

mObridge® – APPLICATION REFERENCE for BMW & MINI retrofit coding using Autologic®



www.mobridgeinc.com

version 1.1-ROW, 12/08/2009

APPLIES TO mObridge® PRODUCTS for BMW & MINI Applications, and [what functions in iDrive or Radio are coded if not already equipped]

- mObridge Audio A2010-series (iPod + Aux) [codes vehicle for CDC, sometimes MP3 for iPod text]
- mObridge Bluetooth M1000-series (Bluetooth only) [codes vehicle for Bluetooth]
- mObridge Bluetooth ABT2010-series (Bluetooth & iPod + Aux) [codes vehicle for Bluetooth, CDC, sometimes MP3]
- mObridge Pre-Amp DA1000 (Toslink out only) & DA2000 (5.1ch analog RCA outs) [codes vehicle for Logic 7 amplifier (“top HiFi”)]
- mObridge XM Sat XMD-A2010 series (*applicable to North America Only*) [codes vehicle for Digital Satellite Radio]

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1 Background

BMW and MINI vehicles that did not come from the factory enabled with certain functions require “retrofit coding” to enable these functions in the iDrive or radio. Some common Q&A’s:

1.1. Q: What is required to retrofit?

A: mObridge recommends the Autologic® independent workshop system for BMW & MINI. BMW and MINI OEM dealer diagnostic equipment can only retrofit factory (BMW/MINI part number) units to the vehicle. While technically it is possible for a BMW/MINI dealer to temporarily fit a factory unit (example: CDC), coded the vehicle to enable this option, then fit the retrofit unit (e.g., mObridge A2010 iPod/Aux), this is outside the norm for most BMW/MINI dealers and thus this is **highly discouraged** as it is usually a path to much frustration and time spent convincing the BMW/MINI dealer to perform the job.

Therefore, **it is recommended that any retrofit coding in BMW or MINI be done with an Autologic® independent workshop system.** Requirements of the Autologic system:

- **Latest Autologic software.** The shop should have a subscription for updates with Autologic, since new CIP index, new coding, and I-Levels are always being added. As of the writing of this document, **the Autologic release with all of the mObridge retrofit functions is minimum Autologic BMW version 636 (12/7/2009).** Versions earlier than this may have some, but not all of the necessary coding functions and/or mObridge products.
- **Optical interface head (“Ops Head”).** The MOST “Ops Head” is an Autologic option but is a necessity for coding and programming of the BMWs starting with 2002 E65 (introduction of MOST into BMW) and later MINI with the R56. Please contact your Autologic rep for further information on this piece and the Autologic user manual for information on where to connect to the vehicle’s optical service port (see Appendix as well as Autologic training & manuals).

mObridge® – APPLICATION REFERENCE for BMW & MINI retrofit coding using Autologic®, continued.

1.2. Q: Do I need to bypass anything before programming in the car (for other service) or coding for mObridge products?

A: The default answer is “no” but you may find some diagnoses that require bypass of the aftermarket unit(s) out of the system in order to proceed. There are two ways of bypassing:

1. **Physical bypass off the fiber ring:** use a bypass loop on connector that would normally go into mObridge so as to take it out of the ring as a factor, as is standard diagnostic protocol or “strategy” of a technician).
2. **mObridge “bypass” mode:** every mObridge unit can be put into bypass mode (6 toggles on the bypass input, which is basically 6 transitions to or from B+ aka “30 power”, either direction), whereby it simply passes light through the mObridge unit as if the unit were not present. How to enter bypass mode is also described in the mObridge user manual for the respective product.

1.3. Q: Will the BMW / MINI dealer be able to diagnose the vehicle after installation of the mObridge products.

A: The default answer is “yes” but with anything, just like answer to 1.2, there may be diagnostic operations that require byp

1.4. Q: Do I need to update the vehicle’s software (in various ECUs – CIP programming) prior to coding?

A: This depends. We generally recommend against updating firmware in a BMW control unit when you’re “just retrofitting” unless this is required of some other unit repair/replacement (unrelated to mObridge). However, some retrofits, for example MP3 CD Text, may require that earlier (particular iDrives) be CIP programmed as earlier software versions may not support MP3 CD Text.

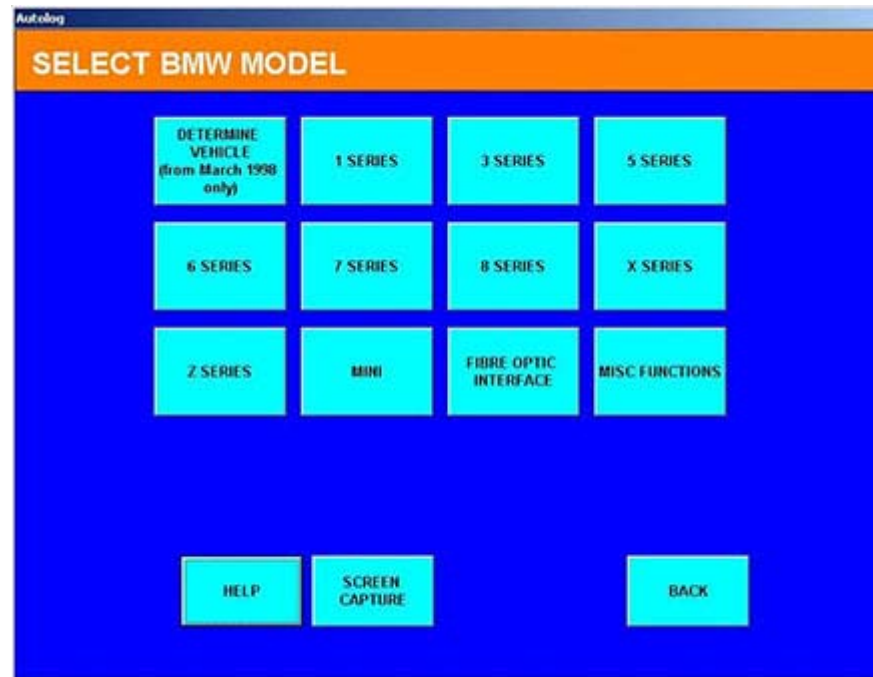
mObridge® – APPLICATION REFERENCE for BMW & MINI retrofit coding using Autologic®, continued.

2 Procedure

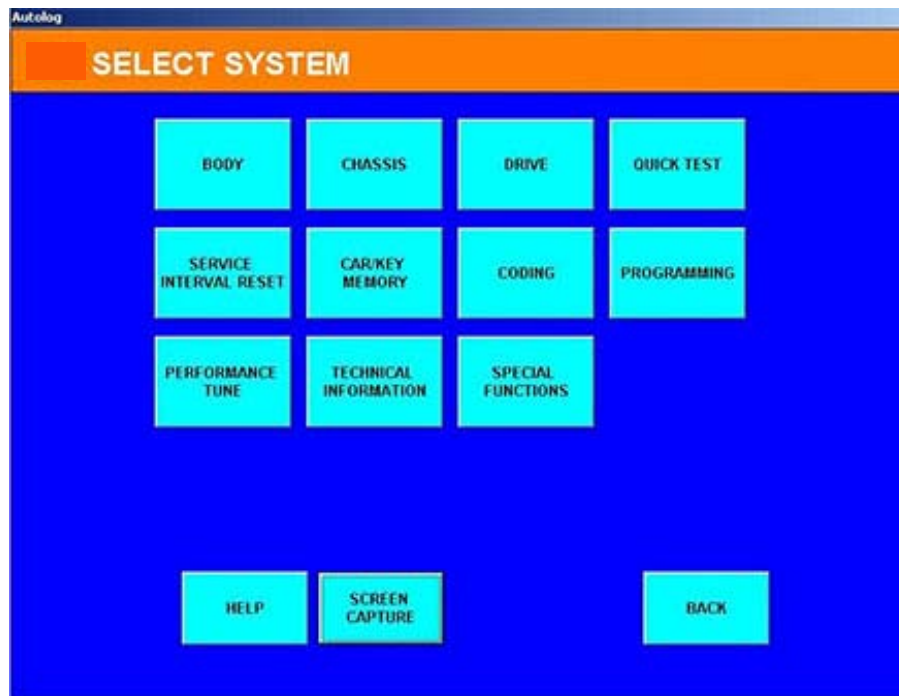
Warning: coding and programming are technical service procedures that can alter behavior in the vehicle and disable control units if done improperly. It is important to have the proper equipment and training. If you are unfamiliar with these procedures, please consult your Autologic training and user's manual prior to starting regarding detailed CIP procedures. It may also be helpful to consult BMW TIS and WDS for to familiarize with any applicable TSB's, Service Campaigns (recalls), as applicable. It may be more efficient to have dealer service campaigns (recall items) handled prior to any work in an independent workshop, to ensure that the car is up-to-date per factory protocol. The screens below are provided for convenience (reference) only and subject to change with Autologic versions. As always, we will try to keep this document updated as things change.

