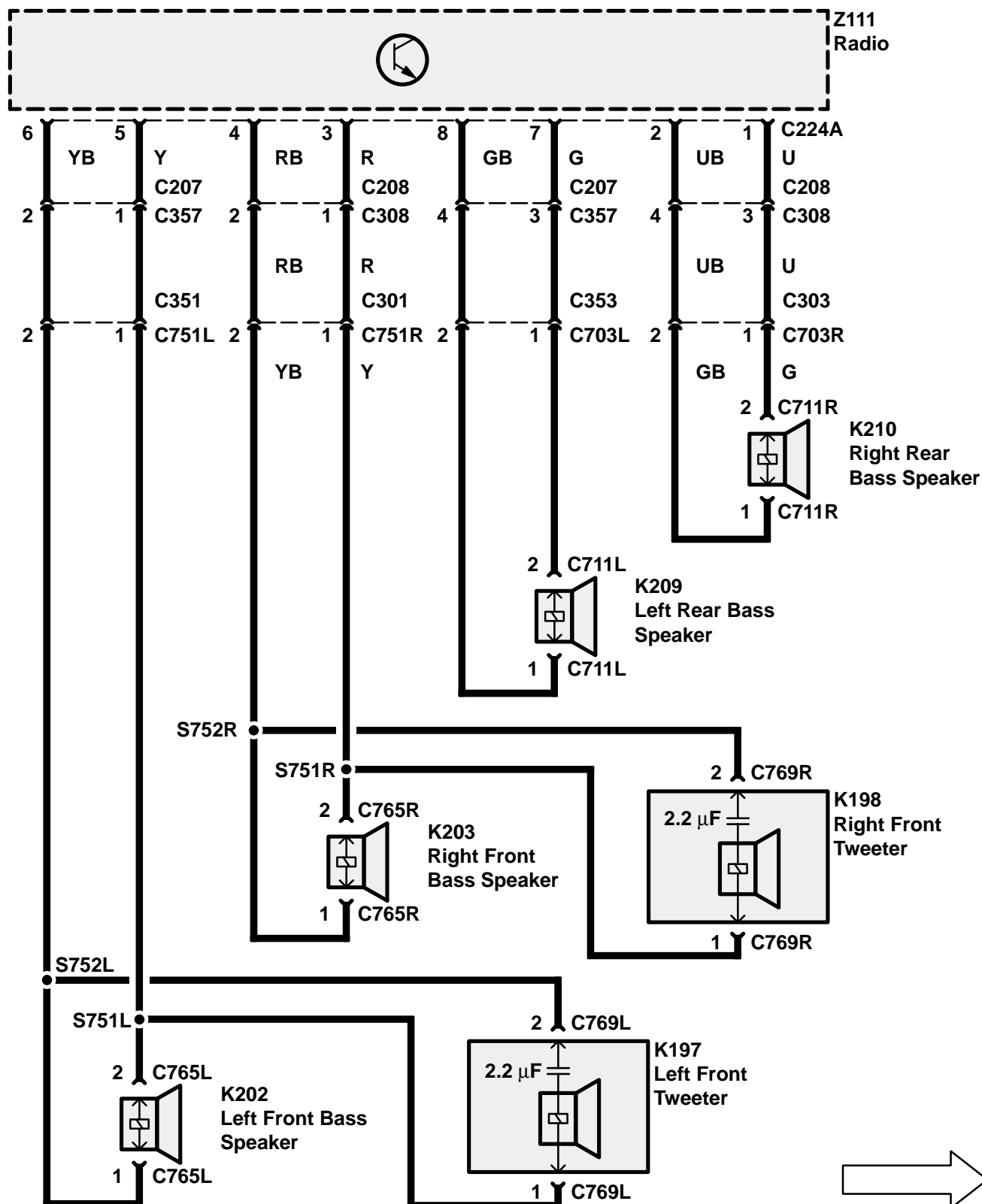
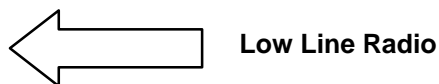
### **Speakers**

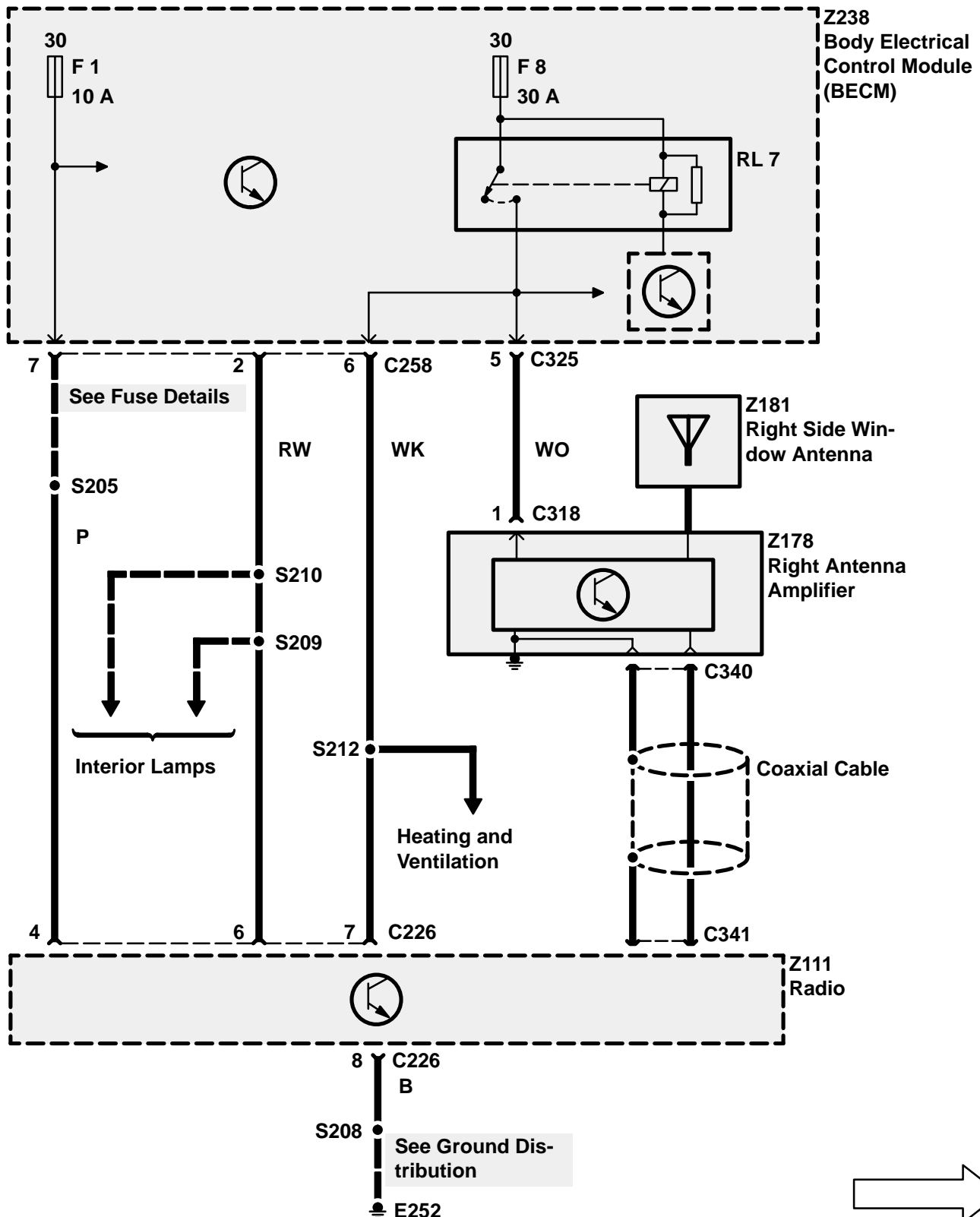
Trim level 1/2 – The low/midline radio is equipped with 6, 8 or 10 speakers fitted in the doors. The midrange speakers (K200, K201, K211, K212) are filtered by capacitors in the wires (K239, K240, K247, K248) and the tweeter speakers (K197, K198) filter the signals by built-in capacitors.

