General Service Bulletin (GSB):	SYNC Software Programming v3.0
GSB Overview:	Information on Programming the SYNC Accessory Protocol Interface Module (APIM) along with Recommended Computer Settings
NOTE: This information is not intended to replace or supersede any warranty, parts and service policy, Work Shop Manual (WSM) procedures or technical training or wiring diagram information.	

The SYNC Accessory Protocol Interface Module (APIM) may require programming to add system enhancements/upgrades, improve system reliability and/or address consumer issues. The following information is intended to help determine when programming necessary and address common programming issues using current Professional Technician Society (PTS)/ Integrated Diagnostic System (IDS) Programming methods.

When is APIM programming necessary?

- APIM Replacement – Programming is required with any APIM replacement. (When Workshop Manual Procedures direct to replace)

- Technical Service Bulletin (TSB) – Updates to resolve SYNC performance issues should only be performed when directed by a TSB.

- Upgrades – Occasional upgrades such as 911/VHR, Traffic, Directions, and Information (TDI) will become available at Customer request and expense.

APIM Programming Tips using PTS/IDS programming

- Refer to WSM Section 418-01 or 415-00 for programming steps.

- It's recommended to install a battery charger set on low when performing programming steps.

- A hard wired internet connection is strongly recommended when programming.

- Make sure the proper SYNC USB 2.0 A-Male to A-Male cable and SYNC USB 2.0 A-Female to Mini B Female 5-Pin Adaptor is being used.

- Internet Explorer (IE) version 9 or 11 is required for proper SYNC programming.

- If no progress bar is present at the bottom of IE, click Maximize to make visible.

- Confirm SYNC function by pressing the "Phone" button. If no SYNC function is present, the APIM will not program; follow normal WSM Diagnostics.

Note: If unable to complete programming because the operation stops or errors are received, IE Security settings may need to be configured. Follow the steps below to properly configure IE.

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This document applies to IE 9, and 11. All graphics were taken from Internet Explorer 11 Using any other browser other than Microsoft Internet Explorer 9 or 11, will not work and is not supported.

NOTE: If you have the browsers that came with windows 8.1 (Metro) or, Windows 10 (Edge) its recommended that you upgrade IE 11.

Skipping any steps below may result in a SYNC Programming error.

1. Open Internet Explorer, and click on the **Tools** icon in the upper right corner.

2. Select **Internet Options**, and click on the **Advanced** tab in the upper right.

   Look for the **Reset** button and click. Place a check in the **Delete Personal Settings** box, then click the **Reset** button. When the reset has completed, you will be asked to reboot the computer.
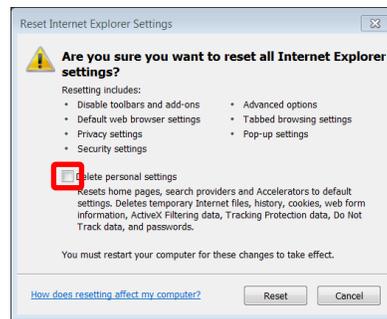
3. Open Internet Explorer, go to Tools and select **Safety**, make sure there *is not* a check to the left of **Active X Filtering**. If there is click it to remove .

   Look at **SmartScreen Filter**. If it says **Turn off SmartScreen filter**… Click to turn it off. Once done it will say "**Turn on SmartScreen Filter**. If it already says **Turn on SmartScreen Filter**, no further action is needed.
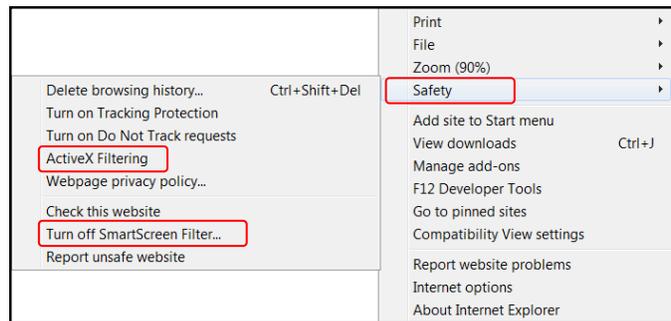
4. Click **Tools** > **Internet Options** > **Security** , and select **Trusted Sites**, remove the check from the box that says: **Enable Protected Mode …,** now click the **Sites button.**

   Remove the check from the **Require server verification for (https:)...** In the **Add this website to the zone:** box clear it and add the following as shown below. Double check spelling.

