

Version 0.1

mObridge XM Install Notes

For use with the mObridge XM range of products for BMW & Mercedes vehicles.

www.mobridge-usa.com

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Common Install Notes



Important Items ATTENTION



- 1. Never bend fiber optic lines sharply (acutely) or at more than about 2" radius or permanent damage may result to the fiber.**
- 2. Battery power (+) to the unit must be fused by a value of 5A. On a 10A circuit or the radio's circuit is acceptable (safe, OK).**
- 3. Power to mObridge must be constant battery (B+).** It cannot be from a vehicle power plug. Vehicle power plug is not consistently constant power, despite appearances or first apparent behavior. Best location to source power is at the Head Unit's own power or CD changer's power wire (e.g., in Porsche red wire with yellow stripe).
- 4. Power to XMD1000 must be constant battery (B+).** It cannot be from a vehicle power plug. Vehicle power plug is not consistently constant power, despite appearances or first apparent behavior. Best location to source power is at the Head Unit's own power or CD changer's power wire.

5. **If vehicle is intended to be serviced (diagnosed) by the dealer, bypass switch should be put into the ON mode.** It is not plug and play (vehicle power cycle must be done / complete sleep/wake cycle in order to properly initialize MOST bus in mObridge's bypass / non-bypass mode. Bypass mode can be activated by toggling the bypass switch 5-6 times in a five second window. The MOST bus will be broken for two seconds.

6. **MOST bus is not hot "plug and play".** Do not expect system to immediately work after plugging in units and turning on vehicle. If any MOST pieces have been.

7. **BMW Vehicles require coding. mObridge can only supply limited support in the area of coding BMWs, and will not refund if the mObridge unit cannot be fitted due to an inability to code the vehicle.**
For further information on the coding of BMWs please refer to the [Autologic web site](#).

8. **MY2009 and MY2010 vehicles are not supported at this time.**

mObridge Wiring Connection

The mObridge main power connector contains the optical fiber input as well as a 4 pin wiring insert. This 4 pin wiring insert, if inspected closely, has numbering on the pins. Although both the BMW and mObridge share the same connector as the BMW CDC and Sat Radio wiring, the pinning is slightly different. If the user tries to plug the connector directly in without changing the BMW plug wiring into the mObridge unit, the user will burn a fuse out in the vehicle.

For Mercedes vehicles the factory Sat Radio connector has the same pinning as the mObridge interface. There is no need to change this wiring around.

