

M.I.B. MANUAL

AUDI

COMPLETE UPDATE MANUAL

MHI2

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Nomenclature

FW Firmware

GEM Green Engineering Menu

M.I.B. More Incredible Bash

REM Red Engineering Menu

SW Software

Change Log

V1.1

Creation of original document.

V1.2

Correction of minor typos. Extra chapter added regarding SD card formatting.

V1.3

Clarification regarding MMI reboot procedure.

V1.4

Clarification on sound system update.

Introduction

The information contained in the manual is for general information purposes only.

The author assumes no responsibility for errors or omissions in the contents of the manual.

In no event shall the author be liable for any special, direct, indirect, consequential, or incidental damages or any damages whatsoever, whether in an action of contract, negligence or other tort, arising out of or in connection with the use of the manual or the contents of the manual. The author reserves the right to make additions, deletions, or modifications to the contents of the manual at any time without prior notice.

The following manual provides a detailed procedure for FW MHI2_ER_AUG22_S2140 to FW MHI2_ER_AUG22_K2161 update and patching, but the general procedure can be repeated for similar systems.

May this document serve as a legacy for younger generations to understand the complex nature of firmware updates and patching.

Firmware updates

The following chapter provides an in-depth procedure on the FW update and the corresponding required hardware and software.

3.1 Preparations

This sections provides the basic preparations prior to the actual update.

3.1.1 Check FW version

First thing first, the current FW of the car shall be checked in order to see if the update, in general, is required or the patch can be applied straight away.

The FW of the car shall be checked in the REM (Red Engineering Menu), which is a hidden menu which can be accessed with a special button combination.

The button combinations for the different cars can be found on [Key Combinations](#). With the use of the correct key combination, the REM will appear on the screen, similar to the one shown on [Figure 3.1](#).

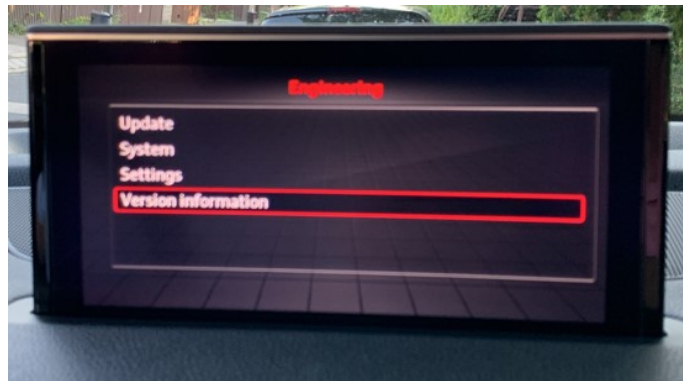


Figure 3.1: REM example.

Next, the ***Version Information***, shall be accessed from which the current FW version can be seen, similar to the one on [Figure 3.2](#). Therefore, the FW of this car is **MHI2_ER_AUG22_S2140**.

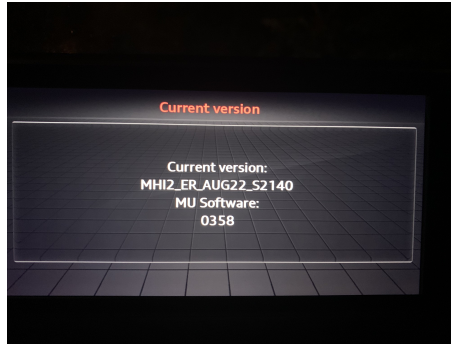


Figure 3.2: Example FW number.

As the current FW number has been identified, we can decode it to see which unit generation / tier / region etc. does our car have. This can be done with the use of [Train Decoding](#).

As the actual FW has been fully identified, we shall ask the experts to which new FW shall we updated to. This step is crucial as FW updates follow a certain chain (or for that matter train), therefore, there is a fixed order of FW updates that shall be followed.

In order to ask the experts, [join the Telegram channel](#), in which the experts will identify your new required FW. Assuming the new required FW has been identified (in our case the MHI2_ER_AUG22.K2161), we shall proceed to the next phase, [subsection 3.1.2](#).

3.1.2 Getting the required FW

The new FW shall be downloaded from [mibsolution.one](#). Use the username: *guest* and password: *guest* to access the site. Navigate to the *Firmware* folder, from which with the use of the identified new FW number, choose the relevant sub-folder, (in our case the MHI2), and download the new FW (in our case MHI2_ER_AUG22.K2161).

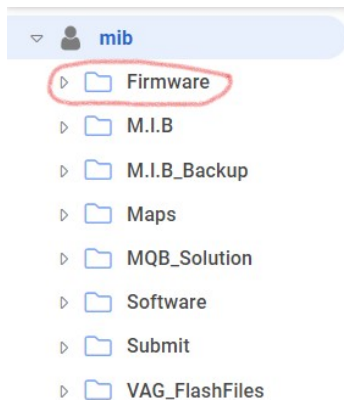


Figure 3.3: Main FW folder.

