

415-00B Information and Entertainment System - General Information - Vehicles
With: SYNC 3

2019 Ranger

Description and Operation

Procedure revision date:
12/7/2018

Information and Entertainment System - Overview

Audio System

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

Main Features

- AM radio
- FM radio
- Satellite radio (if equipped)
- HD Radio (if equipped)
- Audio extended play
- Speed compensated volume
- MyKey

AM/ FM Radio

The ACM can be operated when the ignition is on or off. The accessory delay feature powers the audio system, after the ignition has been turned off, for a preset time or until a front door is opened. The ACM is connected to the vehicle network, so a scan tool can be used in diagnostics.

When the AM/ FM mode is selected, the ACM amplifies the radio waves sent from the antenna. It then selects the requested frequency, converts and amplifies the content. The ACM outputs the signals to the speakers or to the separate DSP (amplifier).

Radio stations may broadcast RDS signals which contain information such as station identification and program information. Radios equipped with RDS can extract this information and also target the station genre (music type, such as Rock) for seek or scan functions.

HD Radio

HD Radio is a free service offered by some radio stations, enabling them to broadcast better sound quality with multiple programs on a single radio frequency. HD Radio-equipped radios can connect to the multiple programs offered.

Satellite Radio

Satellite radio is a subscription-based service which broadcasts various programs without commercials. The satellite-transmitted signal contains station identification and various program information, including genre and song titles. A satellite equipped radio can display or use this information along with the programming.

Satellite radio receivers contain a required ESN which registers the radio and vehicle with the satellite company.

Extended Audio Play Feature

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

Battery Load Shed Feature

The audio system turns off after periods of engine-off activity with low battery state of charge. The display shows "Battery Saver - System Off." Restarting the engine and recharging the battery resets the load shed feature.

Chimes

The audio system is used to broadcast chimes and other driver alerts sent by various vehicle systems.

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

Speed Compensated Volume Feature

The adjustable speed-compensated volume can be turned off or set to increase audio system playback level as the vehicle speed increases.

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

Remote Audio Controls

The audio system can be remotely controlled from the steering wheel.

SYNC System

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

Main Features

- SYNC
- SYNC AppLink
- Android Auto™ (touchscreen only)
- Apple CarPlay™ (touchscreen only)
- SYNC Connect (if equipped)
- Bluetooth mode
- Compass
- Navigation (if equipped)
- SIRIUS Travel Link™ (if equipped with navigation)
- MyKey
- 911 Assist or emergency assistance
- Wi-Fi hotspot (if equipped, cellular subscription required)

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

The SYNC system provides the following functions:

- 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®, USB device, or Bluetooth-enabled audio device to play audio files
- Initiate a 911 Assist or emergency assistance call if the airbags deploy
- Provide Vehicle Health Reports
- Provide a vehicle Wi-Fi hotspot (if equipped)

Not all SYNC system features are supported with every phone/device. Review the Ford authorized website list of compatible devices to determine if the SYNC system supports a specific phone, tablet, media player or a feature of one of those devices.

The vehicle owner can update the SYNC system (CIP) using a USB flash drive or a Wi-Fi connection not requiring a browser sign in or two-step security validation. The update can be as large as 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 when the ignition is in the ON/RUN mode.

Once the update download and installation is complete, an ignition cycle must occur before the update becomes active.

Remote SYNC Controls

The audio/SYNC steering wheel switch is used to remotely control SYNC system functions. The steering wheel switch consists of multi-button switches that operate various SYNC functions.

Bluetooth Mode

Bluetooth is a secure, short-range (up to 10 meters (33 feet)) wireless connection method used for wireless device communication with the SYNC system. The SYNC system supports multiple Bluetooth profiles, allowing the SYNC system to interact with Bluetooth enabled phones and Bluetooth-enabled media devices. While most Bluetooth-enabled devices can pair with the SYNC system, not all Bluetooth-enabled devices have the same level of SYNC-compatible features. To determine if a Bluetooth-enabled device or feature is supported, refer to the list of compatible devices and features at the Ford authorized website.

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.

USB Mode

Connecting a portable media device mass storage device (such as a MP3 player or USB flash drive) to a USB port allows media files to be played through the audio system. Playback functions (volume, seek, fast forward, pause) can be controlled with the vehicle audio controls.

SYNC can use media with embedded information (artist, album and song titles, and genre) for search and

playback functions, if it is supported and correctly formatted on the media device.

When a new media device is connected, SYNC records where the information resides and uses this information to quickly find requested songs. Indexing the media information and location can take several minutes if the size of the media is large. Future changes to SYNC-indexed media are updated rather than replacing the entire index, which greatly reduces the time required.