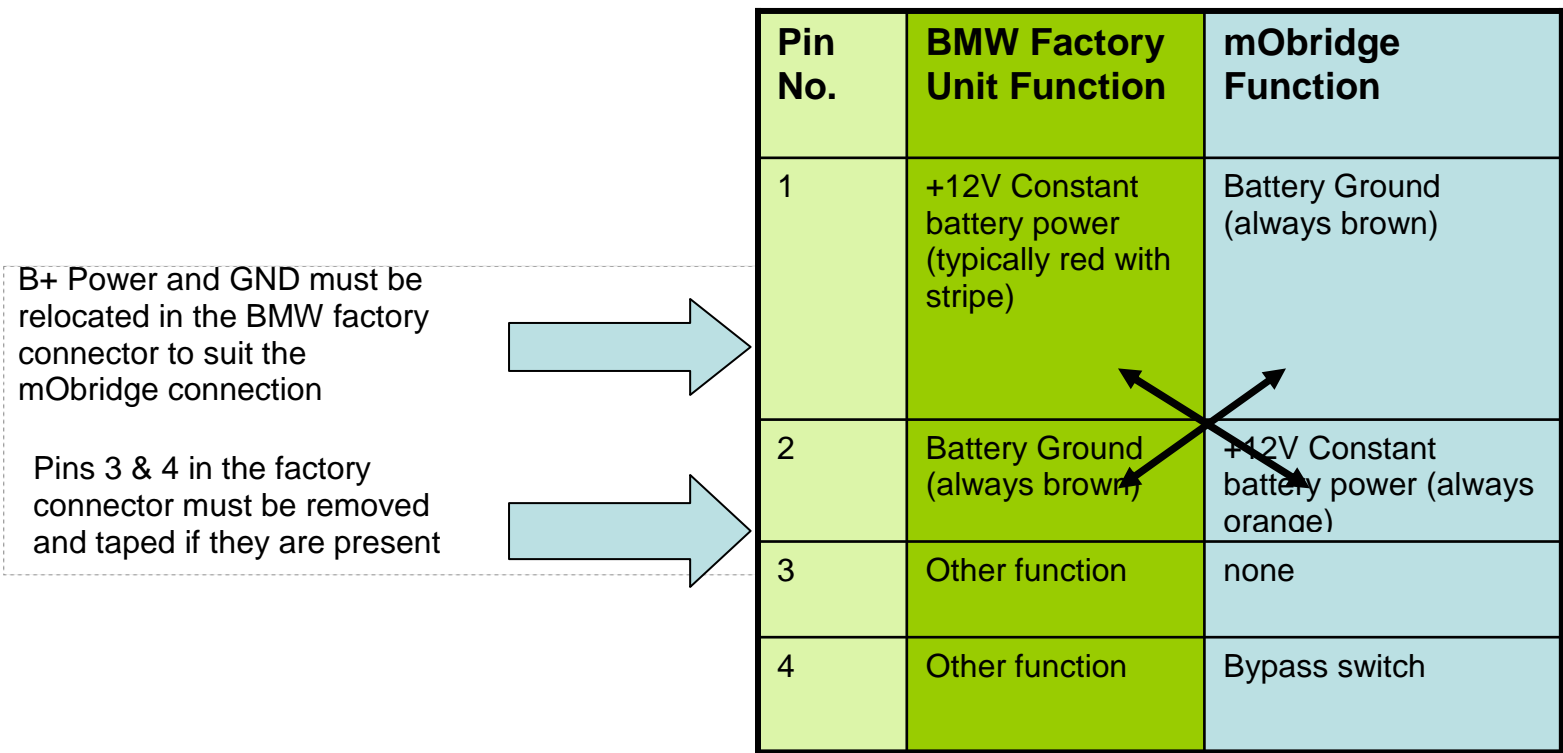


Figure 1 BMW pin out against mObridge pin out

As can be seen from Figure 1, the BMW factory wiring connector needs to have pins 1 & 2 swapped to be compatible with the mObridge wiring.

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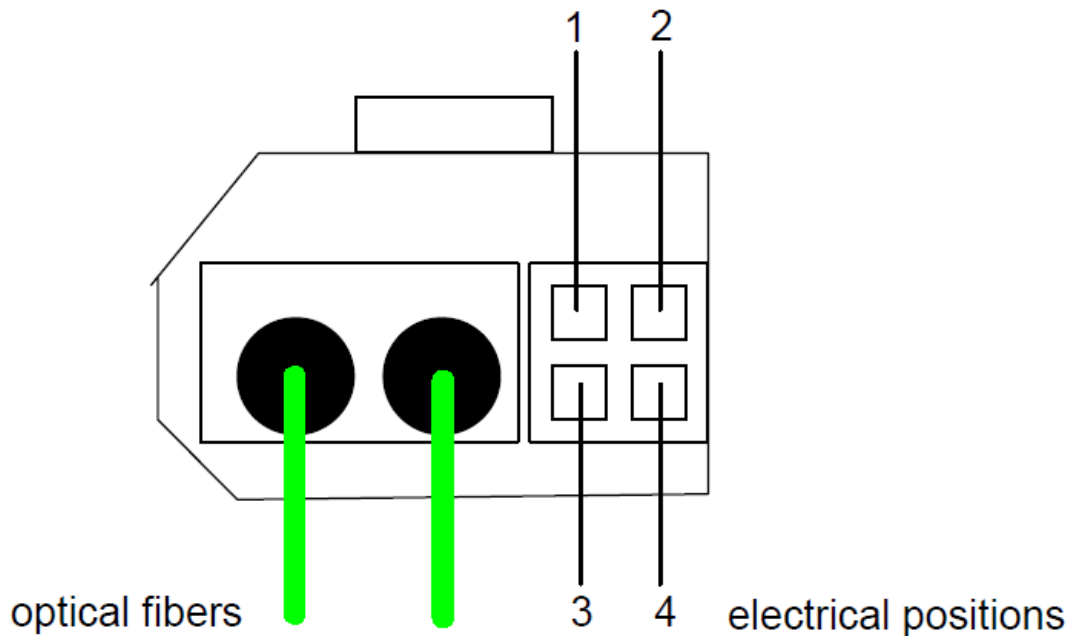