   *.dealerconnection.com
   *.ford.com
   *.fordservicecontent.com
   http://updates.installshield.com

   Click **close.**
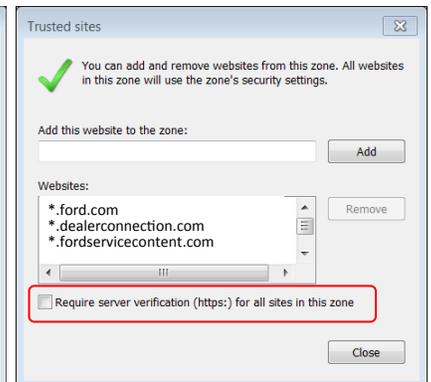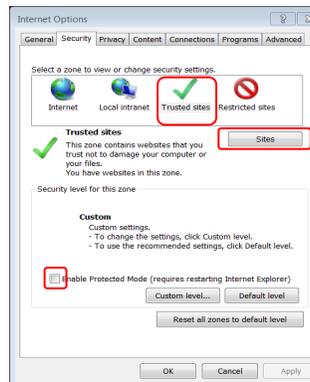
5. Ensure you are in **Security/Trusted Sites**, and select the **Custom Level Button**.
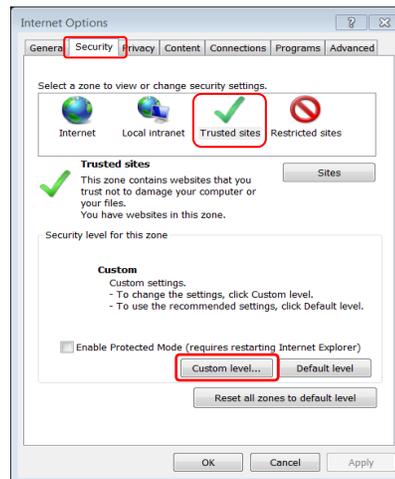
6. Using the scroll bar on the right side, scroll down until **Miscellaneous** Is found. Look for and enable the following selections. Scroll down for more selections.

    Miscellaneous
    - Access Data sources across domains.
    - Navigate windows and frames across different domains.
    - Websites in less privileged web content zone can navigate into this zone.

    Scripting:
    - Active scripting

    Click OK. A prompt may display asking if you are sure you want to make the changes, click **YES**.
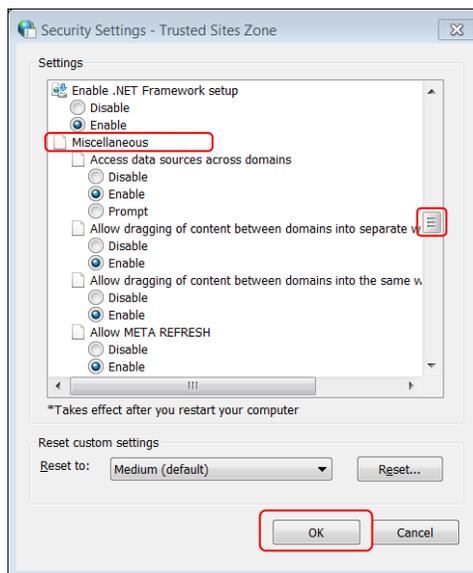
7. Click on the **Privacy** tab. Look for **Turn on Pop-op Blocker** if it is checked, click on the settings button to the right and ensure ***.dealerconnection.com** is listed.

    If it is not checked, leave it unchecked and click **OK** to close the window.

    When the configuration is finish, close Internet Explorer and restart.

    If prompted to reboot the PC, close all programs including Internet Explorer and reboot, and reevaluate.
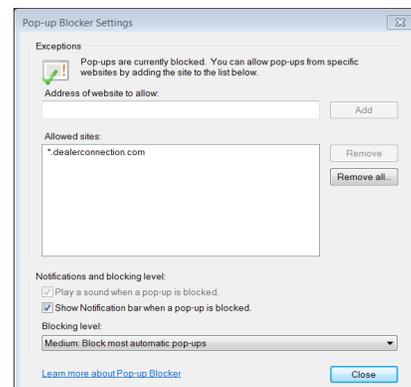
Note: SYNC server status is indicated on PTS > Home. If the SYNC server is currently online, there will be a 'GREEN' icon and a message "SYNC Programming is online". If the SYNC server is offline, there will be a 'RED' icon and a message "SYNC Programming is offline".

