
Information and Entertainment System - Overview

Overview

The audio/SYNC system consists of the following:

Main Components

- 10 speakers (includes subwoofer)
- FDIM (touchscreen)
- ACM (contains the DACMC if equipped with 3.5L GTDI)
- Audio unit antenna
- Audio DSP module
- APIM
- FCIM
- Audio/SYNC steering wheel switch
- Satellite radio/GPS antenna
- SYNC microphone
- TCU
- TCU antenna
- USB hub

Main Features

- AM radio
- FM radio
- Audio extended play
- Battery load shed
- CD
- Satellite radio
- Speed compensated volume
- ESE (3.5L GTDI only)
- MyKey

- Navigation (if equipped)
- SIRIUS® Travel Link® (if equipped with navigation)
- Compass
- SYNC
- SYNC AppLink
- SYNC Connect
- Wi-Fi® hotspot

Audio System

NOTE: *Refer to the Owner Literature for additional details of the audio system.*

AM/ FM Radio

The ACM can be operated when the ignition is on or when the accessory delay or the extended audio play feature is active.

The audio unit fender-mounted antenna receives analog radio waves and sends them to the ACM.

The ACM converts the radio waves to sound through the speakers.

RDS (if equipped)

The RDS allows metadata (information such as station call letters, artist, song title, and genre) to be contained within the radio waves. If the RDS feature is enabled, a program type can be chosen. Once a program type is selected, such as Sports, Rock, Religious Music, or Weather, the ACM only tunes channels within the selected category when the SEEK or SCAN button is pressed. If a channel within the selected category is not found, the ACM continually seeks or scans.

HD Radio®

HD Radio® is a subscription-free service.

HD Radio® technology allows an AM or FM radio station to duplicate their traditional analog channel with a matching digital channel over the same AM/ FM signal. Some FM radio stations subdivide the digital output signal into multiple channels that are not duplicates of the analog channel. These extra multicast channels vary in availability and are called HD2, HD3 and HD4 channels.

Satellite Radio

Satellite radio is a subscription-based service.

The roof-mounted satellite radio antenna receives signals containing metadata (information such as station call letters, artist, album title, song title and genre) and digital satellite radio audio. The metadata displays on the FDIM and the audio is converted into sound from the speakers.

The ESN of the satellite radio receiver (integrated into the ACM) is associated with the VIN. The SIRIUS 12-digit ESN can be obtained by tuning to channel 0, accessing “AHU Part Numbers” in Bezel Diagnostics, or by referencing the label attached to the ACM.

Accessory Delay Feature

The accessory delay feature allows the audio system to be operated for a preset period of time after the ignition is turned off and a front door has not been opened.

Audio Extended Play Feature

This feature allows the audio system to operate with the ignition OFF. When the power button on the FCIM is pressed, the audio system activates and remains active for a period of up to 30 minutes, depending on configuration settings. Audio extended play does not function if the battery load shed is active.

Battery Load Shed Feature

Once certain criteria have been met (such as low battery state of charge, time elapsed or an excessive percentage of charge has been drained) the audio system turns off to save the remaining battery charge. Under this condition, "Battery Saver - System Off" displays on the FDIM to notify the driver that battery protection actions are active. To clear the load shed state, start the vehicle.

Chimes

Various vehicle systems send chime requests use the audio system to alert the driver.

For specific chime information,

Refer to: [Warning Chimes - Overview](#) (413-01 Instrumentation, Message Center and Warning Chimes, Description and Operation).

Refer to: [Warning Chimes - System Operation and Component Description](#) (413-01 Instrumentation, Message Center and Warning Chimes, Description and Operation).

Speed Compensated Volume

The speed compensated volume feature compensates for wind and road noise by adjusting the audio system volume based on the vehicle speed and the selected setting.

When a MyKey is in use and the MyKey Volume Limiter is enabled, the speed compensated volume is disabled.

ESE (vehicles equipped with 3.5L GTDI)

The ESE is an audio system feature that enhances certain engine tones typically induced under wide open throttle or heavy part-throttle conditions.

The ESE feature can be disabled (or re-enabled after disabling) through the use of a diagnostic scan tool. For more information,

Refer to: [Module Configuration - System Operation and Component Description](#) (418-01 Module Configuration, Description and Operation).

Subwoofer Speaker

The subwoofer enhances the sound experience by producing the low notes to be heard which the other speakers are incapable of.

Noise Suppression Equipment

The radio frequency suppression equipment reduces interference transmitted through the speakers by the engine, ignition, and electrical systems. When installing any new radio suppression equipment components, make sure that a good contact is made at all connections.

Steering Wheel Audio Controls

The right steering wheel switch is used to remotely control audio system functions. Each steering wheel switch function corresponds with a specific function of the audio system. The right steering wheel switch consists of a multi-button switch that operates the volume +/-, seek +/- and the audio mode functions.