The user of this document assumes all liability for changes to the vehicle and all responsibility for training in proper use of tools and equipment.

2.1 (Main Entry Screen) Start Diagnostics → Select Vehicle Model You are Working On



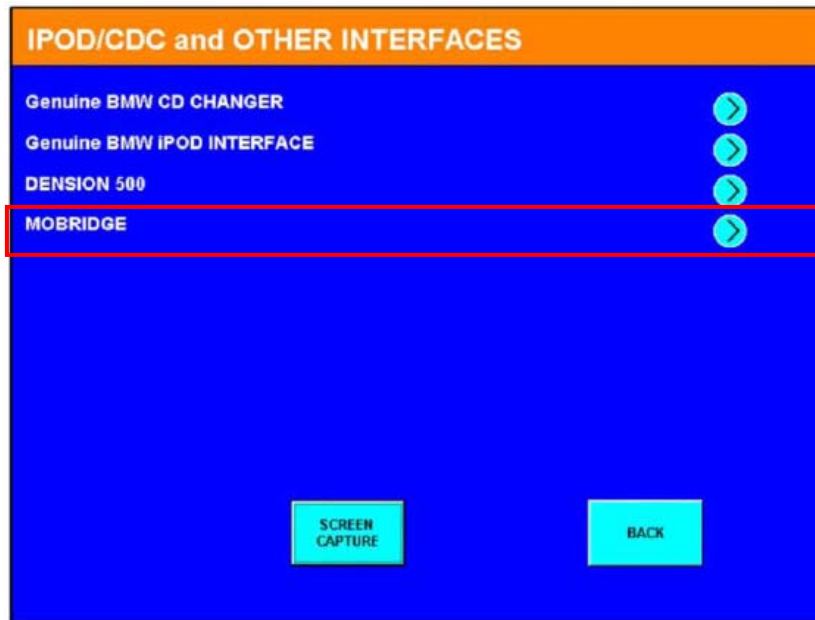
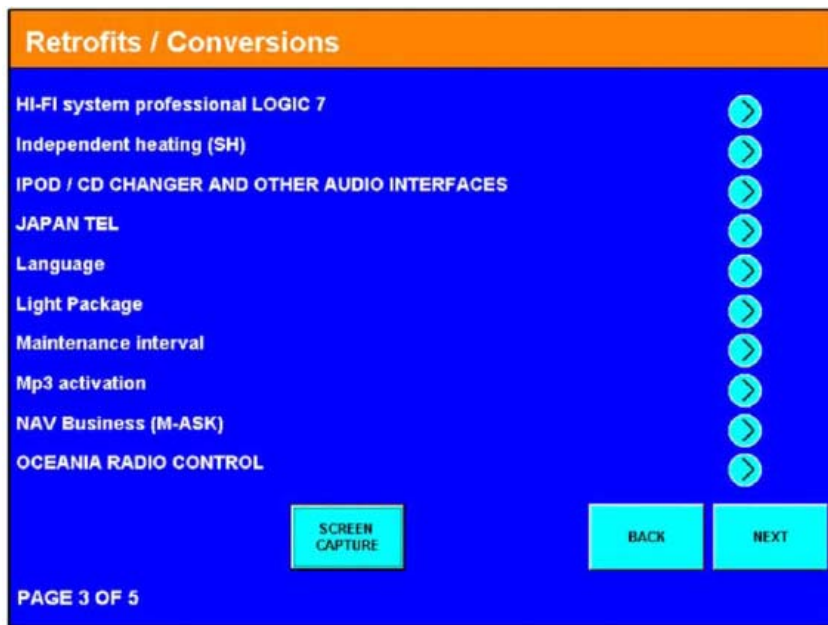
2.2 Select System/Operation. Coding or “CIP Programming” then Coding (Retrofits/Conversions)



2.3 Retrofits / Conversions: MOBRIDGE

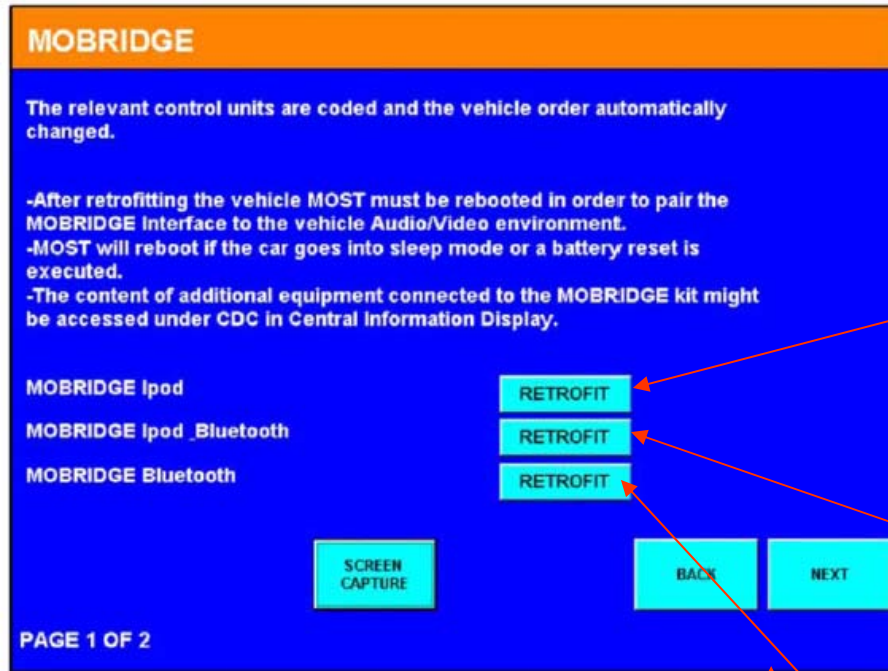
Page 1 → Next

Next page: IPOD/CDC and OTHER INTERFACES → (right arrow)



mObridge® – APPLICATION REFERENCE for BMW & MINI retrofit coding using Autologic®, continued.

2.4 Retrofits / Conversions: MOBRIDGE: Specific Interfaces



iPod for A2010-series iPod/Aux. If coded correctly, CDC option will show up in Audio sources (FM, AM, SAT, CD → CD, DVD, CD1, CD2, etc). If CDC or CD1.. CD6 do not appear, then you know the vehicle has not been coded for the functions.

