

Head Unit Software Update Version 1861 via OTA and USB (Denso-Ten)

Service Category Audio/Visual/Telematics

Section Audio/Video

Market USA

Toyota Supports
 ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2023 - 2024	RAV4, RAV4 HV, RAV4 Prime	

Introduction

A new head unit software update is available for 2023 – 2024 model year RAV4, RAV4 Hybrid, and RAV4 Prime vehicles equipped with Toyota Multimedia (earlier than version 1861). This software update includes the following improvements:

- Usability of CarPlay® exit.
- User Profile.
- User interface.
- Cloud navigation.
- Intelligent assistant voice recognition.
- Bug fixes.

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Introduction (continued)

Vehicle operators can perform this update directly by accepting the on-screen notification (see Figure 1), advising the software update is available, or by locating the software update from the Settings menu and initiating the available update (see Figure 2). The release notes text below will be displayed to the customer:

“This software update includes the following improvements: Usability of CarPlay® exit, User Profile, user interface, cloud navigation, intelligent assistant voice recognition, and bug fixes.”

Figure 1.

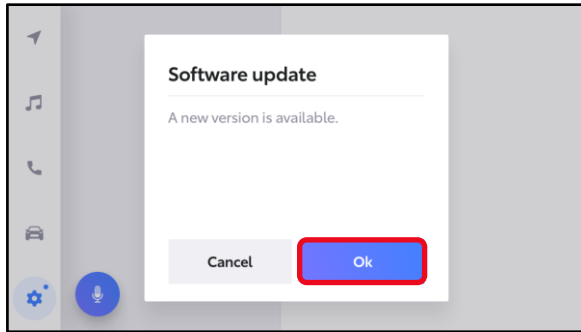
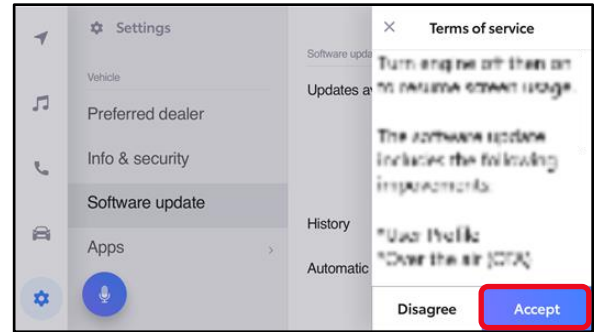


Figure 2.



If it is necessary to perform the software update for a customer, follow the software update procedures in this bulletin.

This is a phased rollout, which means that as time progresses, more vehicles will receive the update notification and ability to update the head unit. This timing will vary by location and may not display for every vehicle in one location at the same day/time.

Warranty Information

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
–	Software update via OTA (Not Applicable to Warranty)	–	–	–	–
EL2603	Battery Reset and Software Update via OTA or USB	0.9	86140-***** 86100-*****	87	74

*Warranty claim MUST be submitted with the correct 10-digit OFF. Choose the correct OFF for the vehicle being repaired by searching for the parts in the Electronic Parts Catalog using the VIN filter.

APPLICABLE WARRANTY (USA)

- This repair is covered under the Toyota Basic Warranty. This warranty is in effect for 36 months or 36,000 miles, whichever occurs first, from the vehicle’s in-service date.
- Warranty application is limited to occurrence of the specified condition described in this bulletin.

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Multimedia Software Update Information

This new software addresses the following items in Toyota Multimedia versions earlier than 1564:

NOTE

*This item does NOT affect the backup camera display.

- Head unit reboots.*
- The head unit does not boot up.*
- The display screen flickers.*
- The map is not displayed.
- User profile enhancements.
- When French is selected, the “Share ETA” screen is not completely in French.
- Incoming call ringing continues even after ignoring or ending the call.

This new software addresses the following items in Toyota Multimedia versions earlier than 1668:

NOTE

*This item does NOT affect the backup camera display.

- Display screen is black.*
- Display screen freezes.*
- Display screen is white.*
- Head unit reboots.*
- Head unit reboots after requesting the POI via Virtual Assistant.*
- Apple CarPlay® connectivity improvements.
- Route guidance arrow is not displayed on the Multi-information Display (MID) during Apple CarPlay® navigation.
- Apple CarPlay® navigation route guidance information is not displayed on the MID.
- Remaining distance to destination is not displayed on the MID during Apple CarPlay® navigation.
- Remaining distance to destination displays incorrectly during Apple CarPlay® navigation.
- Loads the last User Profile.

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Multimedia Software Update Information (continued)

- PIN prompt appears unexpectedly.
- QR code stays on the screen.
- Bluetooth® device name shows incorrectly.
- “Calling” message remains on the Head Unit Display (HUD) after the phone call ends.
- Phone call accept/decline prompt stays on the combination meter.
- Apple CarPlay® phone call progress screen does not appear.
- Apple CarPlay® enhancements and updates.
- Difficult to delete the secondary User Profile.
- The secondary User Profile won't load with the PIN.
- User Profile does not completely switch from guest to primary, just shows as loading.
- User Profile enhancements and updates.
- User Profile head unit settings do not stay for the Guest profile.
- User Profile image copies to other profiles that don't have a user image.
- Android Auto® enhancements and updates.
- Android Auto® won't connect.
- Apple Music® audio is inoperative after phone call ends.
- Apple Music® enhancements and updates.
- Apple Music® explicit song skipping feature setting is inoperative.
- Apple Music® playback list is missing.
- Apple Music® shuffle does not work.
- Audio volume is louder than it was before using the Virtual Assistant command.
- Contact photo does not update after making a call via Virtual Assistant.
- POI Virtual Assistant search results display in numerals (e.g. Options 1, 2, 3 instead of Options A, B, C).
- Virtual Assistant delay at start up.
- Virtual Assistant enhancements and updates.
- Virtual assistant orb is no longer animated.
- Rear A/C OFF via voice command does not work.