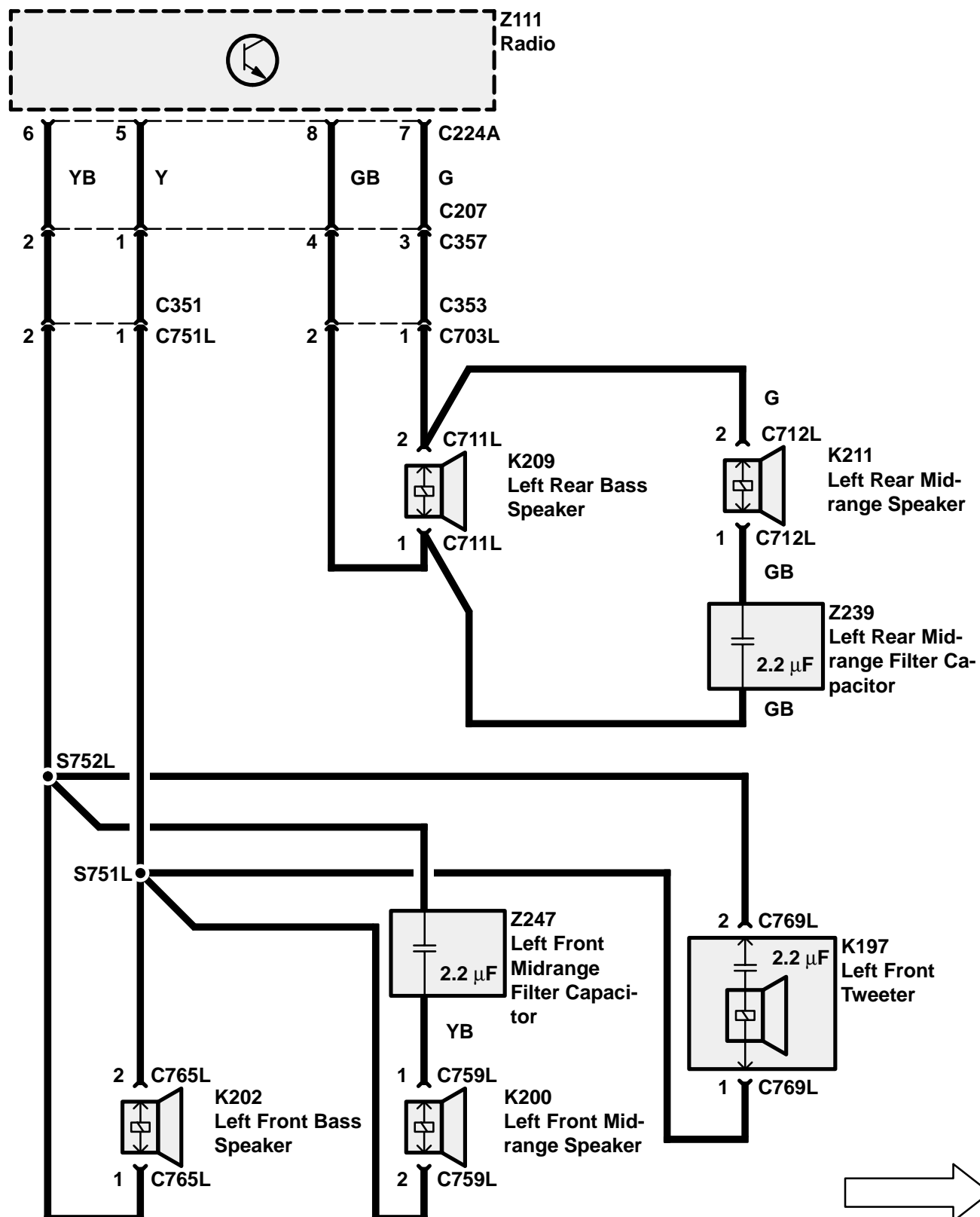
Trim level 3 – the high line is equipped with 10 speakers like the trim level 1/2, but they all receive power and ground via 4 additional speaker amplifiers. The signals for the tweeter speakers (K197, K198) are filtered by their internal capacitors, similar to the mid/low line tweeters.