If the SYNC server is online, and all normal WSM, TSB, SSM and/or GSB diagnostics have been performed, there may be a SYNC server issue preventing SYNC programming. If all above diagnostics, as well as all below diagnostics, have been performed, it may be necessary to contact the Ford Technical Assistance Center to restore SYNC server information.

IDS / Scan Tool Issues		
Error State / Message	**Possible Causes**	**Solution**
Control 14	• Incorrect IDS Internet Explorer (IE) Security settings • Incorrectly formatted USB drive • Incorrect PC administrative privileges • Corrupt IDS software files	• Configure Internet Explorer (IE) Security settings per this GSB • Format USB to FAT32 • Gain PC administrative privileges • Select 'Uninstall' for the IDS software and then select 'Repair' option
Error Code 50	Attempting to program APIM using Internet Explorer (IE) 10	Use different IE version (ex. IE 11)
General Error 1002	Incorrect Internet Explorer (IE) Security settings	Configure IE Security settings per this GSB
General Error 1003	Incorrect Internet Explorer (IE) Security settings	Configure IE Security settings per this GSB

General Error 4001	• Incorrect Internet Explorer (IE) Security settings • Incorrectly formatted USB drive • Faulty USB drive	• Configure IE Security settings per this GSB • Format USB to FAT32 • Use different USB drive
Failure to load session information	• Incorrectly identified vehicle • Outdated VCM • Incorrect Internet Explorer (IE) version being used	• Start new a session on PTS once 'Read VIN & DTCs' is selected, wait until the "Collecting network data, please wait" message disappears before selecting 'GO' and continuing • Open IDS and verify no updates for VCM • Ensure correct IE version is being used
Configuration Failed	• Incorrectly connected VCM • APIM as-built data missing from PTS	• Verify VCM connections • Depower/Repower VCM and select 'Retry'; for VCMII both connections must be disconnected • Verify APIM as-built is present on PTS

Failed to Parse the Analyze Log File	• 'Read SYNC' timed out • IDS window that opens after selecting 'Read SYNC' is closed either via the red X or prevented by pop up blocker / added Internet Explorer (IE) Toolbar • Incorrect IE Security settings	• Retry 'Read SYNC' function • Verify IDS window is not closed and there is no pop up blockers or IE Toolbar is installed • Configure IE Security settings
Communication of the CIP has failed	• Incorrectly connected SYNC USB programming cable • Incorrect Internet Explorer (IE) Security settings • The SBoot driver is not installed • Faulty vehicle USB cable or connection	• Verify USB cable connections • Configure IE Security settings per this GSB • Verify installation of SBoot driver • Verify vehicle USB cable connections • Swap / replace vehicle USB cable
Unable to program CIP / Check USB cable	• Faulty vehicle USB cable • Faulted APIM	• Swap / replace vehicle USB cable • Perform APIM hardware test per WSM Section 415-00
Programming failed	IDS related files	Use a different IDS that has not yet been connected to the vehicle

Unable to rename file	- Windows Firewall - Anti-Virus - Internet Explorer (IE) Toolbar - Lack of PC administrative privileges	- Disable Windows Firewall - Disable anti-virus - Disable IE Toolbar - Gain PC administrative privileges
Diagnostic tester needs an update	Incorrect Internet Explorer (IE) settings	Uncheck the "Check for publisher's certificate revocation" and "Check for server certificate revocation" option in the IE settings (Tools > Internet Options > Advanced tab). Once unchecked, close all IE windows to allow changes to take effect. Once programming is complete, return these settings to original state.
Bad installation file	Faulted USB drive	Use a different USB drive
Unable to extract files to USB	- Lack of PC administrative privileges - File download not completed	- Gain PC administrative rights - Allow files to download completely
Read SYNC button does not operate	- Incorrect Internet Explorer (IE) settings - PTS is not a trusted site - IDS running in the background	- Configure IE Security settings per this GSB - Verify PTS is listed in 'Trusted Sites' - Disable pop up blocker - Close all other IDS windows
DID read failed	VCM subscription message or communication faults	Verify the VCM is properly connected and is operating correctly