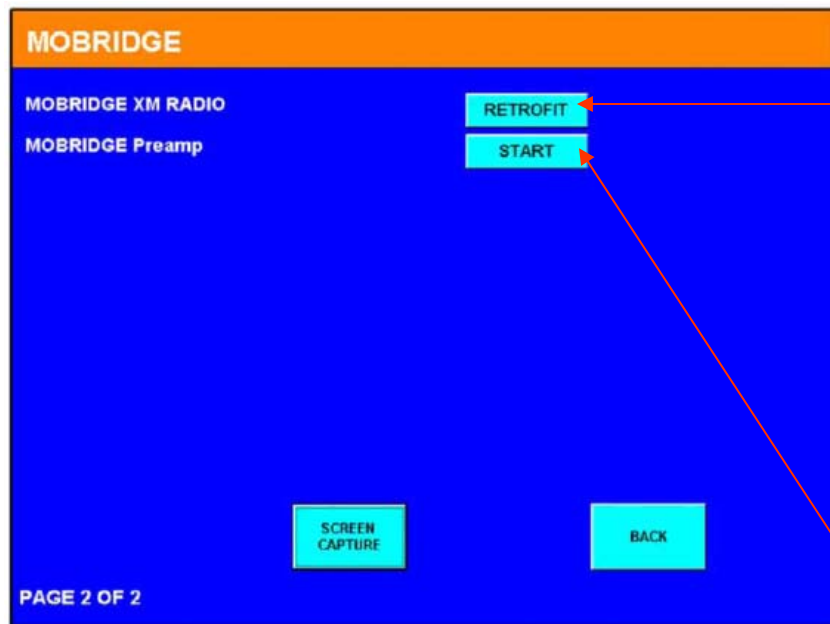
- Even if the mObridge unit isn't "lighting up" on the bus yet itself, if the vehicle is coded correctly, you should get the CDC/discs at least greyed out at all times.
- If mObridge is working correctly, Non-Mp3 (no text) cars will at least always get a CD6 for Menu/Aux functions even when an iPod isn't plugged in.
- If the vehicle already has a factory CDC, then generally this coding is not needed (just fit the mObridge unit and it should come up in the iDrive or radio under CDC.
- However, if programming/updating is needed for the vehicle to support MP3 (MP3 CD-text) then it is recommended to proceed with this PRIOR to fitting the mObridge unit, and ordering the mObridge SKU intended for the vehicle per MP3 CD-Text support.

iPod Bluetooth for ABT2010 Bluetooth/iPod/Aux. If coded correctly, under the Communications or Telephone menu, there should be pairing capabilities. See box above iPod for A2010-series for more about iPod/Aux function.
Note: if, for whatever reason, mObridge's Bluetooth functionality will be replacing a pre-existing factory telephone/Bluetooth unit (may be ULF or Bluetooth/telephone built into TCU aka BMW Assist unit), please contact support@mobridgeusa.com as there may be further considerations to coding or bypassing existing equipment and proper setting up of ECUs on the bus in order to make the new Bluetooth fitment work properly.

Bluetooth for either ABT2010-series or M1000-series MOST Bluetooth.
 If you are installing mObridge Bluetooth and not the Aux/iPod portion (whether it's the Bluetooth in ABT2010 series or the new Bluetooth-only M1000-series you can use this Bluetooth-only retrofit).

(NEXT page for further retrofits)

Section 2.4, Retrofits / Conversions: MOBRIDGE: Specific Interfaces, continued.



For XMD-A2010 (XMD1000 interface), M1000-M-XM2-BMW (new MiniTuner interface) for XM Satellite Radio integration. If coded correctly, under the entertainment sources, you should now see an option for SAT.

- If the mObridge unit is not seen (yet), it will be present and at least greyed out or cannot select.
- If the mObridge unit is functioning properly, you will be able to enter the SAT sub-menu. (in iDrive, it will be white, to show that the source is available).
- *Note: technically, in the vehicle order, this is a coding for SA655 / S655A DIGITAL SATELLITE RADIO option. This is NOT a CDC coding and should not be confused as such.*
- **Note: troubleshooting tip:** after entering the SAT sub-menus, you should always be able to get the XM tuner's Radio ID (also on the back of very tuner) by choosing ESN in the SAT menus. *If you see a blank ESN, then you know the mObridge unit and tuner are not communicating. Particularly on XMD-1000 tuner, make sure the orange wire has proper B+ power and also you can try jumpering the case of the tuner to a good ground just to verify ground.*

Pre-Amp for DA1000/DA2000 (M1000-M-DA1-BMW, M1000-M-DA2-BMW). If coded correctly, you will get sound out the Toslink or other outputs of the mObridge MOST BMW Pre-Amp.

For other troubleshooting assistance, refer to support@mobridgeusa.com

2.5 Other considerations/troubleshooting.

1. Did you read the mObridge General Install Guide for BMW? Critical items:

- If you are connecting to a factory BMW MOST/Power ("2+4") connector plug (applicable A2010/ABT2010/XMD-A2010/AS2010 series product only) be sure to follow the guidelines about pin order as the mObridge pin order for ground and power are different than that for the BMW factory plugs. It is okay to use these but you must be mindful of the pin order as immediately plugging a mObridge in without observing this will result in blowing the vehicle fuse for the circuit.
- Be sure to let the vehicle go to sleep after physically fitting the unit and after coding. MOST-bus is not "plug and play" and all components must come up together from vehicle sleep state. That is, if one component got power before the others, they will have missed messages. Bottom line, when in doubt, and if seeing erratic behavior, let the vehicle go to sleep.

2. Do you have the right configuration/part. # for the vehicle? See mObridge's Detailed BMW Application Guide for further details.

Particularly because of differences in iPod browsing, the configuration/part. # of the mObridge iPod series will be different depending upon the type of iDrive and it's capabilities or if it's a radio and they are generally not interchangeable without reconfiguring the mObridge unit or exchanging for the proper part.

mObridge® – APPLICATION REFERENCE for BMW & MINI retrofit coding using Autologic®, continued.

3 Appendices

Other materials not produced by mObridge but that you may find useful (not responsible for updates or anomalies such as broken links).

3.1 Other Resources on the Web

<http://Autologic.us>

<http://www.Autologic-diagnostics.com>

<http://www.bmw-tis.com>

<http://www.realoem.com>

3.2 Autologic - Guide to CIP programming with Optical Interface. *While the following reference applies to CIP Programming (reprogramming of ECU(s)), it may be useful to simply see some of the aspects of using the Ops interface with the vehicle, the same interface that is used for retrofit coding.*

(FOUND AT END OF THIS FILE)

Version History:

1.1	12/9/2009	Fixed Registered Trademark (®) & Copyright (©) information of respective owners, published RoW version.
1.0	12/7/2009	Initial Release

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Guide to CIP programming with Optical Interface

Before starting programming with Autologic optical interface.

Ensure the Autologic is fully up to date with the latest software version of BMW and CIP.

Connect an Autologic or BMW approved battery charger and set the voltage to 14.8 volts.

Preparing the vehicle

Carry out a quick test and if possible rectify all faults and make sure all control units communicate.

E65: Fuel level check. During programming the fuel pump could run at full output and drain the tank if less than half full. Remove fuse 73 to avoid any damage.

If a Bluetooth system is fitted remove the vehicle SIM card or disconnect any paired phone from the vehicle.

Programming with MOST

1. Connect the fibre optic interface cable to the most port (located in or under the glove box, depending on model).
2. Connect the fibre optic interface to the Autologic.
3. Connect the Autologic via the OBD cable to the vehicle.
4. Ensure the external power supply is connected to the Autologic.
5. Switch on ignition.