Figure 2 Rear view of the 4 pin connector

Figure 2 illustrates the pin out wiring of the electrical 4 pin insert. For mObridge units pin 1 is always ground and pin 2 is always constant 12V+ supply. This view is from the back of the connector.

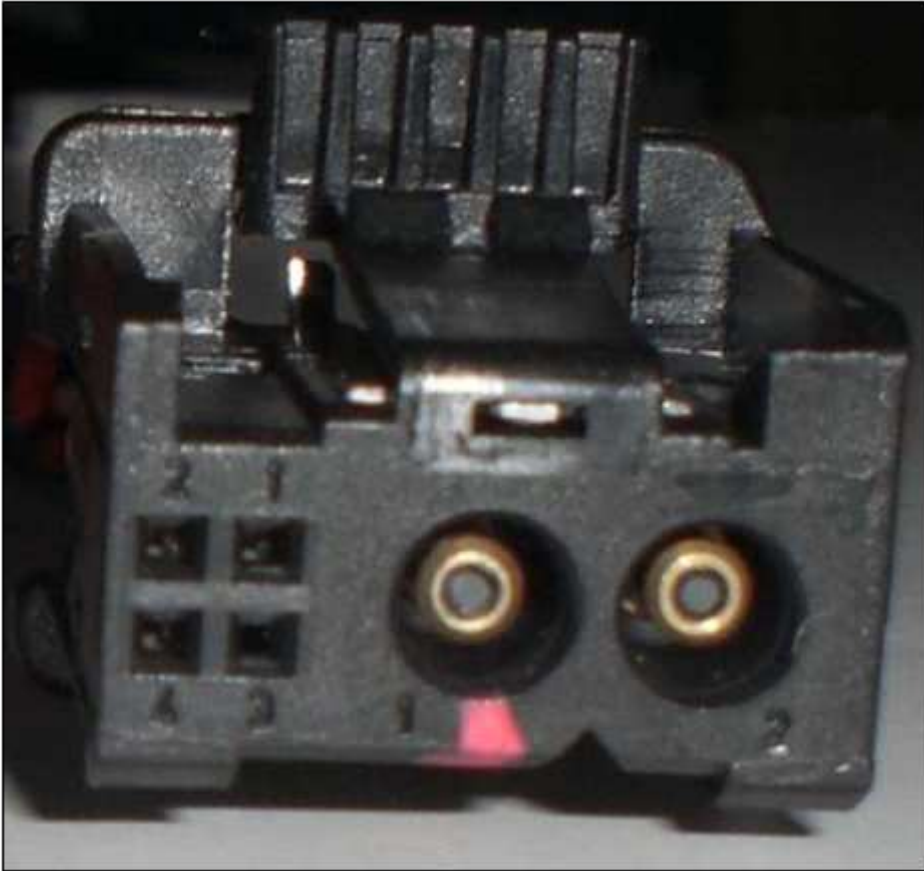


Figure 3 Front view of the 4 pin connector

Figure 3 clearly demonstrates the pin numbering visible on the outside of the connector. Pin 1 is always ground on the mObridge wiring and pin 2 is always constant 12V+ battery on the mObridge connector.