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Multimedia Software Update Information (continued)

- Map disappears unexpectedly.
- About screen in Navigation updates.
- Native Navigation items shown in the Mexico market vehicle notifications setting screen.
- Navigation route color update.
- Navigation route disappears unexpectedly.
- Navigation system enhancements and updates.
- POI search screen freezes.
- Right-hand side of split navigation display is white.*
- Traffic along navigation route clears after adjusting map view.
- Vehicle direction does not update during navigation.
- Volume level banner stays on the screen.
- Bluetooth® connectivity improvements.
- Bluetooth® system enhancements and updates.
- Primary iPhone® becomes the secondary device after ignition cycle.
- Secondary device name is still displayed even after it is deleted from the head unit.
- Unable to delete a Bluetooth® device from the head unit device list.
- Handsfree call/text system enhancements and updates.
- Incoming/outgoing phone call ringing and notification improvements.
- Phonebook improvements.
- Radio logo on favorites list does not match the actual radio logo.
- Remove messages related to “hybrid radio.”
- Clock and time zone information enhancements and updates.
- Add animation when transitioning to steering switch screen.
- Apple CarPlay® audio banner updates.
- Drive mode screen transition enhancements and updates.
- HMI enhancements and updates.
- HMI translation updates.
- Power back door opening setting grayed out.
- Software update HMI and notification pop-up/banner updates.

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Multimedia Software Update Information (continued)

- Software system enhancements and updates.
- Some PHEV charge schedule menu buttons are grayed out if the parking brake is not on.
- Multimedia system enhancements and updates.
- Some customized settings are unable to be adjusted.
- Destination Assist enhancements and updates.
- Amazon Music™ enhancements and updates.
- Google Assistant enhancements and updates.
- Google Assistant freezes and lowers volume.
- FM radio plays instead of wired Apple CarPlay® audio when using steering wheel MODE switch.
- USB audio enhancements and updates.
- Wi-Fi system enhancements and updates.
- Rear Seat Entertainment system enhancements and updates
- “Communication Stopped” pop-up is not displayed when connecting GTS+.

This new software addresses the following items in Toyota Multimedia versions earlier than 1733:

- Wireless Android Auto® inoperative.

This new software addresses the following items in Toyota Multimedia versions earlier than 1861:

NOTE

*This item does NOT affect the backup camera display.

- Add Exit Apple CarPlay® HMI enhancement (a dynamic resize button that shows or hides the Toyota menu).
- Display screen is black.*
- Display screen is black after the remote climate control timed out.*
- Display screen is white.*
- Head unit reboots.*
- Apple CarPlay® disconnects when placing or receiving a call.
- No sound during an Apple CarPlay® call.
- Apple CarPlay® connectivity improvements.

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Multimedia Software Update Information (continued)

- Combination meter compass direction is incorrect during Apple CarPlay® and Google Maps® navigation.
- Apple CarPlay® enhancements and updates.
- Microphone icon stays on combination meter even after voice command is finished.
- Navigation information is missing from the MID.
- Map orientation unexpectedly changes to North-up.
- Clock time does not match between the head unit and the MID.
- Music volume decreases unexpectedly.
- Inability to register the User Profile.
- User Profile enhancements and updates.
- Android Auto® enhancements and updates.
- Apple Music® cover art and sub information is missing.
- Apple Music® enhancements and updates.
- Sixth Android Auto® device will pair via Bluetooth® but doesn't display the Start Android Auto® button.
- Scroll bar missing from the Apple Music® "For You" screen.
- Poor sound from navigation voice guidance.
- Add Route Overview button.
- Add traffic lights and stop sign icons along navigation route.
- Allow the disabling of "Closing Soon" pop-ups when setting navigation routes.
- Improvements to the appearance of 3D buildings within the navigation map.
- Navigation +/- button is grayed out.
- Navigation guidance blue line disappears unexpectedly.
- Navigation guidance text font size increases and adds road sign illustrations.
- Navigation route guidance screen freezes.
- Navigation settings do not save.
- Navigation system enhancements and updates.
- Navigation voice guidance stops.
- Stop displaying alternate navigation route after guidance starts.
- Vehicle location cursor is missing from navigation map at start up.

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Multimedia Software Update Information (continued)

- Unable to switch audio sources when two phones are connected.
- Bluetooth® audio quality is poor/breaks up.
- Bluetooth® connectivity improvements.
- Bluetooth® system enhancements and updates.
- Call history and contacts are missing.
- Handsfree call/text improvements.
- Handsfree system enhancements and updates.
- Radio station information does not update when switching between Sirius XM® and AM/FM.
- Sirius XM® radio enhancements and updates.
- “Song Name” text appears in the audio banner instead of the actual song information.
- Audio screen does not update when going from radio to Bluetooth®.
- Drive mode banner appears at start up.
- The MID displays radio information as unknown characters instead of letters and numbers.
- HMI enhancements and updates.
- Power backdoor setting button is grayed out and inoperative.
- Top edge of navigation screen is white after switching to night mode.
- Unsupported settings listed within items in the vehicle customized settings screen.
- Multimedia system enhancements and updates.
- Steering wheel switch track buttons are inoperative during Amazon Music™.
- USB audio system enhancements and updates.
- Wi-Fi hotspot turns off.
- Software update HMI and notification pop-up/banner updates.
- Software system enhancements and updates.