If a CDC is programmed on a E87/90 the correct equipment must be used i.e. fibre optic interface. If this is not used the CDC might be damaged in the process and Irreparable.

Notes: Do not run any cables through the windows as the initialisation could take place during programming.

Roll all door catches and lock the vehicle from the central locking button inside to prevent the door status changing and programming being disturbed.

During programming the vehicle must not be disturbed. If disturbed, Programming will be aborted and damage to control unit may occur.

E65: The navigation system should be updated via the Installation disc version 31 or above prior to programming with CIP. Before inserting the disc, make sure the system is fully functional or the disc could get locked into the drive and will not eject.

Guide to CIP programming with Optical Interface

All other models: remove all discs from CCC/M-ASK Remove Navigation disc from CCC/M-ASK. Remove CDC cartridge where applicable.

Check and note down all CBS data, customer personal settings, radio stations and navigation addresses on the CBS vehicle preset record sheet (download from Autologic BMW website under Documents.)

Programming

A.UPDATE

This option will allow the user to execute a general software update of all Control Units fitted that have newer software available.

1. Select model or determine vehicle.
2. Select CIP.
3. Check the latest CIP version is installed and press CONTINUE.
4. Enter the date and press CONTINUE.
5. Check ignition (terminal 15) is on and press CONTINUE.
6. Check vehicle details are correct, if so press CONTINUE.
7. Once CIP analysis has finished. If the message "*Error occurred*" is printed below the button INITIAL REPORT please check the initial report for errors. Identify and rectify the errors then restart step 1 to 7 until no warning messages are displayed. (see Appendix – B, Override below)
8. Press Update button. You will be asked if any new control unit have been installed. If you press 'YES', a control unit list menu will be displayed. Select from the list the replaced unit and carry on until all replaced units have been selected. Once all replaced units have been selected press 'NO'. At this point the message below will be prompted on the screen signifying that a CIP session has created a list of all control units that need to be updated.

"The files required to program? control units are not installed."

"Now connect Autologic to the HOST SOFTWARE to obtain an update."

,

"For more information please view the CIP documentation available online."

Press continuously the BACK button until you are asked to quit CIP.

Now you can send the CIP session through the Host software to Diagnos.co.uk. to obtain the updated programming file.

Guide to CIP programming with Optical Interface

9. After sending the request, the programming files will be made available by Diagnos.co.uk on your web page under the category "My Files" named CIP (vehicle VIN). Please upload the file onto Autologic and carry out step 1 to 8 again. This time around when you press the UPDATE button the programming of the on-board ECU's will start automatically.

Always refer on-line CIP1.pdf document for detailed instructions on requirements to be met before, during and after programming.

B. OVERRIDE

This option allows the user to target control units to be updated individually.

1. Once you have executed step 1 to 7 in paragraph A. choose OVERRIDE instead of UPDATE. At that point a message will be displayed warning you that it is recommended to update all units requiring an update together. However if you wish to continue and select from the list of modules fitted in the vehicle, you can.

2. Once you select a module you will access a page that will allow you to execute functions, such as programming and/or coding and/or initialisations. If you press the PROGRAM button the following message will be prompted, see below*. This signifies that a CIP session has been created including a request of a programming file for the chosen module list.

** "The files required to program 1 control units are not installed."*

"Now connect Autologic to the HOST SOFTWARE to obtain an update."

"For more information please view the CIP documentation available online."

3. You can at this point press the BACK button two times and select another control unit and execute step 2 again. Each time you execute step 2 for a chosen ECU you will add it to the CIP session allowing you to send a request for as many control units as you want by selecting them individually.

4. Similar to step 9 in Appendix - A Update. The download file released by Diagnos.co.uk will need to be downloaded onto Autologic and carry out step 1 and 2 again. This time around when you press the PROGRAM button the programming of the chosen control unit or units will start automatically.

Always refer on-line CIP1.pdf document for detailed instructions on requirements to be met before, during and after programming.

Guide to CIP programming with Optical Interface

C.IMPORTANT:

1. It is very important to have a strategic approach when OVERRIDING a general update. In vehicles some ECU's interact with each other to control vehicle systems. For example, if your vehicle is fitted with a professional level CCC system (Car Communication Computer) controlling on-board entertainment and navigation you will have to update all entities of that system. (CCC-GW, CCC-ASK, CCC-ANT, CCC -BO, CCC-A). You will also have to program them in the order they are displayed in the INITIAL REPORT.
2. If, No control unit's need updating. Autologic will display a CONTROL UNIT LIST Button allowing you to program individually a chosen control unit the same way as you would when using the OVERRIDE function
3. When programming a pre 03/07 vehicle with both CCC and SVS voice activation, an enabling code could be required to successfully carry out programming of these components. If an enabling code is required contact Diagnos.co.uk for further information.
4. Programming CAS: If the CAS requires programming as part of the initial report, the key will need to be removed from the key slot to allow programming to be carried out successfully. There will be a prompt from the Autologic to remove the key, this also states that the continue button on the screen should be selected within 30 seconds of removing the key. If this is not done correctly it will cause programming errors. The Autologic will indicate when the CAS has been successfully programmed, the key should be reinserted and terminal 15 activated. Once this process is completed, the Autologic will continue to programme the rest of the vehicle according to the initial report.
5. Regular checks should be made that the vehicle is being supplied with the correct voltage and the progress of the CIP update.
6. During the final stages of programming, the Autologic will inform you as to what initialisations or settings the vehicle requires.
7. After successful completion of programming, clear all fault codes and ensure the vehicles MOST bridge is replaced.

Guide to CIP programming with Optical Interface

After successful programming

Car/Key memory: If applicable to your vehicle, reset the CKM settings as noted down before programming.

E60/E61: Please check all windows operate correctly, or check CKM settings and ensure that all one touch window settings are active.

E65/E66: If the vehicle was produced after 03/05 and the CD-BO has been programmed, it will be necessary to carry out a battery reset at this point!

Session Management: You can only store a maximum of 5 CIP Sessions onto Autologic. After finishing all programming and updating procedures you should ideally go into CIP>Session Management and remove the session stored with the VIN number of the vehicle. This will remove from Autologic, all related programming files and CIP history, making space for another session.

IMPORTANT: You now need to carry out any initialisations that were mentioned by the Autologic towards the end of the programming.

Check CBS data is correct and that it corresponds to the data noted down before programming.

Ensure the exhaust emission CBS data has been deleted. If not carry out CBS correction.

Switch off the ignition and remove the key. Wait for 3 minutes for the bus networks to shut down.

Switch on the ignition and start the engine, carry out a quick test, and immediately carry out a quick clear.

Switch off the ignition and remove the key. Again wait for 3 minutes to allow the bus networks to shut down.

Switch on the ignition and start the engine, carry out a functional check of the MFL functions and carry out functional test of horn, wiper stalk, indicator stalk, heater control panel, etc. Also check that no check control messages are present on engine start.

Carry out a road test and when you return carry out a quick test to ensure there are no faults stored in the vehicle.

Guide to CIP programming with Optical Interface

Service functions / Set-up information

Active steering: On cars with active steering fitted, the system must be adjusted after programming. Find this function in: Chassis - AFS - Adjustment.

Gearbox/Engine idle speed adaptation: The engine must be at operating temperature. Turn the steering from lock to lock 3 times, then select reverse and move the vehicle backwards for 10 metres. This procedure starts the idle speed adaptation of the engine and gearbox.

Radio stations: Restore the customers AM/FM radio stations as noted down before programming.

TMC: It is possible for the TMC to be deactivated during programming. Ensure this is set in the traffic information menu using the (I – drive).

TV format: If the vehicle has a video module and it has been programmed, it could be necessary to reset the TV format back to the relevant country setting.