SYNC System

NOTE: *Refer to the Owner Literature for additional details of the SYNC system.*

Main Features

- SYNC
- SYNC AppLink
- Android Auto™

- Apple CarPlay™
- Bluetooth mode
- Compass
- MyKey
- Navigation
- 911 Assist or emergency assistance
- Wi-Fi® hotspot

The SYNC system is a hands-free communication and entertainment system that supports many features.

The SYNC system provides the following function:

- Send and receive phone calls via a paired Bluetooth-enabled phone
- Send and receive text messages via a paired Bluetooth-enabled phone
- Connect media devices (such as an iPod™, a USB device or a Bluetooth-enabled audio device) to play audio files
- Initiate a 911 Assist or emergency assistance call when the airbags deploy
- Provide Vehicle Health Reports

All SYNC system features are not available with every phone/device. To determine if the SYNC system supports a particular phone, a tablet, a media player or feature of one of those devices, review the device compatibility list. Refer to the appropriate Ford authorized website to view a list of compatible devices and features.

The vehicle owner can update the CIP by using a USB flash drive or a Wi-Fi® connection not requiring a browser sign in or two-step security validation. The update is approximately 600 MB.

- When the SYNC system is connected to a stationary Wi-Fi® network (such as a home or restaurant) for automatic updates, the update download occurs when the ignition is OFF. To limit battery drain, the SYNC system downloads the update for up to 150 minutes in a month for a maximum of 30 minutes at a time.
- When the SYNC system is connected to a mobile Wi-Fi® hotspot (network) for automatic updates, the update download can occur with the ignition in ON/RUN and the vehicle is stationary or in motion.

Steering Wheel SYNC Controls

The right steering wheel switch is used to remotely control SYNC system functions. Each steering wheel switch function corresponds with a specific function of the SYNC system. The right steering wheel switch consists of a multi-button switch that operates the mute, answer/begin call, end call and the voice functions.

Bluetooth Mode

Bluetooth is a secure, short-range radio frequency that allows devices to communicate with the SYNC system. The operating range of a Bluetooth signal is application specific, but has a minimum range of 10 meters (33 feet).

The SYNC system supports multiple Bluetooth profiles, allowing the SYNC system to interact with both Bluetooth enabled phones and Bluetooth-enabled media devices.

Any Bluetooth-enabled device must first be paired with the SYNC system before it can become operational. Pairing a Bluetooth-enabled device is accomplished through the "Add Device" selection of the phone menu. When pairing a device, the SYNC system generates a unique PIN that must be confirmed on the Bluetooth enabled device in order for the pairing process to be successful.

Multiple Bluetooth-enabled phones and Bluetooth-enabled media devices can be paired to the SYNC system at the same time. The SYNC system supports an active connection with one Bluetooth-enabled phone and one Bluetooth-enabled media device at a time. If an additional device of either type is paired and made active, the SYNC system ends any active connection with an already-paired device, and establishes an active connection with the new device.

It is important to understand that while most Bluetooth-enabled devices can pair with the SYNC system, not all Bluetooth enabled devices have the same level of available features when interacting with the SYNC system. To determine if a Bluetooth-enabled device or feature is supported, review the device compatibility list, refer to the appropriate Ford authorized website to view a list of compatible devices and features.

USB Mode

When a portable media device, such as an iPod™ with its available cable or portable mass storage such as a USB flash drive, is connected to the vehicle audio system through a USB port, audio from the device can be played through the vehicle speakers. Functions such as volume, seek, fast forward, pause, etc. can be controlled with the vehicle audio controls.

When playing media files stored on a mass storage device such as a USB flash drive, the SYNC system only plays supported file types that do not have DRM protection, and are contained on a properly formatted device. For more information, refer to "Supported Media Players, Formats and Metadata Information" in the Owner's Literature.

USB Hub

The USB hub contains two illuminated USB ports. The USB ports allow audio from portable media devices to play through the vehicle speakers.

The USB hub can be used to power and/or charge a device if the device supports this feature and does not have a power consumption requirement of more than approximately 5 volts and 2.5 amps (approximately 13 watts).

SYNC AppLink

SYNC AppLink allows applications installed on a device to be controlled using the steering wheel switch, the FCIM and/or the FDIM.

All devices must be paired with the SYNC system via Bluetooth. Additionally, Apple® devices must also be connected to a USB port.

Data is transmitted back and forth between the device and the SYNC system through Bluetooth or through the USB port with Apple® devices.

Voice Recognition

Voice recognition allows certain phone, navigation system (if equipped), audio system and climate control system functions to be controlled with voice commands to reduce or eliminate the need to interact with the FCIM, the FDIM and or a paired device while driving.

When the steering wheel voice button is pressed, an audible prompt is heard from the speakers. Based on the setting, audible prompts are either a voice or a simple tone. When interaction mode is set to standard, a detailed voice guidance is provided. When the interaction mode is set to advanced, most prompts are tones only and minimal voice guidance is provided. The microphone receives the voice commands and the system responds based on the interpreted input.