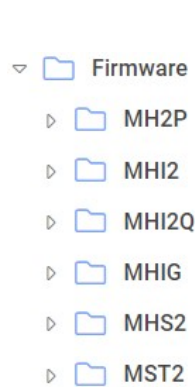


Figure 3.4: FW sub-folders.

MHI2_US_AUG22_K3347_MU1439 (A4-A5-Q5-Q7)	7Z
MHI2_US_AUG22_K3345_MU1439 (A4-A5-Q5-Q7) 4M0906961CQ	7Z
MHI2_US_AUG22_K5125_MU1390 (R8)	7Z
MHI2_US_AUG22_K2569_MU0889 (R8)	7Z
MHI2_US_AUG22_K0539_MU1062 (A6-A7)	7Z
MHI2_US_AUG22_K0538_MU0109 (A6-A7)	7Z
MHI2_US_AUG22_K5124_MU1389 (TT)	7Z
MHI2_US_AUG22_K1075_MU0885 (TT)	7Z
MHI2_US_AUG22_K5107_MU1363 (A3)	7Z
MHI2_US_AUG22_K4219_MU1196 (A3)	7Z
MHI2_US_AUG22_K5083_MU1312 (Q2)	7Z
MHI2_ER_VW613_P4521_MU1367	7Z
MHI2_ER_VW613_K4525_MU1367	7Z
MHI2_ER_VW611_P3301_MU0814	7Z

Figure 3.5: Example list of FW.

The FW will be downloaded as a .zip file, therefore, extract the contents of the compressed file to a 32 GB (a smaller is fine as well) SD card, formatted to **FAT32**. Important to note that the SD card **MUST** be FAT32, otherwise the car cannot identify the SD card. Also, the files should not be inside of a big sub-folder as the car will not recognize the update, thus, the files shall be on the SD card in a same way to the one which can be seen on [Figure 3.6](#). With this, everything is ready in order to start the update. If the car is equipped with BOSE or B&O sound system, please proceed to [subsection 3.1.3](#), otherwise, proceed to [section 3.2](#).

AMP_BAO_P3	08/10/2020 09:09	File folder	
AMP16bAPN	08/10/2020 09:09	File folder	
Bose6416A	08/10/2020 09:09	File folder	
common	08/10/2020 09:09	File folder	
DAB	08/10/2020 09:09	File folder	
DUA303	08/10/2020 09:09	File folder	
DUA305	08/10/2020 09:09	File folder	
DUA308	08/10/2020 09:09	File folder	
DUA309	08/10/2020 09:09	File folder	
DUA900	08/10/2020 09:09	File folder	
DUC303	08/10/2020 09:09	File folder	
DVB-DTV	08/10/2020 09:09	File folder	
DVD	08/10/2020 09:09	File folder	
DVDC2_APN	08/10/2020 09:09	File folder	
FC1H49xE	08/10/2020 09:09	File folder	
FC1P73xE	08/10/2020 09:09	File folder	
GPS	08/10/2020 09:09	File folder	
IOC	08/10/2020 09:09	File folder	
LTE-ALS6	08/10/2020 09:09	File folder	
MMX2	08/10/2020 09:09	File folder	
MUCConsistency	08/10/2020 09:09	File folder	
MulNIC	08/10/2020 09:09	File folder	
MuTnrRef	08/10/2020 09:09	File folder	
RCC	08/10/2020 09:09	File folder	
SAA-DTV	08/10/2020 09:09	File folder	
SpeechAppRes	08/10/2020 09:09	File folder	
SpeechRes	08/10/2020 09:10	File folder	
TD_SDIS	08/10/2020 09:10	File folder	
Tuner	08/10/2020 09:10	File folder	
metainfo2	25/09/2018 11:04	Text Document	364 KB

Figure 3.6: Example of SD card content.

3.1.3 BOSE or B&O

In case the car is equipped with a BOSE or B&O sound system, extra caution shall be done as the FW update, by general nature, would like to update the sound system as well which will create some 'problems' which would ultimately require extra coding etc.

3.1.3.1 Option 1

In order to avoid it, ask the experts again in the group for a custom **metainfo2** file, which will ensure that the sound system will not be updated, thus no extra custom coding is required. With the new metainfo2 file, just copy-paste it on the SD card, therefore overwriting the old metainfo2 on the SD card.

3.1.3.2 Option 2

If no custom **metainfo2** file is used, one can update the FW in *User Defined Mode* where the sound systems components can be deselected, thus those will not be updated avoiding the any issues.

Please note, that either options (Option 1 or Option 2) work just fine, thus lead to the same exact result. Now, the actual update procedure shall be initialized which can be seen in [section 3.2](#).

3.2 Updating FW

The update procedure usually takes around 40 minutes (mainly dependent on the speed class of the SD card). Important to note that the update procedure **MUST NOT** be interrupted, otherwise the unit has a high probability of getting bricked. If any error is encountered during the update procedure, **DO NOT TOUCH** anything, just ask the experts in the group, they will guide you through it. The step-by-step procedure can be seen below.