Navigation addresses: Enter the saved navigation addresses as noted down before programming.

Personal Profile: Set the personal profile as noted down before programming.

IHKA: If the IHKA has been programmed, start engine and run at idle until the LED in the air con button stops flashing.

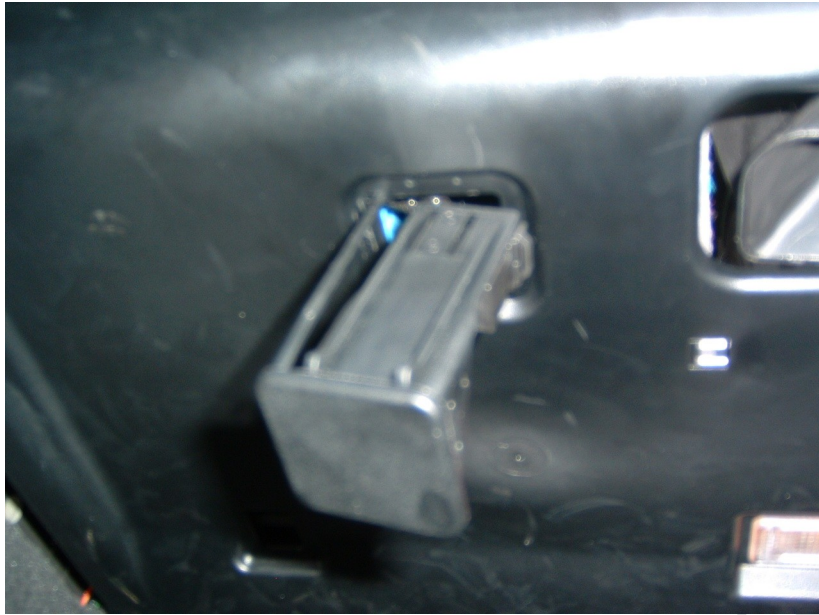
RPA/TPM: If you programme the DSC, it is essential to initialise the RPA/TPM system via the (I – drive) or personal profile.

RDC: If the vehicle is fitted with RDC as opposed to RPA it is also necessary to initialise this system.

If programming is unsuccessful

If programming is unsuccessful, an error code will appear on the Autologic. In this situation contact Diagnos.co.uk for information and guidance.

Guide to CIP programming with Optical Interface

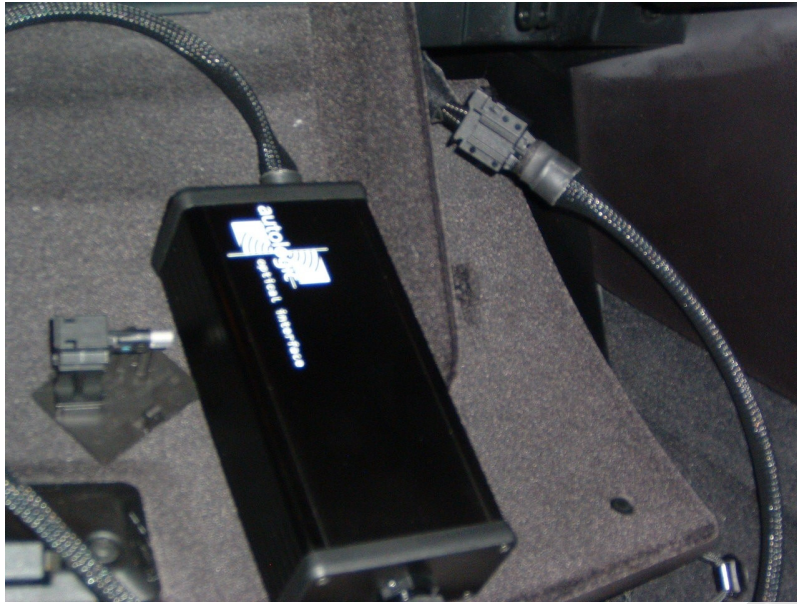


E90/92 Optical Interface connector



E90/92 Optical head connected

Guide to CIP programming with Optical Interface



E60/E61

Autologic



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User Manual

Digital & Analog Pre-Amplifier



▶▶ Welcome to mObridge Pre-amp Technology

The DA Series enables the full control of aftermarket amplifiers from the factory head unit, making a convenient and error-free connection with a custom fiber-optic data link which requires no cutting-and-splicing. Vehicle owners can then add aftermarket components from a simple powered subwoofer to a complete multi-channel high power audio system. The unit also supplies an output to turn-on aftermarket audio components with a delay. The DA Series purposes is to ensure the integrity of each system while making the resources available on one side (e.g. OEM system) to the devices on the others side (e.g. Aftermarket system). DA Series is a modular embedded system based on Blackfin processor. The DA Series extracts 8 channels of 20 Hz to 20 kHz audio output at 4V RMS, and allows full control from the factory radio of an aftermarket car audio system such as a high power audiophile system from whatever Power amplifier brands including volume, fader, balance, bass, treble and graphic equalizer where supported (e.g. BMW).

The preamp stage is driven by Burr Brown DAC converter that give to the customer an audiophile quality without any compromise. Moreover the Blackfin Processor gives to DA Series the capability to introduce powerful Audio processing features.

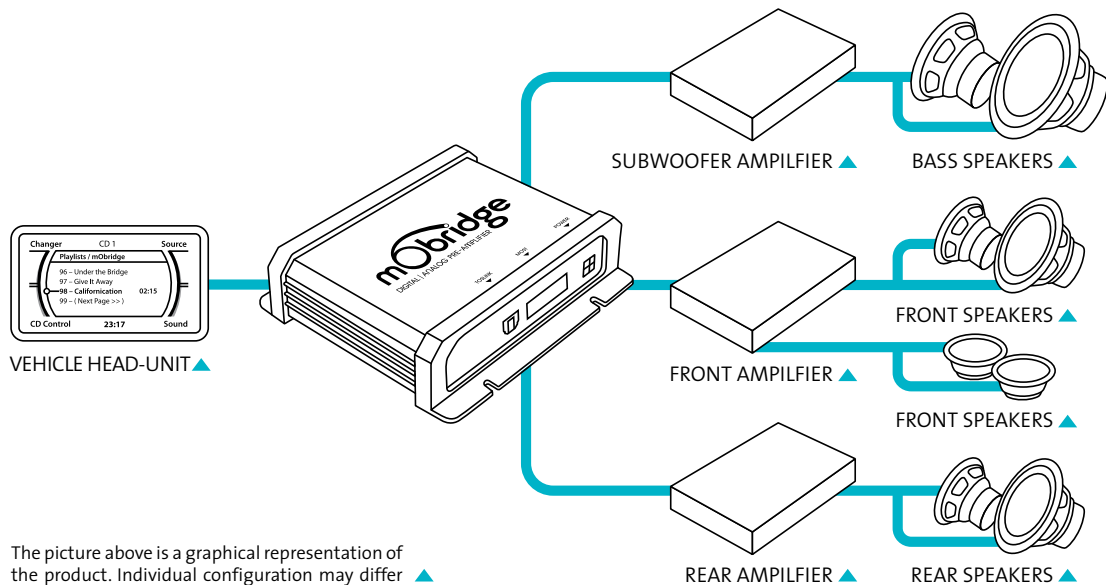
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2011 Fiberdyne Systems Pty Ltd

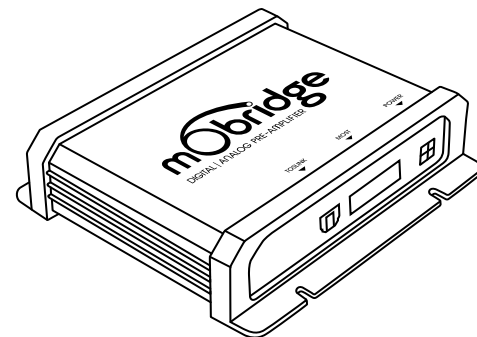
Features of Your mObridge Unit



The picture above is a graphical representation of the product. Individual configuration may differ ▲

mObridge Pre-Amplifier Features

DA2 Series connection to aftermarket amplifier via 8 Channel RCA & TOSLINK connection.