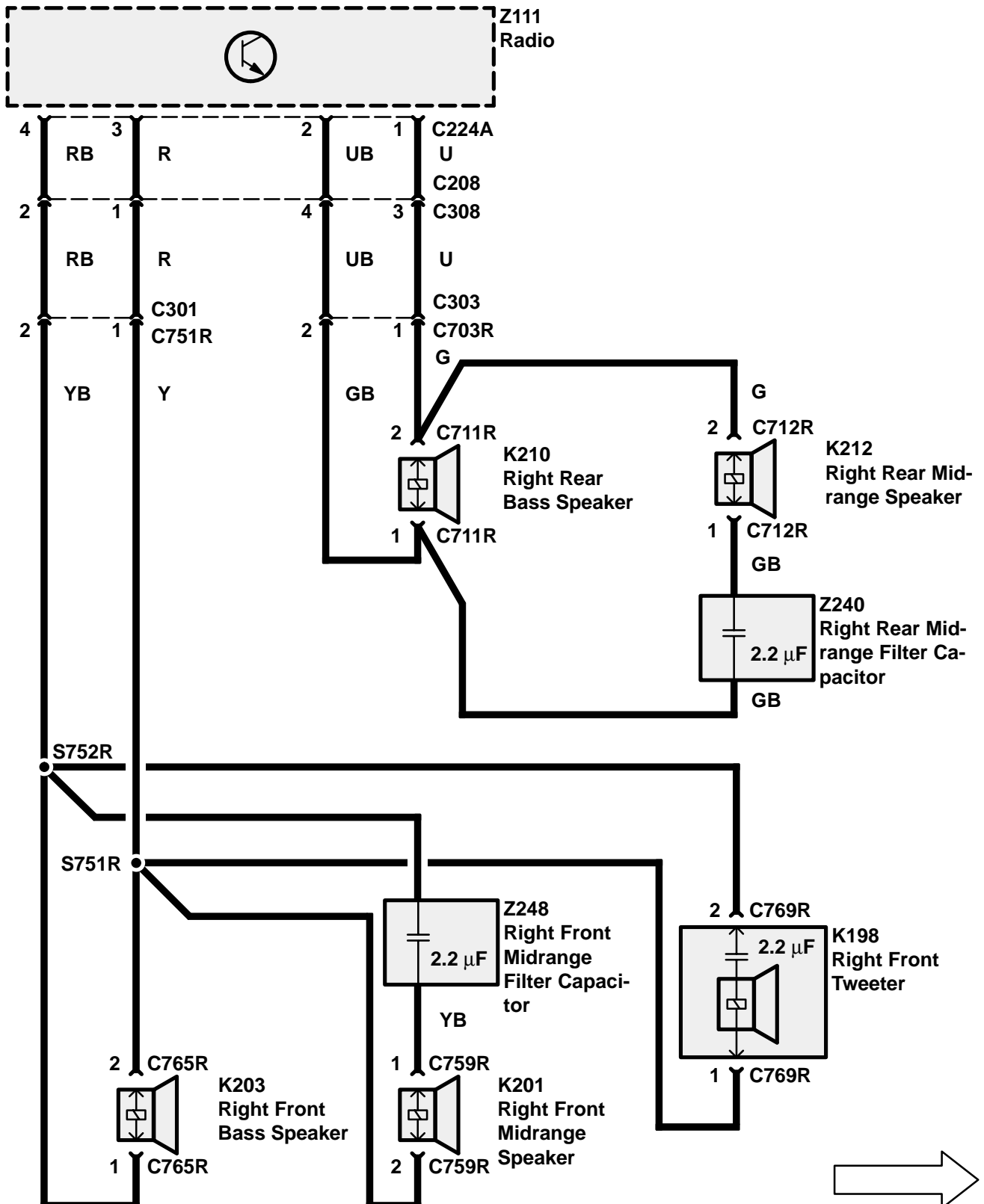
Low Line Radio