Media files that do not have DRM protection or are not properly formatted on the device, cannot be played on the SYNC system.

Media Hub - Vehicles With Non-Touchscreen

A non-illuminated USB port in the media hub allows connection and playback of portable media devices and SYNC software updates. The media hub provides standard 5 volt power and charging of portable devices.

Media Hub - Vehicles With Touchscreen

Two illuminated USB ports in the media hub allow connection and playback of portable media devices and SYNC software updates. The media hub provides standard 5 volt power and charging of portable devices.

SYNC AppLink

The SYNC AppLink supports devices with customer-installed applications capable of outside control by voice command, steering wheel switches, the FCIM or the touchscreen display. These devices must be paired with SYNC Bluetooth and some devices require a USB connection.

Voice Command

The SYNC voice command capability reduces or eliminates physical interaction with certain vehicle functions or portable device controls. When SYNC is prompted by the steering wheel switch, it responds with a tone or audible response (depending on the SYNC setting) in the audio system. SYNC uses the voice microphone to listen to the driver command and control the vehicle function or portable device.

TTS Feature

The SYNC text to speech feature converts text information to speech and broadcasts it through the audio system. Text messages with sender information, media titles, and other information can be read and broadcast through the audio system, helping users maintain driving focus.

Emergency Assistance (911 Assist)

The emergency assistance feature (911 Assist) calls for help in an event where the airbags deploy. This feature must be previously enabled and requires a paired cellular phone to connect with emergency services. If activated by an airbag deployment, the system plays a message in the vehicle indicating an emergency call is about to be placed. If not canceled, it dials the emergency response number and plays a pre-recorded message for the emergency response operator. After the message plays, the vehicle occupant (s) can talk with the operator to give their location and personal information.

Compass

Information from the GPS is used to determine the vehicle compass heading. The compass heading displays in the instrument cluster message center or the center display.

Navigation System (if equipped)

The navigation system uses GPS to display the vehicle location and travel direction on a map, displayed on the touchscreen. Street names, landmarks, and points of interest are included. The driver can enter destination information to obtain automatic map routing and navigation guidance voice directions.

SIRIUS™ Travel Link™

SIRIUS™ Travel Link™ is a subscription-based service available on vehicles equipped with navigation. GPS data is required for certain features. When the subscription is active, the ESN of the ACM, with the VIN, is registered with SIRIUS.

SIRIUS™ Travel Link™ information includes traffic conditions, weather, fuel station locations and prices, and local entertainment information.

Android Auto™ or Apple CarPlay™ (touchscreen only)

SYNC supports interaction with Android Auto™ and Apple CarPlay™ enabled phones connected by Bluetooth. This allows the user to access phone capabilities and control features via SYNC voice commands and switches. The features include:

- making calls.
- sending and listening to text messages.
- selecting and playing music.
- using the phone voice assistant.
- using phone maps and navigation.

Android Auto™ and Apple CarPlay™ disable some SYNC features. Most Android Auto™ or Apple CarPlay™ features use mobile data.

SYNC Connect (if equipped)

NOTE: *Depending on the notification settings, the vehicle may report a “Deep Sleep Mode” on supported mobile Apps. This occurs when battery voltage drops below a level necessary for correct vehicle operation or the vehicle has been inactive for a number of days.*

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

- reading the fuel level and odometer.
- receiving remote alerts and notifications.
- carrying out or scheduling remote starts (if enabled through the IPC).
- using the vehicle locator.
- vehicle lock/unlock control and vehicle lock/unlock status.

NOTE: *If vehicle battery voltage falls below the minimum required or the vehicle has been inactive beyond a designated time limit, the TCU turns off until the next engine running event to preserve battery power. The connected mobile device App reports a deep sleep mode if notifications are turned on. Refer to the mobile device App information to set notifications and for a list of disabled features when the vehicle is in deep sleep mode.*

Vehicle Wi-Fi Hotspot (if equipped)

The Wi-Fi hotspot feature allows up to 8 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.

MyKey Audio Feature

NOTE: *Refer to the Owner Literature for additional details of the MyKey features.*

MyKey use can affect audio system functions.

The following MyKey audio effects are always present, regardless of administrator settings, when a MyKey is in use:

- When the seatbelts are not buckled, the audio system mutes and a message informs the driver to buckle up to unmute the audio.
- The satellite radio adult content channels are muted.

The following audio changes can be set by the MyKey administrator to occur when a MyKey is in use:

- The emergency assistance (911 Assist) can be set to always on and cannot be disabled by the MyKey driver.
- Audio volume can be limited in various circumstances, including turning off speed compensated volume or reducing volume at higher vehicle speeds. The display notifies the MyKey driver when volume has is limited.

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