- ▶ 8-channel 192-kHz Sampling 24-Bit audio digital-to-analog converter (DAC)
- ▶ Audio output is via digital Toslink or 8 channels of RCA analog signal
- ▶ 8 output channels full range
- ▶ Allows for the full retention of factory controls including -Volume, Balance, Fader, and factory multiband Equalizer (where applicable)
- ▶ No need for external mounted controller or volume knob
- ▶ Eliminates the need to cut factory amplifier wiring
- ▶ Creates a 12 volt amplifier turn on and turn off signal
- ▶ Replaces the factory amplifier eliminating all unwanted digital signal processing

Audio Specification

Bass & Treble

DA2 Series is utilised through the factory controls. The DA2 Series gives the user the ability to adjust +/- 12dB on bass and treble range.

Fade & Balance

DA2 Series balance is accessed through the factory controls.

Due to the stereo nature of the TOSLINK connection, fade is not possible to the rear although the user will observe that the front is faded out.

DA2 utilises fade more to those channels that the user designates as rear audio channels. The same is also true for the balance for those channels that a user designates as right and left channels.

Special Vehicle Application

BMW 7 Band Equalisation

The BMW systems feature a 7 band equalisation. This feature is available on all the entire DA Series systems. The DA2 Series will allow a full +/- 12dB range.

Although there are only 7 points in the BMW system, the DA2 Series features a 31 band equalisation for which the BMW system is spread across so in effect compliments the 31 band equalisation system that can be user defined. The BMW system also has three DSP settings that can be utilised. The user can select a different DSP setting through the radio and then adjust the equalisation curve for this particular setting. The DA2 Series will save these settings according to the current DSP selection. This in effect gives the user three different equalisation curves that can be called upon demand which is something that the factory system does not offer.

Warranty

Your mObridge audio interface is warranted against any manufacturing defects for a period of 12 months from purchase. Any part of the mObridge audio interface may be replaced or repaired at the discretion of the manufacturer after such part is deemed to have a manufacturing fault.

If you have any questions about your mObridge audio interface, please contact your local service agent, whose details are attached to the back page of this user instruction manual.

FCC information (for US customers only)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interface by one or more of the following measures:

- ▶ Reorient or relocate the receiving antenna
- ▶ Increase the separation between the equipment and receiver
- ▶ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- ▶ Consult the dealer or an experienced radio/TV technician for help

Warning: Any changes or modifications not expressly approved by mObridge, Inc. could void the user's authority to operate this equipment.



NORTH AMERICA

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MOST Installation Guide
 iPod & Bluetooth Installation Instruction Manual



Introduction

mObridge A2010/A2011 iPod solution emulates a CD Changer and uses CD Changer controls to access off-board audio sources including iPod and AUX devices. If your car is not already equipped with a CD Changer, it may be necessary to have the car programmed by your dealer in order to use the mObridge A2010/A2011 with it. CD Changer retention is not supported.

mObridge ABT2010/ABT2011 iPod and Bluetooth solution is an A2010/A2011 plus the additional functionality of Bluetooth hands-free connection in vehicle, by emulating the Bluetooth controls already featured. If your car is not already equipped with a Bluetooth system, it may be necessary to have the car programmed by your dealer in order to use the mObridge ABT2010/ABT2011 with it. CD Changer retention is not supported.

mObridge M1000-M-BT1 Bluetooth solution emulates the Bluetooth controls featured in the vehicle. If your car is not already equipped with a Bluetooth system, it may be necessary to have the car programmed by your dealer in order to use the mObridge M1000-M-BT1.

mObridge M1000-M-DA1 Digital Pre-Amp offers digital signal directly into an aftermarket sound processor via TOSLINK, it may be necessary to have the car programmed for Factory amplifier by your dealer in order to use the mObridge M1000-M-DA1.

For system setup please see: mObridge WIZARD Guide

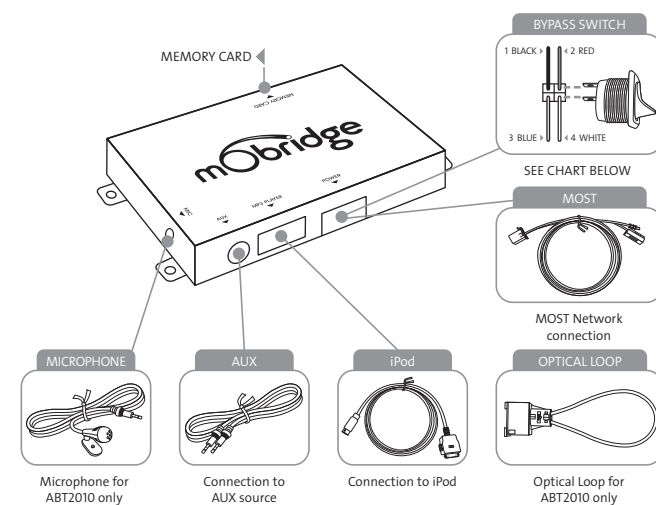


Programming the car for mObridge products:

- AUDI**
 - A2010 – no coding is required
 - ABT2010/M1000-M-BT1/DA1 – MMI software should be updated to 3360 to 4200 (YYYY)
- BMW**
 - A2010/ABT2010/M1000-M-BT1/DA1 – ALL BMW vehicles are required to be “coded” - ie have CD Changer enabled in the vehicle. This requires some knowledge and access to Autologic diagnostic tool.
- LAND ROVER**
 - A2011/ABT2011/M1000-M-BT1/DA1 – Generally no programming is required but in some cases (e.g. no device was connected onto the optical ring) it is needed to enable a Bluetooth with service computer.
- MERCEDES BENZ**
 - A2010/ABT2010/M1000-M-BT1/DA1 – Generally no programming is required but in some cases (e.g. no device was connected onto the optical ring) it is needed to enable a Bluetooth/CD Changer with StarDiagnose tool.
- MINI**
 - A2010/ABT2010/M1000-M-BT1/DA1 – ALL BMW vehicles are required to be “coded” - ie have Bluetooth/CD Changer enabled in the vehicle. This requires some knowledge and access to Autologic diagnostic tool.
- PORSCHE**
 - A2010/ABT2010/M1000-M-BT1/DA1 – Generally it is needed to enable a Bluetooth/CD Changer with the PIWIS service computer but in rare cases the PCM accept the mObridge without this enabling process.