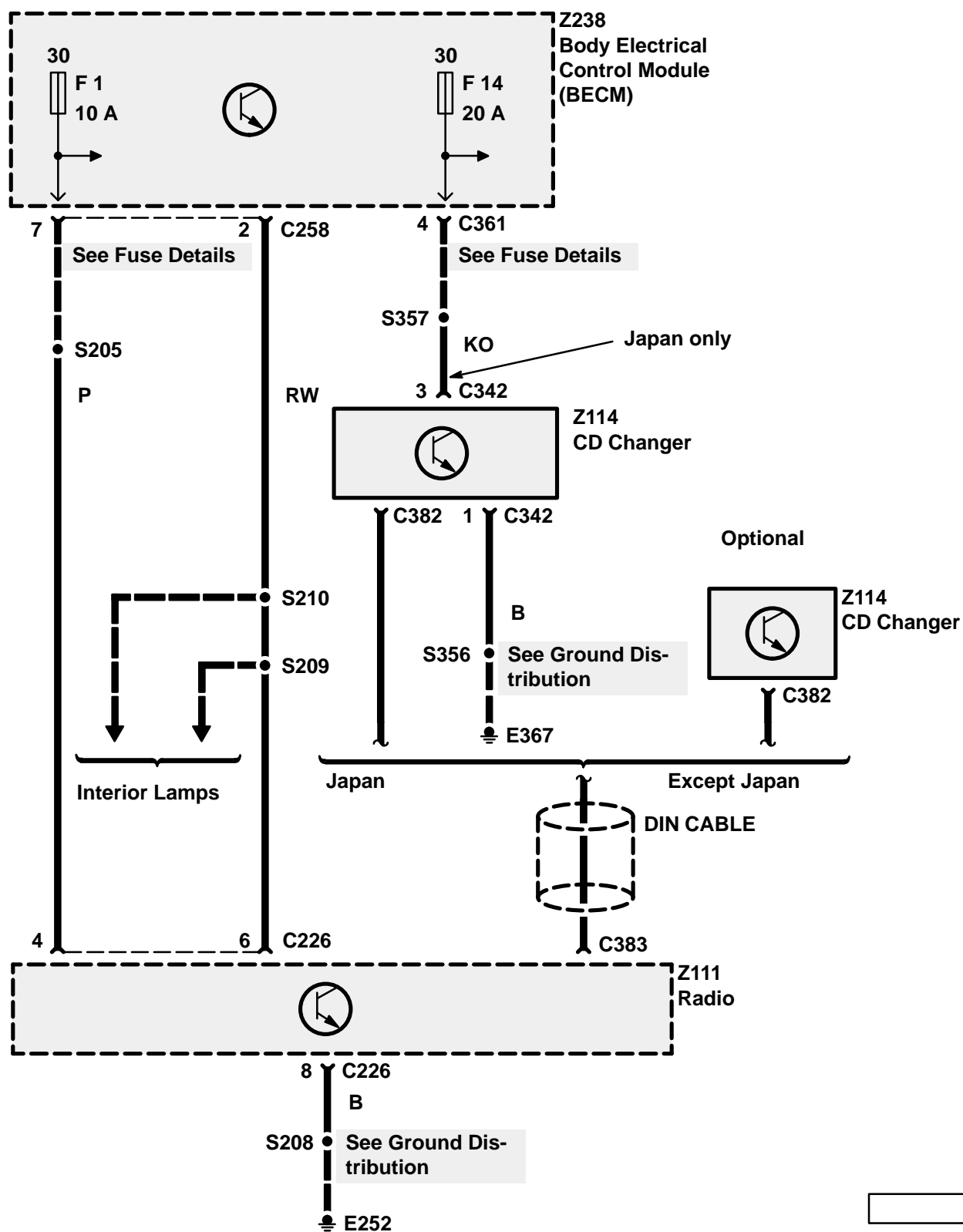






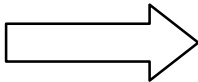