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Multimedia Software Update Information (continued)

The NEW head unit calibration software version 1861 may be accessed from the table below.

Table 2.

MODEL	MODEL YEAR	HEAD UNIT GRADE	HEAD UNIT PART NUMBER	CALIBRATION ID
RAV4, RAV4 HV, RAV4 Prime	2023 – 2024	Entry	Any	rb_update_2024_RAV4_NE_HU_C_01861.zip

MULTIMEDIA SOFTWARE FILE DOWNLOAD

- The multimedia software update file may be downloaded directly from this Service Bulletin by clicking on the file name in the table above.
- Once downloaded, do NOT extract (unzip) the rb_update file; simply drag and drop the file onto to a blank USB flash drive.
- Do not put multiple files on the same USB flash drive at the same time, or the update will not begin.
- It is recommended to use one separate USB flash drive per file.
- Confirm there is no “(1)” or similar suffix on the file due to multiple downloads.
- Do NOT rename the file unless it is to remove “(1)” or similar.
- Use a blank USB flash drive from a trusted name-brand manufacturer with the following specifications:
 - Storage capacity: 4.0 – 32 GB.
 - File format: FAT 32 (Windows®).
 - Communication format: USB 2.0 or newer. USB 3.0 may be faster.
- USB flash drives larger than 32 GB that can be partitioned to smaller sizes will NOT work.
- USB-C port vehicles will require a USB-C flash drive or adapter that is capable of transferring data (not just charging).

NOTE

- The USB method should ONLY be used when the Wi-Fi/Cellular method of updating is unsuccessful.
- The Head Unit should NOT be replaced as part of the Repair Procedure.

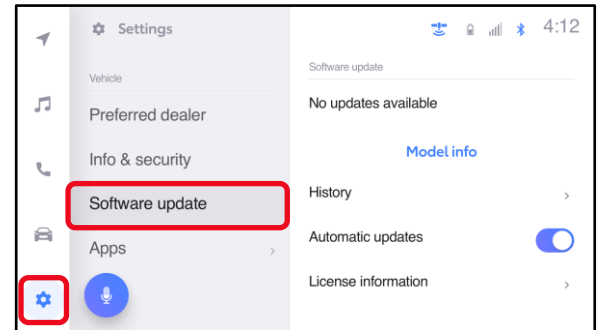
Head Unit Software Update Version 1861 via OTA and USB (Denso-Ten)

Head Unit Software Version Confirmation

1. Select the gear icon, scroll down, and select Software update.

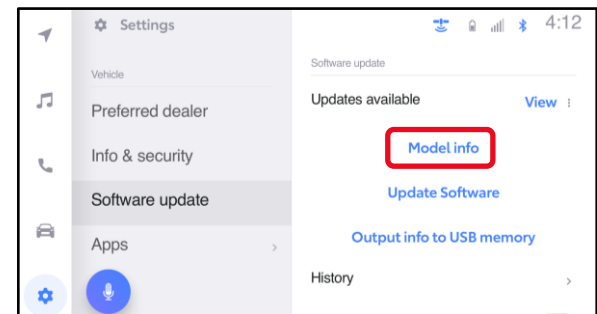
NOTE
If it is NOT possible to perform this step due to rebooting, go to the [Continuous Head Unit Reboot Condition](#) section.

Figure 3.



2. Select Model info.

Figure 4.



3. Note the version of the head unit (HU), as shown in Figure 5.

Is the HU version up to date per Table 3?

- **YES** — This bulletin does NOT apply, continue diagnosis using the applicable Repair Manual.
- **NO** — Continue to step 4.

Figure 5.

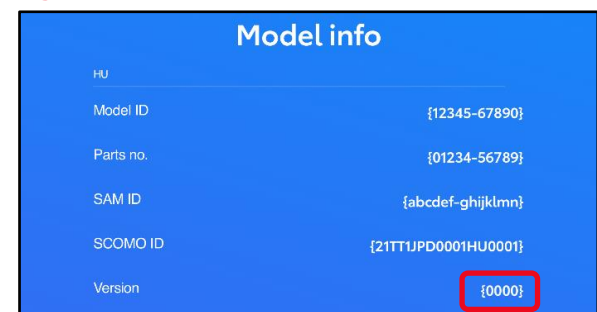


Table 3. Software Version Information

MODEL	TYPE	PREVIOUS VERSION	CURRENT VERSION
RAV4, RAV4 HV, RAV4 PHV, RAV4 Prime	HU Version	lower than 1861	1861 or higher

4. Select X to exit the Model info screen.
5. Continue to the Software Update Procedures section.

Head Unit Software Update Version 1861 via OTA and USB (Denso-Ten)

Continuous Head Unit Reboot Condition

1. Turn the ignition to IG-OFF.
2. Perform a battery reset by disconnecting the cable from the 12V battery negative terminal for 10 minutes, then reconnecting it.