PLEASE NOTE PROGRAMMING VARIES BY REGION

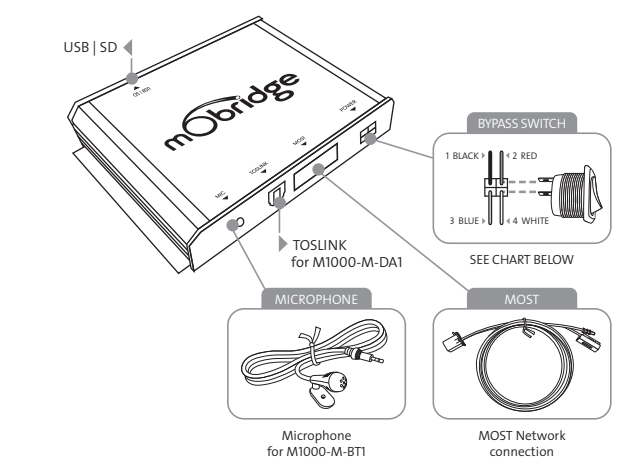
A2010/11 | ABT2010/11 | XMD-A2010 Package Content & Electrical Installation



WIRE COLOUR	DESCRIPTION	USE IN A2010/11 ABT2010/11 XMD-A2010
▶ 1 Black	GND (Battery - GND)	Ground (Battery --) Terminal 31 Klemme 31 / Kl.30
▶ 2 Red	Constant 12V	Power (B+ constant) Terminal 30 Klemme 30 / Kl.30
▶ 3 Blue	varies	Not used
▶ 4 White	bypass or "valet" input	"Valet" MOST bypass switch

Please Note When Servicing Your Vehicle You must set the mode selector switch to service mode (bypass CD Changer) position otherwise the service computer may detect an unknown device in the fiber optic system which can lead to errors reported.

M1000-M-BT1 | M1000-M-DA1 Package Content & Electrical Installation

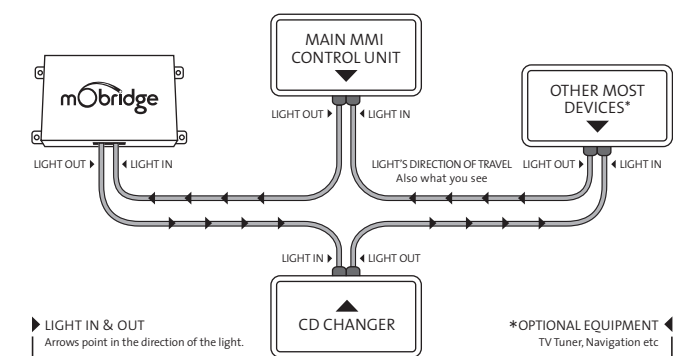


WIRE COLOUR	DESCRIPTION	USE IN M1000-M-DA1	USE IN M1000-M-BT1
▶ 1 Black	GND (Battery - GND)	Ground (Battery --) Terminal 31 Klemme 31 / Kl.30	Ground (Battery --) Terminal 31 Klemme 31 / Kl.30
▶ 2 Red	Constant 12V	Power (B+ constant) Terminal 30 Klemme 30 / Kl.30	Power (B+ constant) Terminal 31 Klemme 31 / Kl.30
▶ 3 Blue	varies	Remote Amp Trigger Output	Not used
▶ 4 White	bypass or "valet" input	"Valet" MOST bypass switch	"Valet" MOST bypass switch

Please Note When Servicing Your Vehicle You must set the mode selector switch to service mode (bypass CD Changer) position otherwise the service computer may detect an unknown device in the fiber optic system which can lead to errors reported.

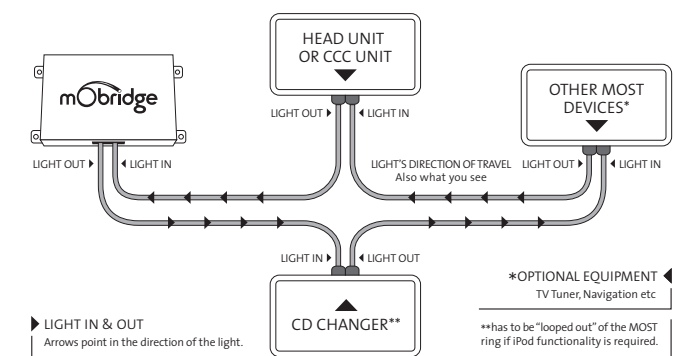
Installation Notes ▶ AUDI

Please see: Audi vehicle compatibility chart for application guide.



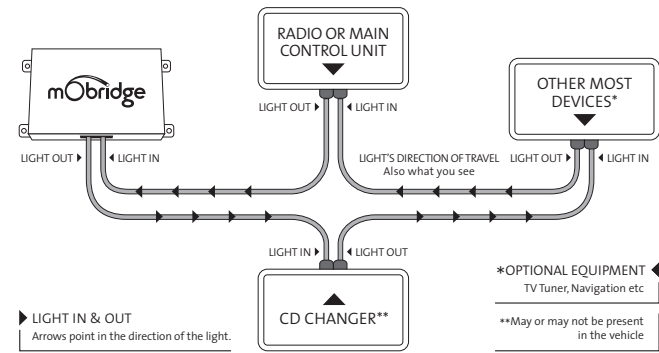
Installation Notes ▶ BMW

Please see: BMW vehicle compatibility chart for application guide.



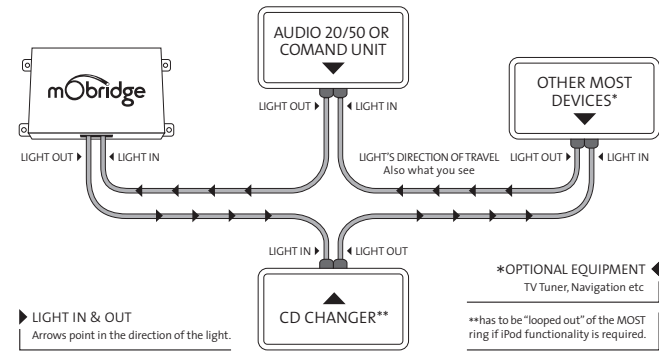
Installation Notes ▶ Land Rover

Please see: Land Rover vehicle compatibility chart for application guide.



Installation Notes ▶ Mercedes Benz

Please see: Mercedes Benz vehicle compatibility chart for application guide.

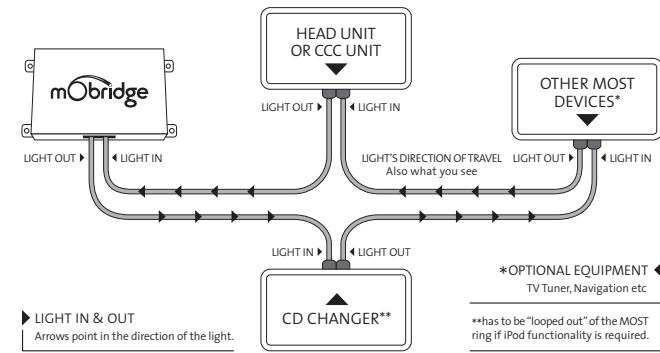


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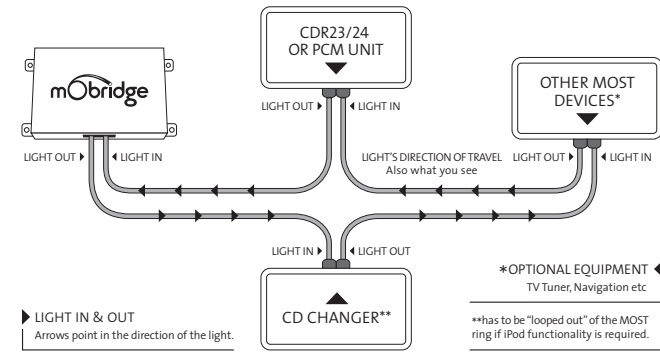
Installation Notes ▶ MINI

Please see: MINI vehicle compatibility chart for application guide.



Installation Notes ▶ Porsche

Please see: Porsche vehicle compatibility chart for application guide.



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▶▶ mObridge Update Wizard

1 Installation of mObridge Update Wizard

The mObridge Update Wizard allows you to configure and update mObridge devices to suit different vehicles via four different methods:

- ▶ Memory Card
- ▶ USB Cable (this method will be used for future product releases)
- ▶ iPod Cable Adaptor
- ▶ Bluetooth (with mObridge Bluetooth products)

Operating System requirements: PC running Windows XP, Vista & Windows 7

The wizard can be downloaded from www.mobridgeinc.com/node/109 Download and save the file to your computer, open the file and follow the installation instructions.

