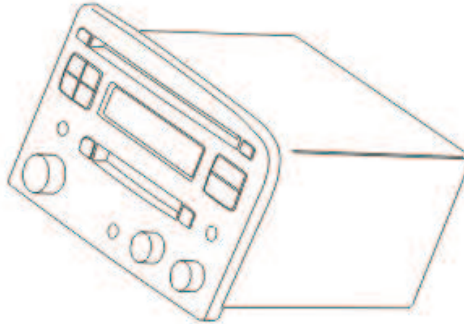


System overview

Control module



The audio module (AUM) manages functions for:

- Radio reception AM and FM
- CD playback (if the control module / car has either a CD player or a CD changer)
- Cassette playback (if the control module is equipped with a cassette player)
- Mini-Disk play back (option, Japan only)
- TV reception (option, certain markets)
- RDS reception (certain models and markets)
- Voice information from the Road Traffic Information system, RTI (road traffic information) (option, market dependent).

The audio module (AUM) is mounted in the Audio Box in the centre console. The control module is integrated with the sound unit. They are replaced as one unit.

There are three different sound units:

- **HU-4XX** – Integrated radio, cassette player and internal amplifier (4x25W)
- **HU-6XX** – Integrated radio, cassette player, CD player and internal amplifier (4x25W).
Available options: external amplifier and external CD changer
- **HU-8XX** – Integrated radio, 4 disc CD-changer, internal amplifier (1x25W) for the centre loudspeaker and requires an external amplifier (4x50W). An external CD changer is available as an option.

The CD player has next/previous track, fast search forwards and backwards and random play (RND - random).

The cassette player has next/previous track, fast forward and backward and random play (RND - random).

The Mini-disk player (option, Japan only) has next/previous track, fast search forwards and backwards and random play (RND - random).

The audio module (AUM) communicates with directly connected components and with other control modules and components connected via Controller area network (CAN) communication.

RDS-reception (Radio Data System) is possible (market dependant) during FM transmissions. In the USA, the system is called RBDS (Radio Broadcast Data System).

The loudspeakers in the front and rear doors are connected to the control module or to an external amplifier if applicable. The loudspeakers in the parcel shelf (S60/S80) and in the D-post (V70/V70XC) are also connected to the control module or to an external amplifier (if applicable). There are three different loudspeaker options:

- Base Performance
- High Performance
- Premium sound (not available for the S80).

The control module continually checks both its internal operations and its input and output signals. A diagnostic trouble code (DTC) is stored in the control module memory if the control module detects a fault in any of these. The diagnostic trouble codes (DTCs) can be read off using the diagnostic tool via the data link connector (DLC) in the car.

The audio module (AUM) has an internal communication system called Melbus. There is communication between the audio module (AUM), CD changer, Road Traffic Information Module (RTI) and the TV receiver.

Melbus comprises three different signals:

- MSCK, the clock signal
- MDATA the data signal which transmits

- MDATA, the data signal which transmits information
- MBUSY, indicates whether the data signal is busy or not.

For information, also see Signal specifications.

Signals

The table below summarizes the input signals to and output signals from the audio module (AUM). The signal types are divided into directly connected signals and Controller area network (CAN) communication. The illustration below displays the same information with the Volvo component designations.

Input signals	Output signals
<p>Directly connected: CD changer (16/15). Audio signal (Melbus communication)</p> <p>Road Traffic Information Module (RTI) (16/45). Voice information which is played back through the door mounted speaker on the driver's side (Melbus communication).</p> <p>Aerial (16/9 S60/S80, 16/50 V70/V70XC). AM and FM signals via the aerial amplifier (16/16).</p> <p>Bumper mounted aerial (16/68). FM signals via the aerial amplifier (16/67).</p>	<p>Directly connected: CD changer (16/15). Signals used to control the different functions in the changer (Melbus communication).</p> <p>Amplifier (16/2) (option). Audio signal which is amplified to the loudspeakers.</p> <p>Road Traffic Information Module (RTI) (16/45). Control of the TV function and the background lighting for the screen (Melbus communication).</p> <p>Loudspeakers. Sound reproduction.</p>
<p>Via Controller Area Network (CAN): Brake control module (BCM) / Anti-lock brake system module (ABS) (4/16). Volume adjustment depending on speed.</p> <p>Steering wheel module (SWM) (3/130). Remote control via the buttons on the steering wheel.</p> <p>Central electronic module (CEM) (4/56). Luminance of the display and the background lighting for switches.</p> <p>Phone Module (PHM) (16/60). Mutes the audio module (AUM) when the carphone is in use. (Market dependent).</p> <p>Accessory Electronic Module (AEM) (4/78). The audio module (AUM) is muted when the handsfree carphone is in use (accessory) or when reverse gear is selected if the car has the</p>	<p>Via Controller Area Network (CAN): Central electronic module (CEM) (4/56). Confirms that a diagnostic check has been carried out.</p>

reverse warning system (accessory).