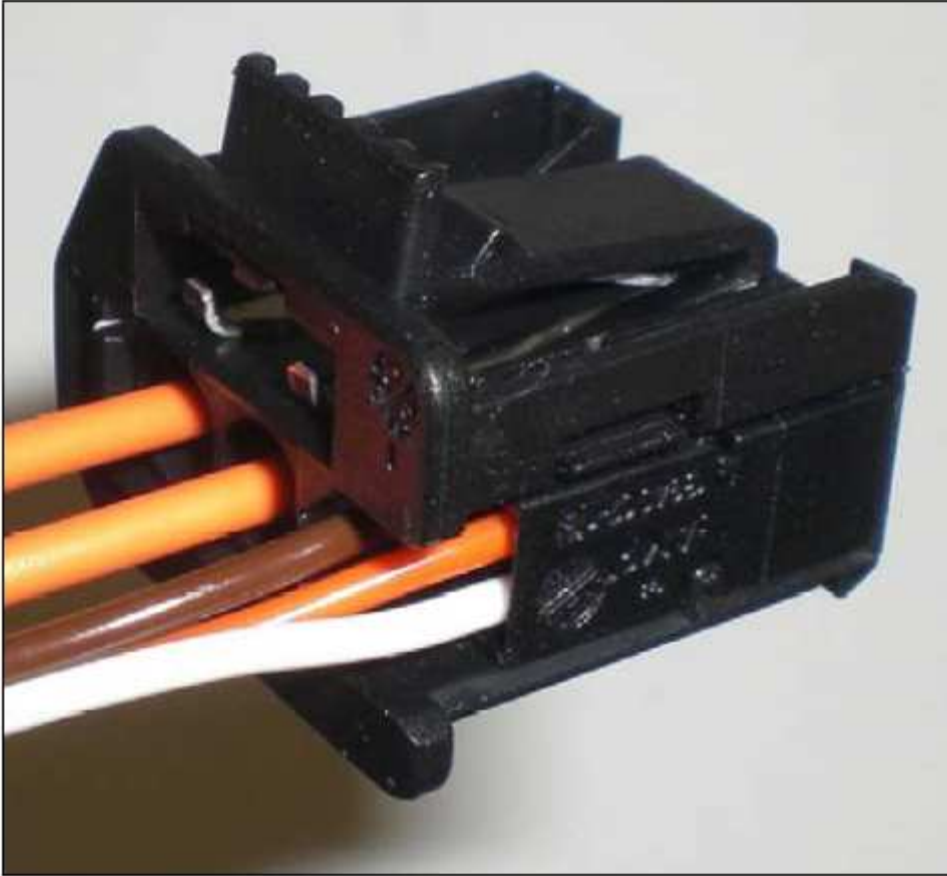


Figure 4 Rear view of fully assembled mObridge connector

Here we have the rear view of the fully assembled 4 position mObridge connector. Note that the brown wire is ground in position 1 and the orange wire is 12V+ battery in position 2.

The white wire is the 'bypass' wire that will be connected to the bypass toggle switch.



Figure 5 Fully disassembled mObridge wiring assembly

Finally we have broken down the complete wiring setup into the MOST connections, 3 wires of the mObridge harness and their connections and the pin numbering of the 4 position insert into the MOST shell.

XMD1000 Kit

The mObridge XM kit contains the following pieces:

- 1) mObridge Audio unit configured for use for Sat Radio
- 2) mObridge power wiring harness
- 3) MOST optical fiber loom patch harness
- 4) 8 pin mini DIN to 8 pin mini DIN extension cable
- 5) 2x RCA audio cable to 3.5mm audio jack
- 6) mObridge XM dongle