TTS Feature

The TTS feature converts text into an audible speech through the audio system speakers so it does not have to be read from the device or the FDIM while driving. Examples include incoming text message sender information, text messages, and metadata from audio being played via the USB or Bluetooth.

911 Assist or Emergency Assistance

The 911 Assist or emergency assistance feature is used to call for help in the event the airbags are deployed. This only operates when a cellular phone has been successfully paired and actively communicating with the audio system.

Compass

The GPS antenna is used to acquire the compass heading that displays in the instrument cluster message center display.

Navigation (if equipped)

The navigation system guides the driver to a pre-entered destination.

The navigation displays on the FDIM.

SIRIUS™ Travel Link™

The SIRIUS™ Travel Link™ feature requires the vehicle to come equipped with navigation.

SIRIUS™ Travel Link™ is a subscription-based service, and requires a separate subscription from the satellite radio. When a SIRIUS™ Travel Link™ subscription is active, the ESN of the satellite radio receiver (built into the ACM) is associated with the VIN and registered in the SIRIUS™ database. The SIRIUS 12-digit ESN can be obtained by tuning to channel 0 and accessing “AHU Part Numbers” in Bezel Diagnostics or by referencing the label attached to the ACM.

SIRIUS™ Travel Link™ allows the driver to receive information such as:

- Fuel prices (stations, fuel type)
- Movie listings (theaters, movie titles, ratings, start and run times)
- Ski conditions (resorts, lodging, conditions)
- Sports (in-game and final scores, weekly schedules, headlines)
- Traffic (traffic flow, accidents, construction, road closings)
- Weather (current weather, forecasts, radar images)

The time intervals for each Travel Link category to update the data vary depending on the category.

Certain date-dependent features (such as sports schedules and scores, movie times, and the 5-day weather forecast) require the use of GPS data for accuracy.

Android Auto™

Android Auto™ integrates select Android device features with the vehicle audio system controls and FDIM. The Android Auto™ interface displays phone information cards on the FDIM and provides control of Google Play Music, Google Maps, and other compatible Applications.

The Android Auto™ interface is available on the FDIM when a device with compatible software is connected to a vehicle USB port. To use Android Auto™, the Android Auto™ Application must be

installed on the Android based device.

Apple CarPlay™

Apple CarPlay™ integrates select iPhone features with the vehicle audio system controls and FDIM. The Apple CarPlay™ interface provides direct access and control of Music playlists, Apple Maps directions, iMessages, Siri, and phone calls. In addition, compatible iOS Applications can also be controlled via the Apple CarPlay™ interface.

The Apple CarPlay™ interface is available on the FDIM when a device with compatible software is connected to a vehicle USB port using an Apple Certified Lightning cable. To use Apple CarPlay™, Siri must be enabled on the iPhone.

SYNC Connect (if equipped)

The SYNC Connect system (when activated) can be used to provide remote connectivity through the FordPass mobile phone application. It can be used to monitor certain vehicle systems and carry out vehicle functions such as:

- Fuel level
- Odometer reading
- Remote alerts and notifications
- Remote start control (if enabled through the IPC), status, and scheduler
- Temperature conditioning for the vehicle interior (based on selected settings)
- Vehicle locator
- Vehicle lock/unlock control and the status of command

Vehicle Wi-Fi® Hotspot (if equipped)

The Wi-Fi® hotspot feature allows multiple devices to connect to high speed internet access. The network name, password, enable/disable and other settings for the Wi-Fi® hotspot feature are accessed using the settings menu on the touchscreen display. It can support up to 8 connected devices at a time.

MyKey Audio Operation

NOTE: *For additional information related to specific MyKey features, refer to the Owner Literature.*

There are configurable and non-configurable items.

Non-Configurable Items

- **Belt-Minder:** The audio system is muted, and “MyKey Buckle Up to Unmute Audio” displays in the information display until the safety belts are buckled.
- **Satellite Radio:** Adult content channels are blocked by being muted.

Configurable Items

- **911 Assist or emergency assist:** If the administrator has selected "Always On" in the MyKey menu, 911 Assist or emergency assistance is enabled and cannot be disabled.
- **Do Not Disturb:** If the administrator has selected "Always On" in the MyKey menu, the Do Not Disturb feature is enabled and cannot be disabled.
- **Speed Compensated Volume:** If the administrator has enabled the Volume Limiter feature, the speed compensated volume feature is disabled.
- **Speed Limiter:** If the administrator has enabled the Speed Limiter feature, the audio volume level is temporarily reduced so the top speed alert chime can be heard when the preselected top vehicle speed is reached.
- **Speed Minder:** If the administrator has enabled the Speed Minder feature, the audio volume level is temporarily reduced so the speed alert chime can be heard when the preselected Speed Minder vehicle speed is exceeded.
- **Volume Limiter:** If the administrator has enabled the Volume Limiter feature, the audio system volume is limited to approximately 50%. In an attempt to exceed the limited volume, “MyKey Volume Limited” displays on the information display.