Refer to TIS, applicable model and model year Repair Manual:

- [2023](#) / [2024](#) RAV4:
General – Maintenance – A25A-FKS Battery – Removal
- [2023](#) / [2024](#) RAV4 HV:
General – Maintenance – A25A-FXS Auxiliary Battery – Removal
- [2023 – 2024](#) RAV4 Prime:
Power Source / Network – A25A-FXS (Battery / Charging) – Auxiliary Battery – Removal

3. Turn the ignition to IG-ON. The head unit should boot up normally.

HINT

If the head unit does NOT boot up normally, the battery may need to be disconnected for longer than 10 minutes.

4. Does the head unit boot up normally?
 - **YES** — Continue to the Head Unit Software Version Confirmation section.
 - **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

Head Unit Software Update Version 1861 via OTA and USB (Denso-Ten)

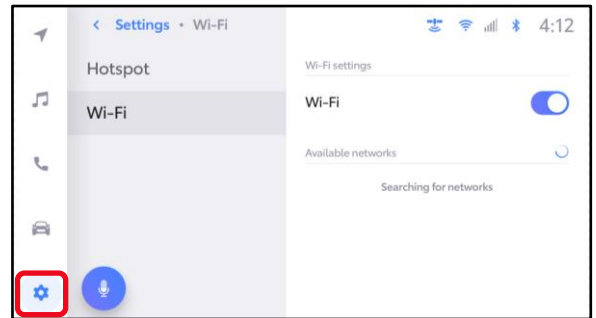
Software Update Procedures

- [Wi-Fi Connection Procedure](#)..... 12
- [OTA Update Procedure \(Wi-Fi and Cellular\)](#)..... 14
- [USB Update Procedure](#)..... 18

Wi-Fi Connection Procedure

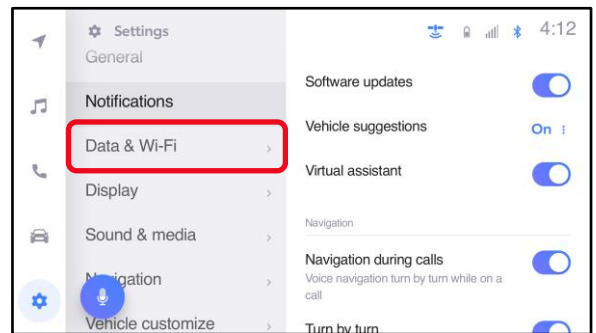
1. Turn ON the ignition.
2. Select the gear icon in the lower left corner of the radio screen.

Figure 6.



3. Select Data & Wi-Fi.

Figure 7.



Head Unit Software Update Version 1861 via OTA and USB (Denso-Ten)

Software Update Procedures (continued)

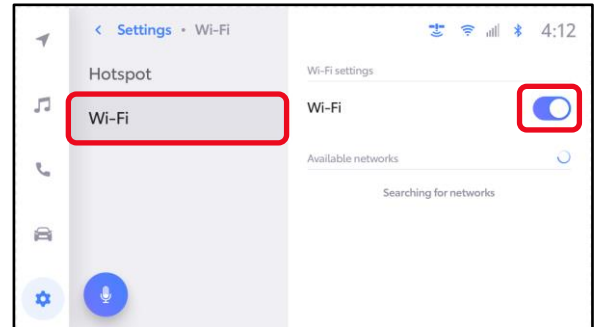
Wi-Fi Connection Procedure (continued)

- Select Wi-Fi and turn the Wi-Fi toggle to ON.

HINT

- This step is used to connect the vehicle to an EXTERNAL Wi-Fi source.
- Wi-Fi connection is NOT required for updates that are delivered through DCM data.

Figure 8.

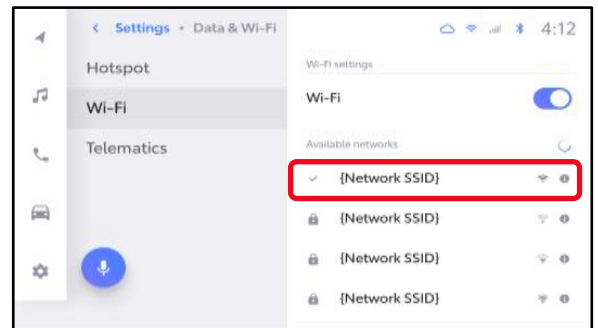


- Select the Wi-Fi network desired to connect.

NOTE

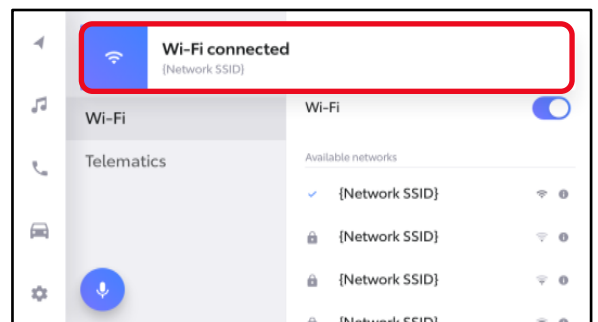
It is NOT possible to connect to a Wi-Fi source that requires a username and password to be entered in a browser.

Figure 9.



- Follow the on-screen instructions. A message will appear confirming that the vehicle is successfully connected to the network.

Figure 10.