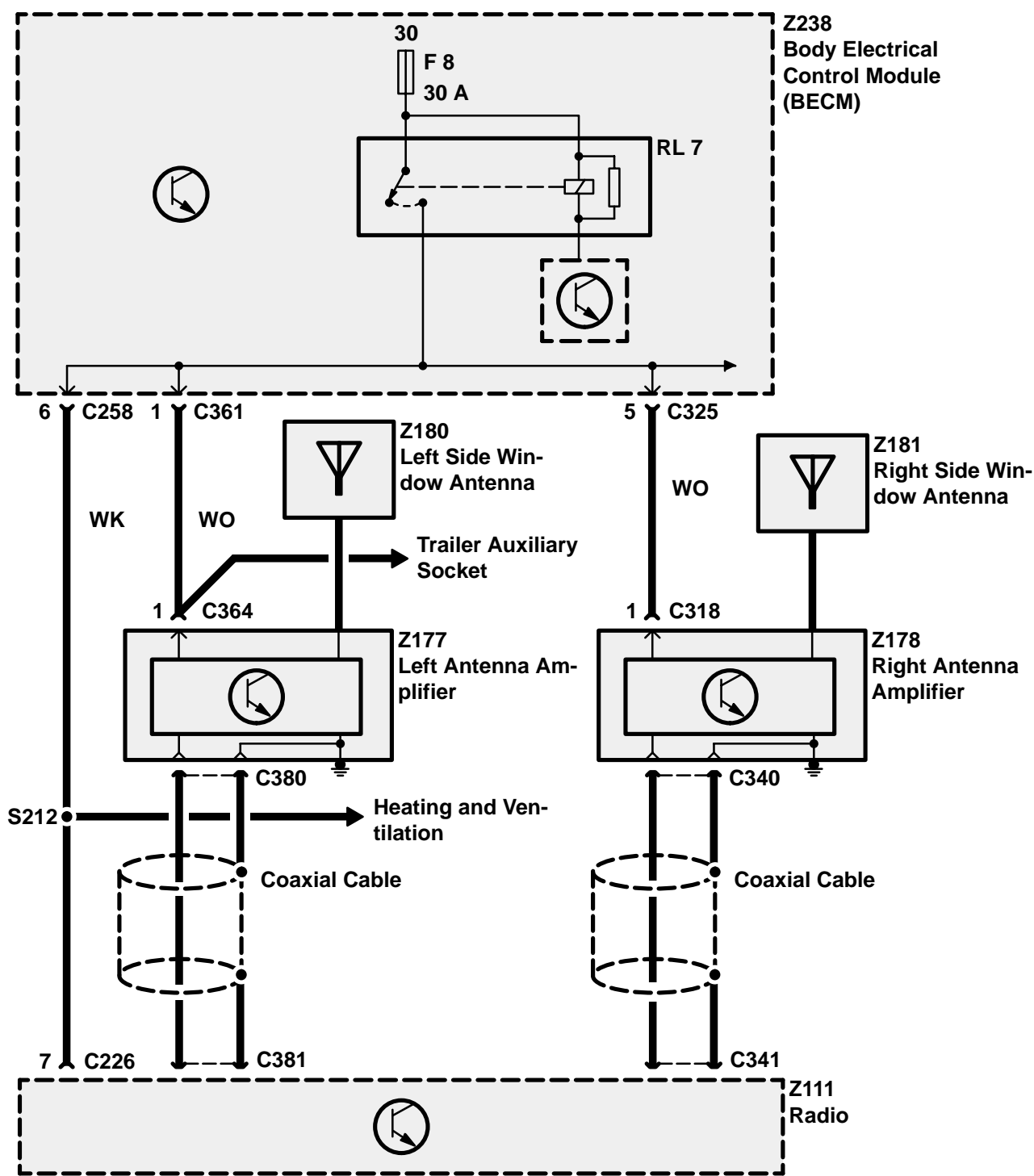


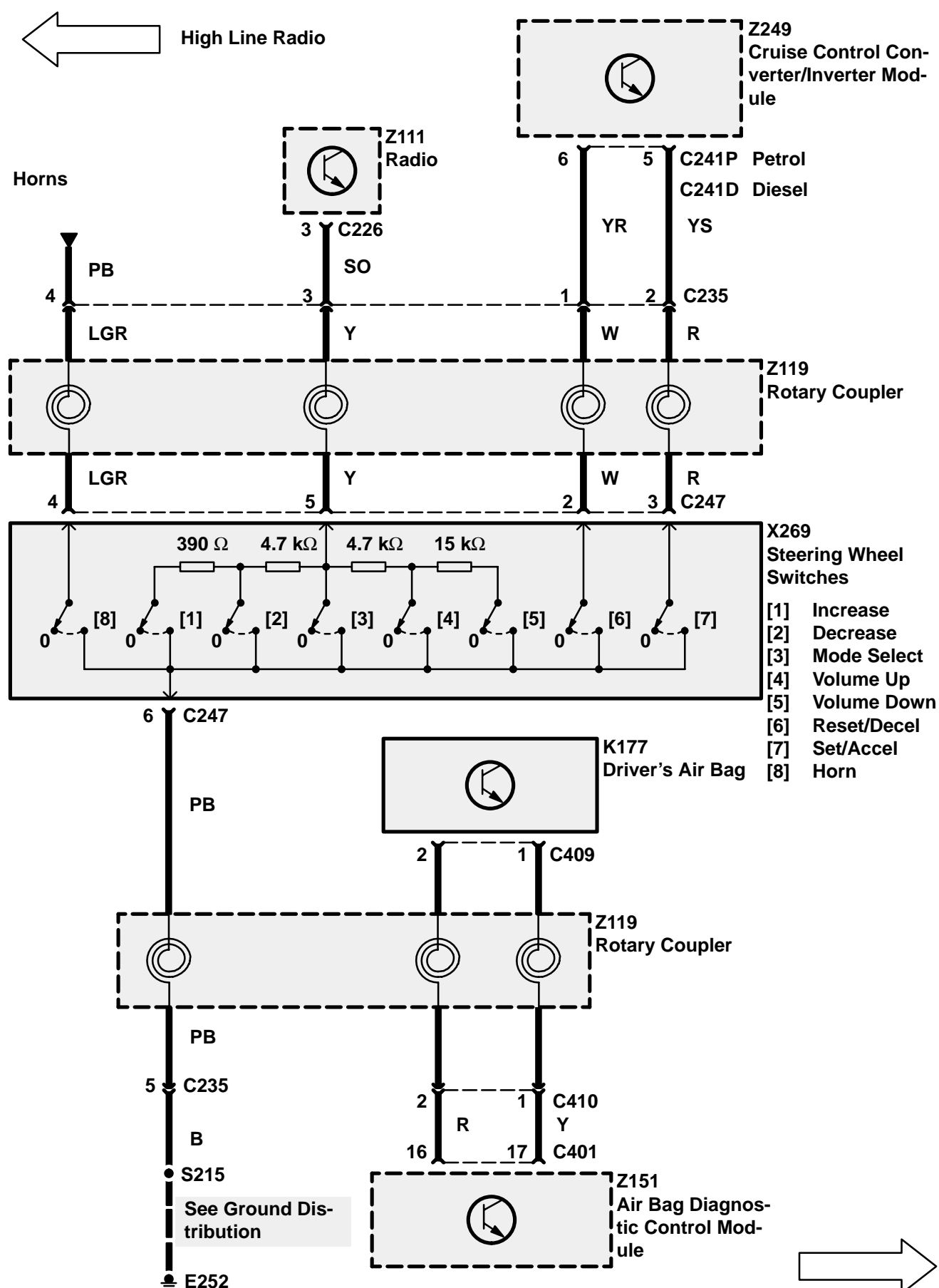






← High Line Radio





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