Getting Started – Study Guide to Focus Approach & Reading Documents

I recommend looking in the "Using E-sys" Folder (see FYI below for more details).

- Start w/ "Getting Started" paired w/ "Editors and Viewers" & "How to Change Werte Values"
- Then, look at "How to change FA in F-series car," and "VO Coding Guide"

These short, step-by-step documents c̄ pictures will help familiarize you c̄ terminology & E-sys' Graphical User Interface (GUI).

At a later time, peruse "User Manual v1.4," as it is more comprehensive & may be confusing or overwhelming at first.

FYI: VO vs FDL Coding

<u>VO Coding</u>: Reset vehicle to factory values or Add/Remove factory options avoiding manually changing multiple FDL's

- CONCEPT: Coding of all FDL's (100% of the ECU) to predetermined settings based on the FA (AKA Vehicle Order)
- PROCESS: Connect → Read & Activate FA (VO) → Read SVT (VCM) → Right-Click ECU (itself ≠ CAFD below) → Select **CODE**
  - o Read (ECU, ≠ SVT): All BDC_BODY vehicles [X1 (F048), X5 & X6 (F15/F16/F85/F86), I3 & I8 (I001/I012), & new Gxx]
- Can VO Code using your factory FA, or modified FA as detailed ("How to Change FA" & "VO Coding" pdf's)
  - o Can also load modified FA's (skipping steps 8-10 of "Change FA") so as to not write FA changes to VCM

<u>FDL Coding</u>: Manually customize parameters beyond settings limited by vehicle production or factory options.

- CONCEPT: Coding of individual FDL's (Function Data List) in an ECU, overriding the VO Coding
- PROCESS: Connect → Read FA (VO) → Activate FA (VO) → Read SVT (VCM) → Right-Click blue CAFD → Select Read Coding Data → Expand CAFD Folder c̄ "+" symbol → Right-Click CAFD file → Select Edit → Edit CAFD as desired → Save CAFD Changes c̄ 💾 icon → Click Back c̄ 🔙 icon → Right-Click Orange CAFD → Select **Code FDL**
  - o "Offline Coding" utilizes same FDL-editor, but you R-click blue CAFD > select NEW FDL & load modified NCD
- To "Edit CAFD as desired" most cases involve changing a drop-down box of predefined values as detailed ("Getting Started")
- If predefined options lack a desired choice, you instead directly modify Werte Values as detailed ("Change Werte" pdf)
  - o Note: change drop-down menus or Werte values, NOT both. Drop-down values will automatically change wertes
  - o Any werte value—other than one corresponding to a predefined, drop-down—will result in an option read as "UNKNOWN" when viewed again

Other Helpful Hints

- E-sys Launcher: select actual chassis (eg. F015 for 2014+ X5) | E-sys Connection Target: representative mainseries (eg. F025 for X5)
- **<u>NEVER</u>** select "Code Default Values." It actually refers to an "Initial [unprocessed] State," which is not equal to "factory values."
- Develop or utilize a system to track changes that works for you. One way is using BMWCodingDatabase.com (program)
  - o Search descriptions or function values & import codes (via selecting "To Car Profile") into created Car Profiles
- E-sys Vehicle Files Backup:
  - o Net-Coded Data: "Reading Coding Data" → processed car data in the form of an *.ncd's file (C:\data\CAF).
    - ▪ Prior to saving FDL-editor changes or "Reading Coding Data," move or copy these files to another location; otherwise, they will be overwritten
    - ▪ Using TokenMaster's NCD / CAFD Tool (NCD Compare) is just one way these can be used to highlight differences.
  - o Comparatively, FA's (C:\data\FA) & SVT's (C:\data\SVT) must be manually saved after read from vehicle
- Normal Behavior & What to Expect:
  - o Prior to coding, backup your vehicle key profiles to a USB stick using idrive menus b/c saved preferences, including seat settings & hotkeys, may be erased depending on which ECU's you code
  - o When VO or FDL coding, the associated car functions will power cycle (eg., HU_NBT turns off and show boot animation)
  - o After FDL coding certain ECU's, various errors in the instrument cluster (eg, KOMBI) or head unit (eg, HU_NBT(2)) may appear
    - ▪ It is fine as long as E-sys pop-up shows "Report – "0" Errors"
    - ▪ For KOMBI, you may have to reset clock
    - ▪ Others (eg. ACSM or ICM) will clear c̄ driving or External Transmitter as described in ShawnSheridan's install instructions
- Other Vocabulary
  - o VCM = Vehicle Configuration Management; SVT = Software Variant Table; ECU = electronic Control Unit; CAFD = Processed CAF

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