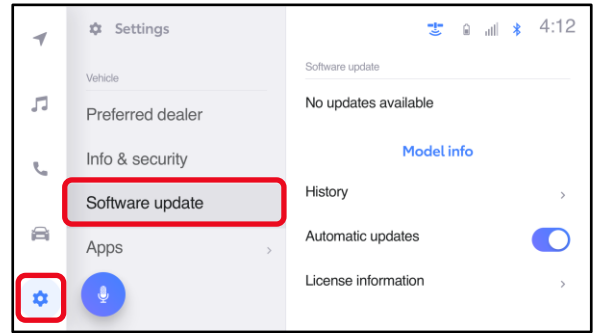
Head Unit Software Update Version 1861 via OTA and USB (Denso-Ten)

Software Update Procedures (continued)

OTA Update Procedure (Wi-Fi and Cellular)

1. Select the gear icon, scroll down, and select Software update.

Figure 11.



2. Are software updates available?
 - **YES** — Continue to step 3.
 - **NO** — This bulletin does NOT apply, continue diagnosis using the applicable Repair Manual.

Figure 12.

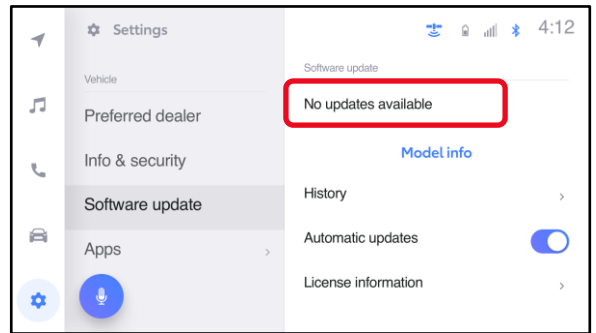
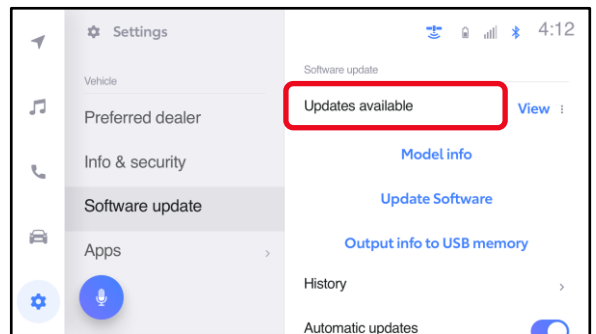


Figure 13.



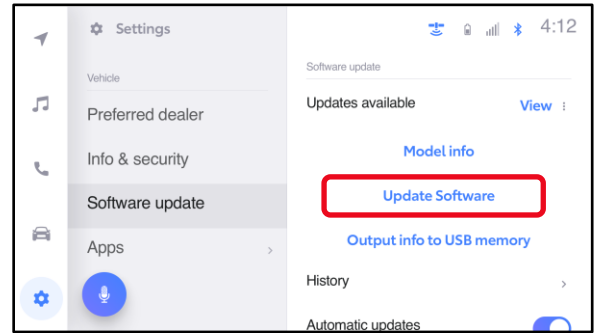
Head Unit Software Update Version 1861 via OTA and USB (Denso-Ten)

Software Update Procedures (continued)

OTA Update Procedure (Wi-Fi and Cellular) (continued)

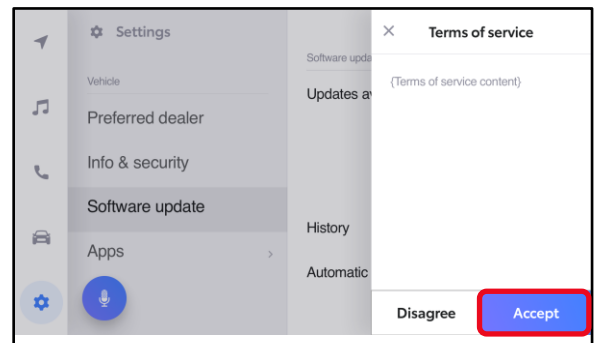
3. Select Update Software.

Figure 14.



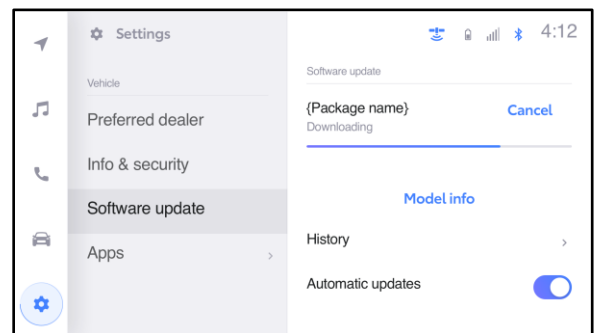
4. Select Accept on the Terms of service screen.

Figure 15.



5. Wait for the update to download.

Figure 16.

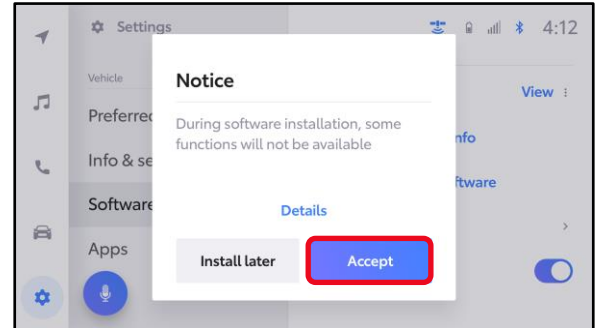


Head Unit Software Update Version 1861 via OTA and USB (Denso-Ten)

OTA Update Procedure (Wi-Fi and Cellular) (continued)

6. Select Accept on the Notice pop-up message if it appears.

Figure 17.

