

2022 CHEVROLET CORVETTE SERVICE MANUAL

- **SEARCH**

1. **Diagnostic Overview, Starting Point, and Programming**
2. **Programming and Setup**
3. **Repair Instructions**
- 4.

A11 Radio: Programming and Setup

Note:

- DO NOT program a control module unless directed to by a service procedure or a service bulletin. If the control module is not properly configured with the correct calibration software, the control module will not control all of the vehicle features properly.
- Ensure the programming tool is equipped with the latest software and is securely connected to the data link connector. If there is an interruption during programming, programming failure or control module damage may occur.
- Stable battery voltage is critical during programming. Any fluctuation, spiking, over voltage or loss of voltage will interrupt programming. Install a battery maintainer or power supply that provides a steady and stable voltage. Do not use a battery charger, as charging voltage will often fluctuate when connected to the vehicle. This may interrupt programming. If a battery maintainer is not available, connect a fully charged 12 V jumper or booster pack disconnected from the AC voltage supply.
- Turn OFF or disable systems that may put a load on the vehicles battery such as; interior lights, exterior lights (including daytime running lights), HVAC, radio, etc.
- Programming must begin with the Ignition/Vehicle OFF. Programming will direct the appropriate control module(s) to change power mode as needed during the procedure, independent of the vehicle's power mode.
- Clear DTCs after programming is complete. Clearing powertrain DTCs will set the Inspection/Maintenance (I/M) system status indicators to NO.

Diagnostic Aids

- Check for Preliminary information or Technical Service bulletins before programming.
- During programming you may be required to select multiple calibrations dependent upon vehicle equipment. Have the vehicle build/RPO information available during the following procedure to ensure the correct calibrations are selected.
- If the control module calibration is only being updated, USB programming may not be required, depending on the current software level, or the release of updates. If USB programming may not be required when replacing/reprogramming the control module. If USB files for the application are not available via SPS, or have not been received from General Motors in another manner, the USB process will not need to be performed unless instructed otherwise in a service document or publication.
- Begin with the vehicle in the vehicle OFF power mode. The Service Programming System will power mode the vehicle.
- The vehicle can be moved to an alternate location when performing the USB portion of the programming steps which could allow the possibility of working on another vehicle while the USB programming event is taking place.
- When transferring a large file (>1GB) from the Techline Connect server to the PC then to a USB stick, below are some useful tips:
 - A wired connection to the network is the quickest, most stable way to download the file.
 - Wireless connections can be used, however slower connection speeds may increase the likelihood of errors to occur during file download.
 - Once the file is downloaded to the PC, it will reside in cache unless the cache is cleared. Any additional USB sticks made from that PC will be copied from cache and take a much shorter time compared to downloading from the server.
 - Never take a USB stick directly to a vehicle for updating without starting a Techline Connect session for that particular VIN. If software is already on the stick, Techline Connect will take only seconds to confirm software on the stick is the latest and correct for that vehicle. Failure to perform this step will result in no warranty claim code indicating a USB programming event was completed.
 - If equipped with an SD Card slot, the SD card must be installed and functioning correctly for USB programming to be successful.

Reference Information

Special Tools

- USB 2.0 flash drive with a minimum capacity of 16 GB.
- EL-52100 Multiple Diagnostic Interface 2 (MDI 2)

For equivalent regional tools, refer to Special Tools.

Reprogram Control Module

To program an existing control module, perform the following procedure:

Note:

The vehicle must remain in PARK and the driver's door closed during the programming procedure.

1. Ignition/vehicle OFF
2. Access the Service Programming System (SPS) and follow the on-screen instructions.
3. On the SPS Supported Controllers screen, select A11 Radio "Programming and then follow the on-screen instructions.
4. Before proceeding with USB programming check for any Info Sys OTA updates under Settings>Updates on the vehicles infotainment screen. If an update is available, it is more efficient to install the OTA update if it will install successfully. If the OTA will not install and USB programming is necessary then before attempting USB programming you should first decline the update by selecting Details and then the Decline Update option, followed by confirming the Decline Update. If an Info Sys OTA update is not available, proceed with USB programming.
5. Note:
 - If the radio displays "calibrate device, one or more devices need to be calibrated" in SPS program the radio selecting replace and program
 - If equipped with an SD Card slot, the SD card must be installed and functioning correctly for USB programming to be successful.
 - If using a pre-configured USB drive supplied by General Motors, proceed to step 7.
6. Connect a USB drive to the computer.
7. Access the Service Programming System (SPS) and follow the on-screen instructions.
8. On the SPS Supported Controllers screen, select A11 Radio "USB Copy/ USB File Transfer.
9. Note:
 - If USB programming is unavailable, or if the selected software description is the following proceed to step 10: STOP. If you are seeing this text, the controller already has the latest software available. If you try to proceed further, SPS will generate an error..
 - Software currently loaded on the USB Drive will be verified and if files are incorrect they will be deleted and correct files will be loaded. If files residing on the USB Drive are correct for the vehicle being serviced, the Techline terminal will not delete those files and allow the drive to be re-used.
10. Upon completion of the file transfer, remove the USB drive from the computer.
11. Ignition ON, infotainment system ON.
12. Note:

The Radio will not allow the installation of the same software version via USB. If the same software is detected the installation process will not start.
13. Connect the USB drive to the USB port in the vehicle.
14. The infotainment system will recognize that update files are available. Follow the infotainment display on-screen instructions and select Update when prompted. Programming will take several minutes.
15. Note:

Once the update is initiated, there is no need to monitor the progress.