Failed to parse Analyzelog	Log file not properly created	Verify IDS window was not closed using the red 'X' or through a pop up blocker
Failed to load session data	• IDS session was not created when using the 'Read VIN & DTCs' button. • VIN has been manually enter and the 'GO' button is clicked prior to the 'Gather Module Data' and the network test complete	• Restart the session using the 'Read VIN & DTCs' button • Allow the Module Data Gathering and network test to complete
"IDS files are missing C:\Program Files (X86)\Ford Motor Company\IDS\XMLFiles\PTS_7D0_GGDS_ModeXML" when using IDS version 100.01 or later	Internet Explorer (IE) settings	Use the following procedure: • Open IE Tools, click Internet Options > General tab > Settings > Temporary Internet Files tab > View Files tab • Scroll down to locate the CacheWrapper.js file • Right click and delete the file Note: a new CacheWrapper.js file will be automatically downloaded. • Open the IE Tools using the above procedure and navigate to the Temporary Internet Files tab • Verify 'Automatically' is selected

Full Flash APIM Programming Issues – Vehicles Equipped with MyFord/MyLincoln Touch Only		
Error State / Message	**Possible Causes**	**Solution**
Navigation (if equipped) missing after Full Flash programming	• Global Navigation Application was not selected during SYNC programming • SYNC server error has removed the Global Navigation Application	• Verify Global Navigation Application is selected during APIM program-ming • If the Global Navigation Application is not available in list of available applications, contact the Ford Technical Assistance Center to have application restored to the SYNC server
The Heated Seats, Backup camera, Navigation, or other functions (if equipped) are missing after Full Flash programming	• APIM programming procedure not completed • Configuration error during APIM program-ming	• Allow APIM programming to complete • Retry Standard APIM programming
Touchscreen Response / Calibration	Touchscreen not calibrated	Configure touchscreen per the appropriate WSM Section 415-00
Select/No Flash Action	Incorrect/missing SYNC server data	Contact the Ford Technical Assistance Center to have server data corrected

Invalid or Unsigned File – Your package may have corrupted, the package signature may have failed or the signature may have been revoked.	The Global Navigation Application requires a second, hidden application to be loaded in the background during APIM programming	Use the following procedure: • Perform Standard APIM programming per the appropriate WSM Section 415-00; only select "App to correct modules that report null ESN" • Follow the on-screen prompts to finish APIM programming • Perform Standard APIM programming again and only select "Global Navigation Application" • Follow the on-screen prompts to finish APIM programming
Select/noPreinstallRestore	• Incorrect APIM installed • Incorrect vehicle data on SYNC server	• Verify correct APIM has been installed • Contact the Ford Technical Assistance Center to correct SYNC server data
No CIP / VIP Recorded on SYNC page	Information was not uploaded from factory to SYNC server	Perform a 'Read SYNC & DTCs' function
Additional non-parsable characters are at the end of the string	Incorrect SYNC server data	Contact the Ford Technical Assistance Center to have the SYNC server data corrected

Invalid Hardware	• Incorrect APIM is in-stalled • SYNC server error	• Verify correct APIM is being installed • Contact Ford Technical Assistance Center to correct SYNC server data

USB / Service Pack Programming Issues		
Error State / Message	**Possible Causes**	**Solution**
"Unsupported" / "Corrupt Device" / "Installation has run out of space" / "Does not work with this version"	• Master Reset not performed prior to the attempted installation of software • Standard programming performed while APIM is already at latest level; applications are attempted to be installed twice	• Perform an APIM Master Reset as per the appropriate WSM Section 415-00 • Perform force CIP programming as per the appropriate WSM Section 415-00; then proceed with standard APIM programming
Update does not start automatically when inserting the USB into the vehicle	• USB not properly for-matted • USB port is inoperative • The autoinstall.lst file is missing from the USB drive • Downloaded files are still compressed (double zipped)	• Properly format USB drive to FAT32 • Verify operation of USB port using the MIT • Verify the autoinstall.lst file is present on USB drive • Verify all down-loaded files are extracted/ decompressed

Service Provisioning

Error State / Message	Possible Causes	Solution
Wireless provisioning is not functional	"Wireless Provisioning" button was selected during provisioning. This is for in-plant use only.	Wait approximately 40 minutes and restart the service provisioning process using the IDS (an APIM Power Reset will not reset this timer)
Provisioning Error	• Partially zipped/ compressed SYNC files on USB drive • Faulted USB drive • Incorrect CIP files • SYNC server concern	• Verify all downloaded SYNC files are extracted/ decompressed • Use a different USB drive • Perform force CIP programming per the appropriate WSM Section 415-00 • Contact the Ford Technical Assistance Center to correct SYNC server

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