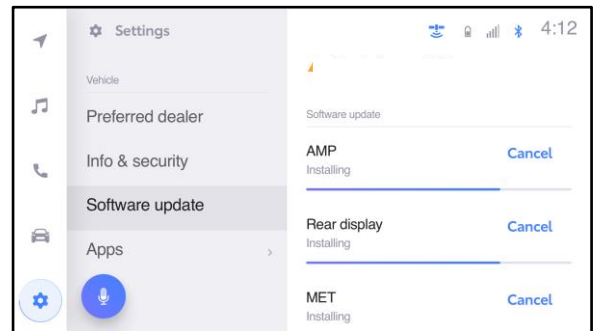


7. Wait for the update to download. Once the head unit begins installation, the update will take 10 minutes or less.

NOTE

- Do NOT turn OFF the engine or ACC BEFORE the software is ready for updating.
- Selecting Cancel will cancel the installation of the specific component, but it can be installed manually later.

Figure 18.

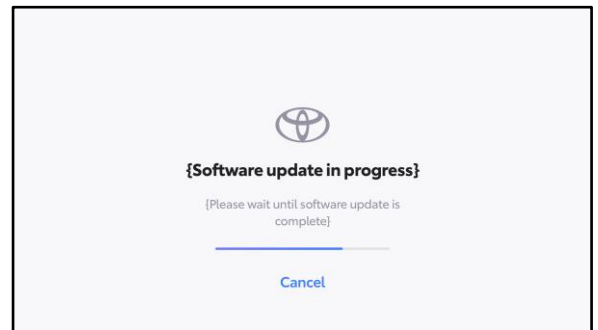


8. If a major update is being installed the message "Software update in progress" will be displayed.

NOTE

- Do NOT turn OFF the engine or ACC BEFORE the software has updated successfully.
- Selecting Cancel will cancel the installation of the specific component, but it can be installed manually later.

Figure 19.



Head Unit Software Update Version 1861 via OTA and USB (Denso-Ten)

Software Update Procedures (continued)

OTA Update Procedure (Wi-Fi and Cellular) (continued)

- The software installation is complete when either a “Software installation complete” banner (Figure 20) or the “Software update complete” screen (Figure 21) is displayed.

NOTE
 If the vehicle has installed a major update, and the “Software update complete” screen is displayed, then an IG-OFF/ON will need to be performed prior to attempting to operate any of the multimedia functions.

Figure 20.

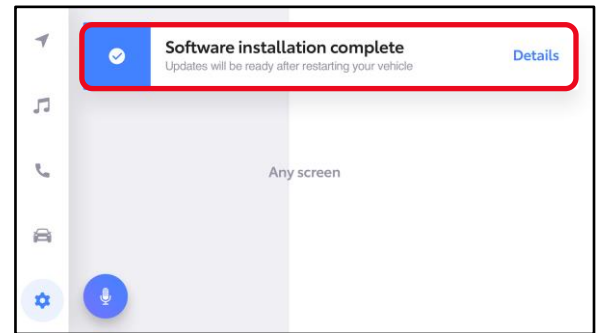
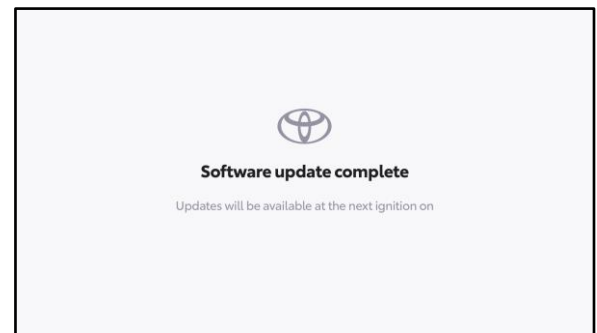


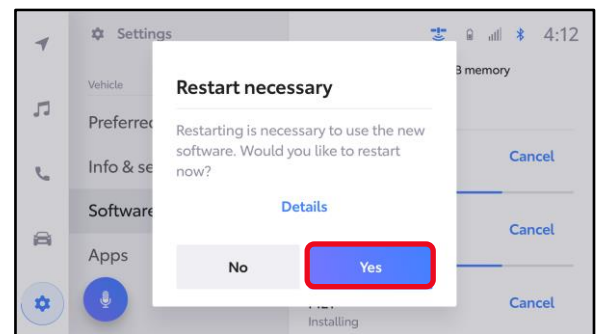
Figure 21.



- If a restart is necessary, select Yes to restart the head unit.

NOTE
 If No is selected or the vehicle is switched to IG-OFF, the installation will occur at the next IG-ON.

Figure 22.



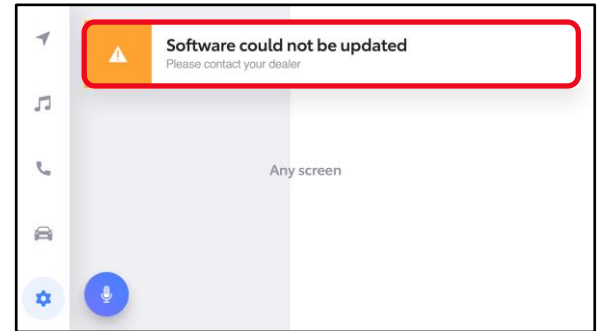
Head Unit Software Update Version 1861 via OTA and USB (Denso-Ten)

Software Update Procedures (continued)

OTA Update Procedure (Wi-Fi and Cellular) (continued)

11. If after IG-OFF/ON a “Software could not be updated” banner appears, continue to the [USB Update Procedure](#) subsection.