To open the Wizard go to Start ▶ All Programs ▶ mObridge ▶ mObridge Update Wizard

2 Using the Update Wizard

Once the wizard has been opened it lists three different ways to update the device:

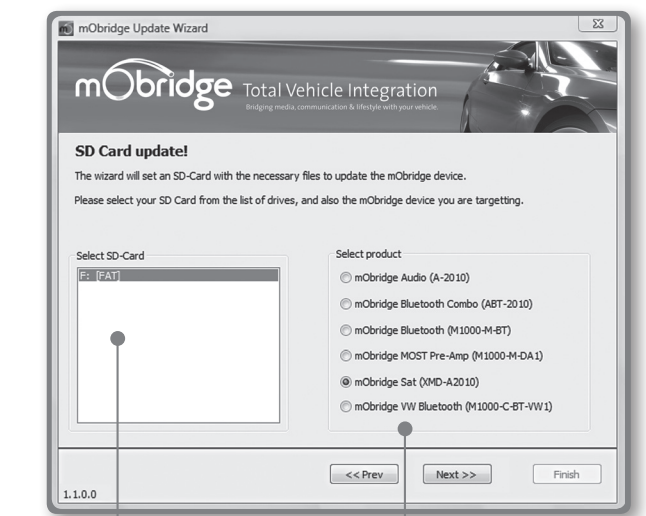
- ▶ iPod Cable Adaptor
- ▶ Bluetooth
- ▶ Memory Card

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▶▶ Updating via Memory Card

If you are going to use the Memory Card method please insert/connect a blank SD CARD which has been formatted to FAT. Micro SD cards are not compatible. Once the memory card has been detected by the PC it will appear in the window.



▶ SD CARD DETECTED BY PC ▶ CHOOSE PRODUCT TO UPDATE

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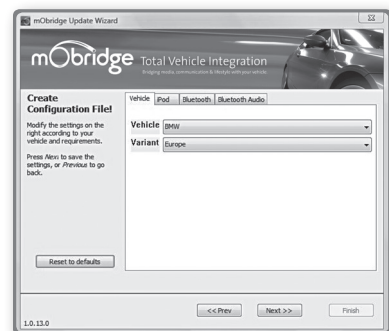
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▶▶ Updating via Memory Card

This page allows you to configure the mObridge device to suit the vehicle.

The page shown to the right relates to updating a mObridge ABT2010.

It has Bluetooth settings which will not be available when configuring non-Bluetooth capable products.



Across is a list of options that each configuration tab gives you.

- ▶ Vehicle: Audi, BMW, BMW (Non-MP3), Landrover, Mercedes, Mini, Porsche, SAAB
- ▶ Variant: Europe, North America
- ▶ iPod: Enable/Disable
- ▶ iPod Browse: First Playlists, Numbered Playlists, Full Folder Browsing
- ▶ Bluetooth Pin: DO NOT CHANGE THIS OPTION
- ▶ Auto-connect/disconnect on key-in: Enable/Disable
- ▶ Dummy phonebook for BT control: Enable/Disable
- ▶ BT control via CDC: Enable/Disable
- ▶ Advanced BMW phonebook (for CCC): Enable/Disable
- ▶ Mic Gain: 0-15 (default is 4)
- ▶ Bluetooth Volume: 0-15 (default is 15)
- ▶ Ring Volume: 0-15 (default is 15)
- ▶ Prompt Volume: 0-15 (default is 15)
- ▶ A2DP Volume: 0-63 (default is 63)

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▶▶ Updating via Memory Card

Once you have chosen the configuration options that are required for your vehicle push the NEXT button at the bottom of the page. A file will then be written to the SD card.

The SD card can now be ejected from the computer and inserted in the mObridge device as per the following instructions:

- ▶ 01 Install mObridge device into the vehicle as per the installation instructions.
- ▶ 02 Turn the vehicles ignition ON and make sure the radio is on.
- ▶ 03 Insert the SD card into the mObridge device.
- ▶ 04 Leave the SD card in the mObridge device for 10 minutes and then eject it.
- ▶ 05 Turn vehicle ignition OFF and wait for the MOST bus to go into "sleep" mode*
- ▶ 06 Turn vehicle ignition back ON and verify the correct operation of the mObridge device.

*MOST bus "sleep" times vary from vehicle to vehicle. The easiest way to tell if it in "sleep" mode is to connect an iPod to the mObridge device and wait until it stops charging. Once it has stopped charging the iPod, it is in "sleep" mode.

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▶▶ Updating via iPod Adaptor Cable & Bluetooth

The iPod adaptor cable is the easiest and fastest way to update a mObridge device. iPod adaptor cables can be ordered from www.mobridgeinc.com

The first time you install the iPod update cable to a PC, the driver software will also need to be installed. Windows will normally find the driver software for you and install it automatically.

Once this is completed you are now ready to update the mObridge device.

Follow the instructions below:

- ▶ 01 Open mObridge Update Wizard.
- ▶ 02 Select iPod cable adaptor as the desired update method and push NEXT.
- ▶ 03 If the driver software has been installed correctly and the iPod cable adaptor is connected to the PC it will show up on the next page as FT232R USB UART.
- ▶ 04 Turn the vehicles ignition ON and make sure the radio is on.
- ▶ 05 Make sure the iPod dock cable is connected to the mObridge device.
- ▶ 06 Connect the iPod cable adaptor to the iPod dock cable.
- ▶ 07 Now push the NEXT button.
- ▶ 08 You will then see a screen that says Connecting...
- ▶ 09 Once the wizard has established communication with the mObridge device a screen will appear with two buttons labelled UPDATE and CONFIGURE.
- ▶ 10 Choose the CONFIGURE option to update the mObridge devices settings.

CONTINUED ▶

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Across is a list of options that each configuration tab gives you.

- ▶ Vehicle: Audi, BMW, BMW (Non-MP3), Landrover, Mercedes, Mini, Porsche, SAAB
- ▶ Variant: Europe, North America
- ▶ iPod: Enable/Disable
- ▶ iPod Browse: First Playlists, Numbered Playlists, Full Folder Browsing
- ▶ Bluetooth Pin: DO NOT CHANGE THIS OPTION
- ▶ Auto-connect/disconnect on key-in: Enable/Disable
- ▶ Dummy phonebook for BT control: Enable/Disable
- ▶ BT control via CDC: Enable/Disable
- ▶ Advanced BMW phonebook (for CCC): Enable/Disable
- ▶ Mic Gain: 0-15 (default is 4)
- ▶ Bluetooth Volume: 0-15 (default is 15)
- ▶ Ring Volume: 0-15 (default is 15)
- ▶ Prompt Volume: 0-15 (default is 15)
- ▶ A2DP Volume: 0-63 (default is 63)

- ▶ 11 Once you have chosen the configuration options that are required for your vehicle push the NEXT button at the bottom of the page.
- ▶ 12 The mObridge device will now be updated. The wizard will re-establish its connection with the mObridge device and you can verify that the settings have been updated correctly.
- ▶ 13 Turn vehicle ignition OFF and wait for the MOST bus to go into "sleep" mode*
- ▶ 14 Turn vehicle ignition back ON and verify the correct operation of the mObridge device.

*MOST bus "sleep" times vary from vehicle to vehicle. The easiest way to tell if it in "sleep" mode is to connect an iPod to the mObridge device and wait until it stops charging. Once it has stopped charging the iPod, it is in "sleep" mode.

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