16. Note:

If no instructions immediately appear on the infotainment display, select the following menu options:

- Home
- Settings
- System
- Updates

17. Upon completion of programming, remove the USB drive. Follow the infotainment display on-screen instructions.

18. Clear DTCs.

19. Perform the Manufacturer Enable Counter (MEC) reset – Access the Global Diagnostic System 2 (GDS 2) and identify the vehicle

20. On the GDS 2 screen select Module Diagnostics – Radio (select appropriate RPO) – Configuration/reset functions – Reset Manufacturer Enable Counter and follow the on-screen instructions.

21. Ignition OFF, Retained Accessory Power (RAP) OFF, remove the key fob from range of the vehicle, and let the vehicle sit for five minutes. Retest system operation to verify the repair.

Replace and Program Control Module

To program a replacement control module, perform the following procedure:

Note:

The vehicle must remain in PARK and the driver's door closed during the programming procedure.

1. Ignition/vehicle OFF
2. Access the Service Programming System (SPS) and follow the on-screen instructions.
3. On the SPS Supported Controllers screen, select A11 Radio – Programming and then follow the on-screen instructions.
4. Note:
 - If equipped with an SD Card slot, the SD card must be installed and functioning correctly for USB programming to be successful.
 - If using a pre-configured USB drive supplied by General Motors, proceed to step 7.
5. Connect a USB drive to the computer.
6. Access the Service Programming System (SPS) and follow the on-screen instructions.
7. On the SPS Supported Controllers screen, select A11 Radio – USB Copy/ USB File Transfer.
8. Note:
 - If USB programming is unavailable, or if the selected software description is the following proceed to step 10: STOP. If you are seeing this text, the controller already has the latest software available. If you try to proceed further, SPS will generate an error..
 - Software currently loaded on the USB Drive will be verified and if files are incorrect they will be deleted and correct files will be loaded. If files residing on the USB Drive are correct for the vehicle being serviced, the Techline terminal will not delete those files and allow the drive to be re-used.
9. Upon completion of the file transfer, remove the USB drive from the computer.
10. Ignition ON, infotainment system ON.
11. Note:

The Radio will not allow the installation of the same software version via USB. If the same software is detected the installation process will not start.
12. Connect the USB drive to the USB port in the vehicle.

13. The infotainment system will recognize that update files are available. Follow the infotainment display on-screen instructions and select Update when prompted. Programming will take several minutes.
14. Note:

Once the update is initiated, there is no need to monitor the progress.
15. Note:

If no instructions immediately appear on the infotainment display, select the following menu options:

 - Home
 - Settings
 - System
 - Updates
16. Upon completion of programming, remove the USB drive. Follow the infotainment display on-screen instructions.
17. Clear DTCs.
18. Perform the Manufacturer Enable Counter (MEC) reset – Access the Global Diagnostic System 2 (GDS 2) and identify the vehicle
19. On the GDS 2 screen select Module Diagnostics – Radio (select appropriate RPO) – Configuration/reset functions – Reset Manufacturer Enable Counter and follow the on-screen instructions.
20. Ignition OFF, Retained Accessory Power (RAP) OFF, remove the key fob from range of the vehicle, and let the vehicle sit for five minutes. Retest system operation to verify the repair.

XM Activation (If Equipped)

Important:

On the radio being replaced, record the XM ID from the radio parts label or before removal tune to XM channel 0. This will be used during the call to XM radio to deactivate the receiver that has been removed from the vehicle.

1. Turn the replacement radio ON, tune to the XM channel 0, and record the radio ID. The radio ID will be needed for activation of the receiver.
2. Contact XM radio to activate the new receiver.
3. Park the vehicle outside in an area with an unobstructed view of the southern sky.
4. Leave the vehicle outside with the ignition switch in the ACC position and the radio on for 30 minutes to activate XM service.
5. Once activated, the radio will receive the remaining XM channels.

Unsuccessful Programming Recovery

In the event of an interrupted or unsuccessful programming event, perform the following steps:

1. Note:

If USB programming was interrupted, a 5 minute recovery time period may be necessary before the software will reinitialize. Wait 3 minutes with the ignition OFF, all access doors closed, and all vehicle systems OFF. Upon restarting the USB portion of the programming, the display will show a countdown timer for up to 5 minutes before proceeding with the USB File Transfer..
2. Note:

Begin with the vehicle in the vehicle OFF power mode. The Service Programming System will power mode the vehicle.
3. Ignition/Vehicle OFF.
4. Ensure the control module, DLC and programming tool connections are secure and the SPS software is up to date.
5. Verify the control module can be reprogrammed.
- 6.

- **If the control module cannot be reprogrammed**

7.

1. Ignition OFF, all access doors closed, all vehicle systems OFF for one minute.
2. Verify the control module can be reprogrammed.
3.
 - If the control module cannot be reprogrammed, replace the control module.
4.
 - If the control module can be reprogrammed.
5. All OK.

8.

- **If the control module can be reprogrammed**

9. All OK.

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