Figure 23.



USB Update Procedure

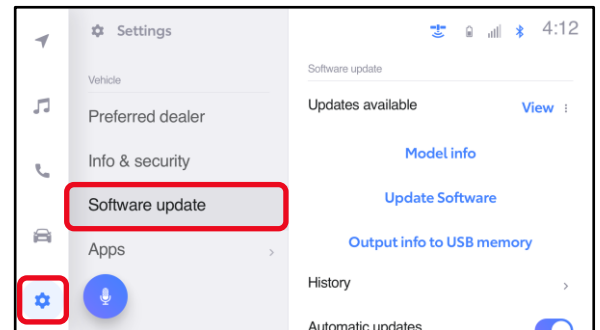
1. Download the software from the Software Update Information section onto an empty USB flash drive.

NOTE

- The USB method should ONLY be used when the Wi-Fi/DCM method of updating is unsuccessful.
- Even for USB update, confirm one of the following signals is present for the head unit:
 - Data Communications Module (DCM) (this function is NOT available in some countries or areas.)
 - Wi-Fi.

2. Select the gear icon and scroll down to select Software update.

Figure 24.



Head Unit Software Update Version 1861 via OTA and USB (Denso-Ten)

USB Update Procedure (continued)

3. Insert the prepared USB flash drive into the vehicle's data USB port.

A "Checking USB memory" message pop-up should display as seen in Figure 25.

Wait for the Update Software button (Figure 30) or Software Update (Figure 29) pop-up to appear. This may take up to five minutes.

NOTE

After inserting the USB flash drive, two banners should appear briefly:

- A blue "USB device connected" banner, as shown in Figure 26.
- An orange "Device no response" banner, as shown in Figure 27. This is normal when there are no music files on the USB flash drive.

If the blue "USB device connected" banner does not appear, the USB flash drive may be formatted incorrectly or is inoperative. Refer to the instructions in page 16 to ensure the USB flash drive is correct.

NOTE

- If the pop-up in Figure 25 does not appear after five minutes, there may be a problem with the file. Refer to the instructions in page 16 to ensure the file is correct.
- If the pop-up in Figure 25 appears, but the "Update Software" button or "Software Update" pop-up do not appear after five minutes, look closely to see if the "Update Software" button appeared in the background as seen in Figure 28. If so, tap on the visible part of the text.

Figure 25.

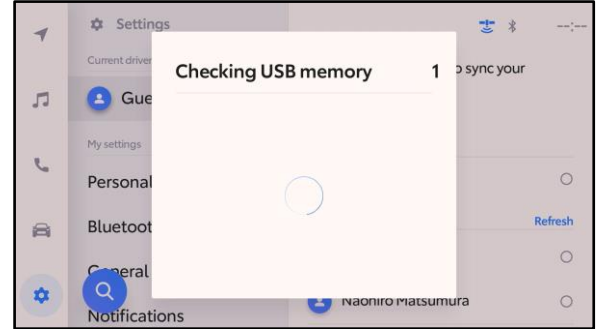


Figure 26.

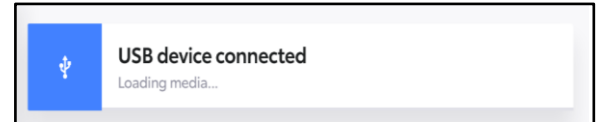
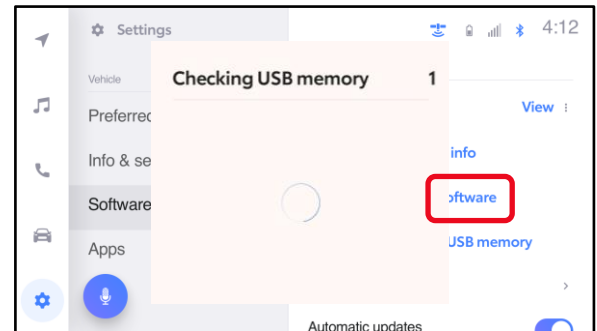


Figure 27.



Figure 28.



Head Unit Software Update Version 1861 via OTA and USB (Denso-Ten)

USB Update Procedure (continued)

4. Select Update Software or Continue.

Figure 29.