1. Get in the car and start the engine. The engine running during the whole FW update is crucial as in case of power loss, the update fails, and the unit has a high probability of getting

bricked. Let the car run in idle for 3-5 minutes to ensure the whole MMI system is up and functioning properly.

2. Insert the SD card with the new FW into SD card slot 1, and enter the REM with the key combinations mentioned in [subsection 3.1.1](#).
3. Select the update option, and follow the instructions on the screen.
4. As soon as the update starts, the MMI will reboot, as indicated on the screen as well. DO NOT panic, sometimes the reboot can take a bit longer than you might think, just DO NOT touch anything, sit tight, and let the car do the work.
5. As you will see on the screen that the update will do its job one by one. During the update, the MMI will reboot a couple of times, this is an expected behaviour, DO NOT panic and DO NOT touch anything, again, sit tight and let the car do the work.
6. In case anything goes wrong, for example the MMI is stuck in reboot for a long time (like 10 minutes or so) etc., DO NOT TOUCH anything, ask the experts in the group for advice.
7. After the last update, a message will pop up as can be seen in [Figure 3.7](#), press '*Cancel version compare*' and the MMI will reboot.



Figure 3.7: Final pop-up message.

8. The MMI will reboot one last time and the generic MMI menu will appear, meaning the update is done. Wait again 3-5 minutes to ensure all the systems are awake. Now, check the new FW version in the REM to ensure the car updated itself correctly.
9. With this, the whole FW update is done. Exit the REM, remove the SD card and proceed to the next step, the patching, which can be seen in [chapter 4](#).

Patching

A new in depth YouTube videos was just uploaded, which can be found [here](#), which gives a very detailed procedure on how to install M.I.B. on your chosen car, therefore the step indicated here are a bit more coarse.

1. Download the latest M.I.B. version from [mibsolution.one](#) and extract the content of the .zip to your FAT32 formatted SD card.
2. Next, download the required patch for your new FW from [mibsolution.one](#), and put the patch into the patch folder located on the SD card.
3. Again, engine running, give it 3-5 minutes to ensure all systems are awake.
4. Make sure, your mobile phone's Bluetooth is turned-off as sometimes annoying pop-ups can appear on the screen.
5. Insert SD card to SD card slot 1 and in the REM perform the update. The MMI again will reboot several times.
6. As soon as the update is fully done and the MMI up and running again (give 3-5 minutes again to ensure system is properly awake), access the GEM (Green Engineering Menu) with another key combination, which again can be found on [Key Combinations](#).
7. In the GEM, select m.i.b.

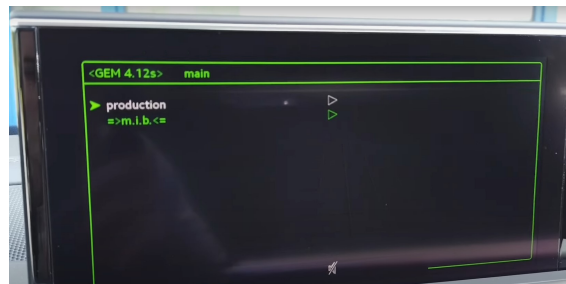


Figure 4.1: Initial GEM.

8. Next navigate to *backup_restore* option and perform a backup. In case anything goes wrong with the patching, the experts can help you out with the use of the backup.
9. During the back up, DO NOT touch anything, let the car do the work. Only use the scroll wheel (only scrolling) to see the progress of the backup. As soon as the backup is done, a message will indicate it.

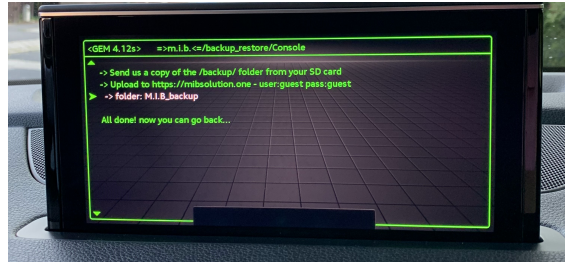


Figure 4.2: Backup complete message.

10. Next, go back to main menu, and select *patch_ifs_root_aio*, and perform the patch.
11. Again DO NOT TOUCH anything, let the car do the work. The system will reboot as soon as the patch is done. After the reboot, the generic MMI will load (give it again 3-5 minutes), and by this, the procedure is done! Remove the SD card and enjoy the ride!

Extra notes

This section aims to provide extra useful notes to troubleshoot some common mistakes during the preparation phase.

5.1 SD card type/format etc.

1. In general, a 32GB SD card is recommended as if one would like to perform a maps update as well, smaller capacity cards will not have enough storage.
2. Buy a proper SD card from a trusted brand, e.g. Samsung, SanDisk etc. as a quality high speed SD card makes the overall procedure a bit more fast and reliable.
3. Even if a brand new SD card has been bought, check if the SD card is not fake and has the advertised storage and speed class. The checking can be done with several different programs, but **H2testw** is recommended as its free and widely used. Thus, before performing any updates, check the SD card!
4. Always use a Windows based PC, as MAC's sometimes can create problems.
5. FAT32 formatting always.