

**HUMAN MACHINE INTERFACE CONTR...****HUMAN MACHINE INTERFACE CONTROL MODULE PROGRAMMING AND SETUP  
(PROGRAMMING AND SETUP)**Document ID#  
2842009**HUMAN MACHINE INTERFACE CONTROL MODULE PROGRAMMING AND SETUP (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 the *EL-49642SPS* Programming Support Tool to maintain system voltage. If 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.
- During the programming procedure, follow the SPS prompts for the correct ignition switch position.
- 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.
- Dependent upon the current software level of the module, or the release of updates, 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 of distribution, the USB update process will not need to be performed.

**Reference Information****Special Tools***EL-49642SPS* Programming Support ToolFor equivalent regional tools, refer to [Special Tools](#) .**Replace and Program Control Module**

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

**Note:** The vehicle must remain in PARK during the programming procedure.

1. Install the *EL-49642SPS* Programming Support Tool .
2. Access the Service Programming System (SPS) and follow the on-screen instructions.
3. On the SPS Supported Controllers screen, select K74 Human Machine Interface Control Module – Programming and follow the on-screen instructions.

**Note:** If using a pre-configured USB drive supplied by General Motors, proceed to step 8.

4. Connect a USB drive to the computer.
5. Access the Service Programming System (SPS) and follow the on-screen instructions.
6. On the SPS Supported Controllers screen, select K74 Human Machine Interface Control Module – USB Copy/USB File Transfer.

**Note:**

If there are no files available for USB transfer via SPS, proceed to step 12.

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.

7. Upon completion of the file transfer, remove the USB drive from the computer.
8. Ignition ON, **infotainment** system ON.

**Note:** The HMI will not allow the installation of the same software version via USB. If the same software is detected the installation process will not start.

9. Connect the USB drive to the USB port in the vehicle.
10. 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.
11. Upon completion of programming, remove the USB drive. Follow the **infotainment** display on-screen instructions.

**Note:** The following step is to be performed to ensure latest calibrations are programed.

12. Access the Service Programming System (SPS) and follow the on-screen instructions.
13. On the SPS Supported Controllers screen, select K74 Human Machine Interface Control Module – Programming and follow the on-screen instructions.
14. At the end of programming, choose the “Clear DTCs” function on the SPS screen.
15. 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.

### Reprogram Control Module

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

**Note:** The vehicle must remain in PARK during the programming procedure.

1. Install the *EL-49642*SPS Programming Support Tool .

**Note:** If using a pre-configured USB drive supplied by General Motors, proceed to step 6.

2. Connect a USB drive to the computer.
3. Access the Service Programming System (SPS) and follow the on-screen instructions.
4. On the SPS Supported Controllers screen, select K74 Human Machine Interface Control Module – USB Copy/USB File Transfer.

**Note:**

If there are no files available for USB transfer via SPS, proceed to step 10.

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.

5. Upon completion of the file transfer, remove the USB drive from the computer.
6. Ignition ON, **infotainment** system ON.

**Note:** The HMI will not allow the installation of the same software version via USB. If the same software is detected the installation process will not start.

7. Connect the USB drive to the USB port in the vehicle.
8. 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.
9. Upon completion of programming, remove the USB drive. Follow the **infotainment** display on-screen instructions.
10. Access the Service Programming System (SPS) and follow the on-screen instructions.
11. On the SPS Supported Controllers screen, select K74 Human Machine Interface Control Module – Programming and follow the on-screen instructions.
12. At the end of programming, choose the “Clear DTCs” function on the SPS screen.
13. 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.

### Unsuccessful Programming Recovery

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

**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..

1. Ignition ON. Ensure the control module, DLC and programming tool connections are secure and the SPS software is up to date.

2. Verify the control module can be reprogrammed.

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

2.1. Ignition OFF, all access doors closed, all vehicle systems OFF for one minute, ignition ON.

2.2. Verify the control module can be reprogrammed.

⇒ If the control module cannot be reprogrammed, replace the control module.

↓ If the control module can be reprogrammed.

2.3. All OK.

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

3. All OK.

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