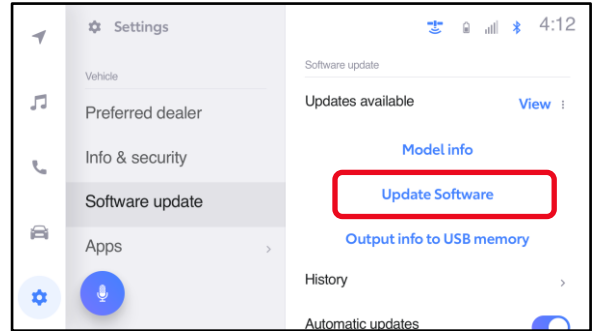
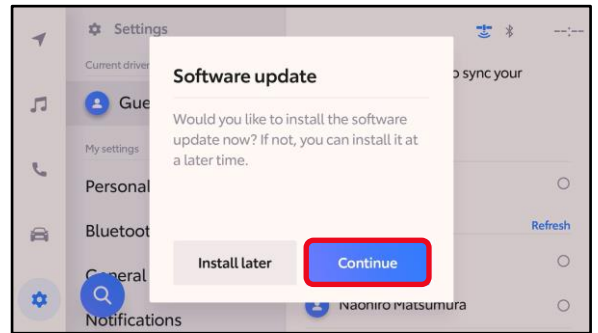
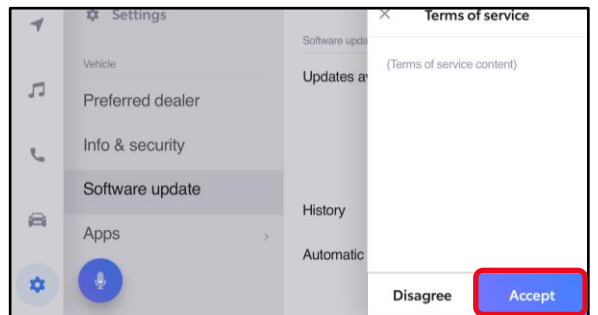


Figure 30.



5. Select Accept on the Terms of service screen.

Figure 31.



Head Unit Software Update Version 1861 via OTA and USB (Denso-Ten)

USB Update Procedure (continued)

- The head unit software installation will begin. This can take up to 10 minutes per update file. A notification will appear when the installation is complete as shown in Figure 33 or Figure 34.

NOTICE

To prevent damaging the head unit, during the software update installation step:

- Do NOT turn IG OFF.
- Do NOT turn ACC OFF.
- Do NOT press CANCEL.
- Do NOT remove the USB flash drive until instructed in step 10.

NOTE

If the installation progress bar freezes in one place (see Figure 32) for five minutes or more, perform a head unit soft reset:

1. Do NOT remove the USB flash drive.
2. Press and hold the power/volume knob until the head unit resets.
3. Wait for the head unit to boot up.
4. Go to Settings – Software Update.
5. Wait for the software update to automatically restart within 60 seconds.

Figure 32.

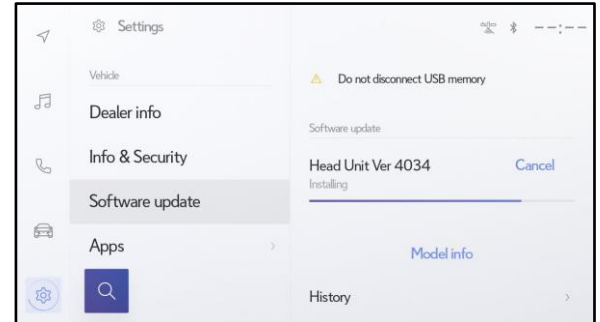


Figure 33.

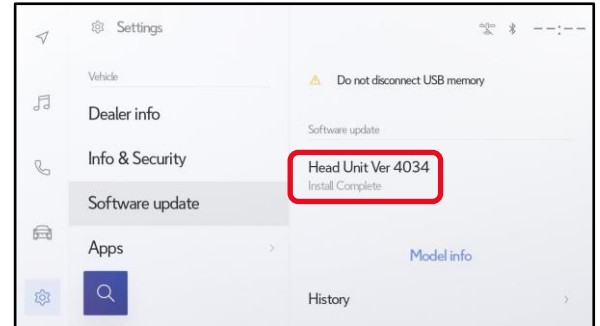
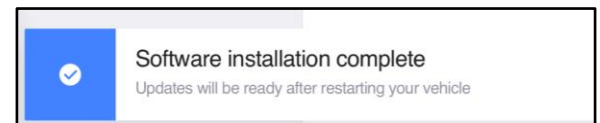


Figure 34.



NOTICE

- Never perform a head unit reset during other head unit software updates, unless instructed to.
- Performing this during other head unit software updates can damage the head unit and require head unit replacement.

Head Unit Software Update Version 1861 via OTA and USB (Denso-Ten)

USB Update Procedure (continued)

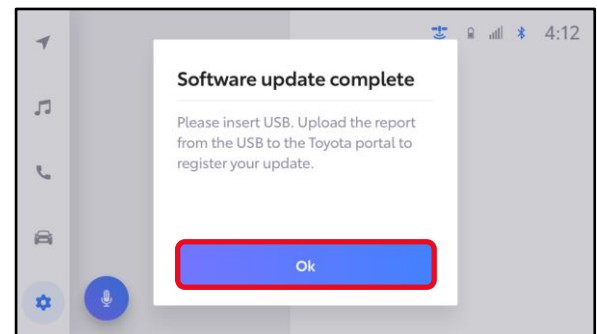
7. After the installation is complete, restart the vehicle:
 - A. Turn IG/ACC OFF
 - B. Open driver door
 - C. Close driver door
 - D. Open driver door
 - E. Close driver door
 - F. Turn IG ON

8. After the system has successfully booted up, wait two minutes.

9. Remove the USB flash drive.

NOTE
 Failing to follow steps 8 –10 can cause the pop-up in Figure 35 to appear. If so, insert a blank USB to remove the .JSON files. These files are not needed and can be deleted from the USB.

Figure 35.



10. Perform steps 1 – 3 of the [Head Unit Software Version Confirmation](#) section to verify the software version matches the tables below.

Table 4. New Software Version Information

MODEL	TYPE	PREVIOUS VERSION	CURRENT VERSION
RAV4, RAV4 HV, RAV4 PHV	HU Version	Lower than 1861	1861 or higher