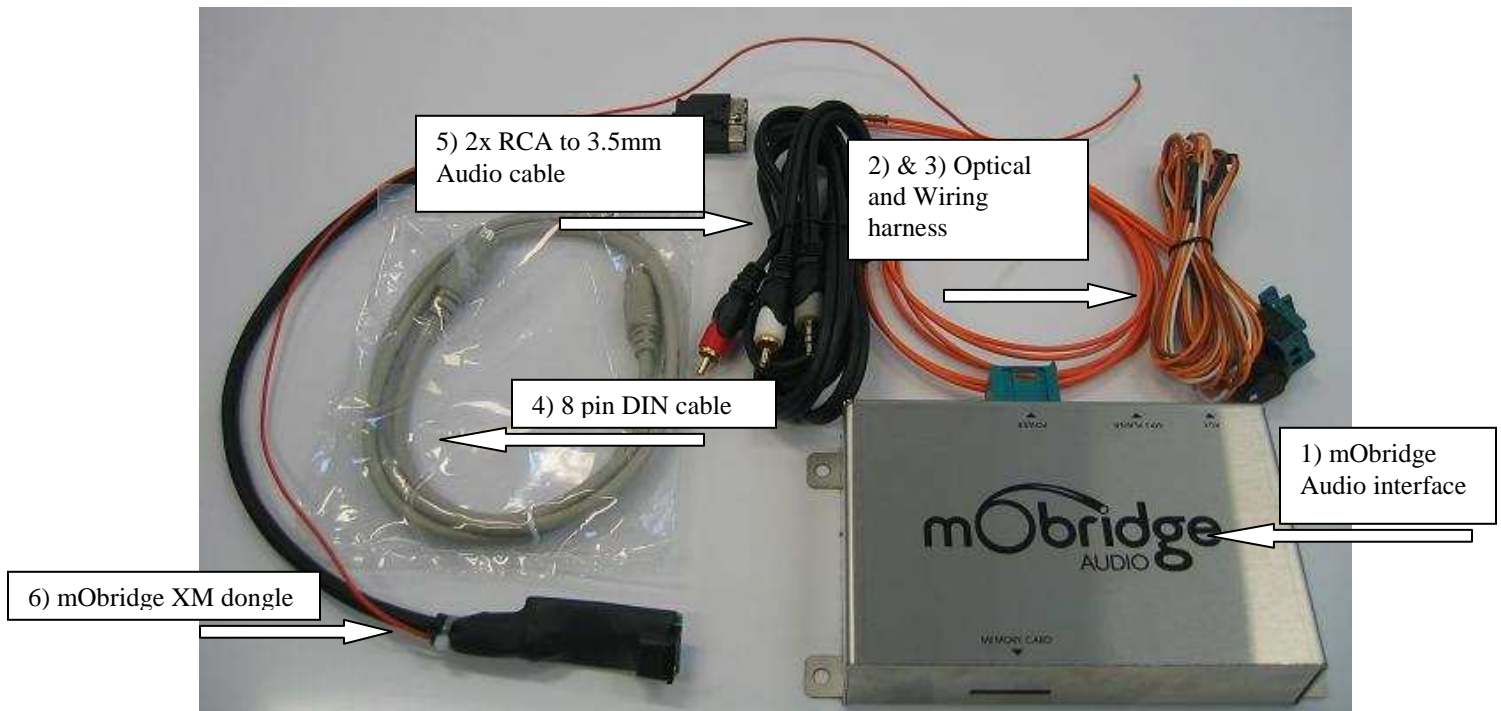


Figure 6 Cable connections to the mObridge Sat Radio interface

Figure 6 contains all the cable connections that are in the XMD1000 kit. Connection is straight forward.

Audio Connection

Audio is connected from the XMD1000 receiver from the 2x RCA audio jacks through to the mObridge unit via the 3.5mm audio jack that plugs into the mObridge interface at the auxiliary audio jack.

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Communication Connection

The communication connection to the XMD1000 receiver is via the 8 pin mini DIN extension cable and a special mObridge dongle cable that contains a small amount of necessary electronics in order to communicate with the mObridge device. The connections are easily recognizable. The large 20 pin rectangle connector plugs into the 'MP3 Player' power on the mObridge unit. The other end of this dongle cable contains an 8 pin mini DIN plug that the extension cable is connected to and from here this plugs into the XMD1000 receiver.

Once the dongle cable and mini DIN cable are in place, communications with the XMD1000 receiver can be established.

The DIN cable plugs are keyed so please do not force the connection otherwise damage may occur.

XMD1000 power connector

The final piece of the wiring that needs to be connected for the XMD1000 receiver to power up is the orange wire from the dongle itself. This is required to be wired to permanent power. DO not worry as you cannot flatten the battery. The control of this wire is done via the mObridge interface power circuit that is only awake when the optical fiber ring is in operation. Once the optical fiber ring has slept then it is impossible to still be powering the XMD1000 receiver.

An easy wiring location for this wire is the same wiring location as the mObridge interface permanent power wire also. This can be taken directly from either the BMW or Mercedes factory plugs.

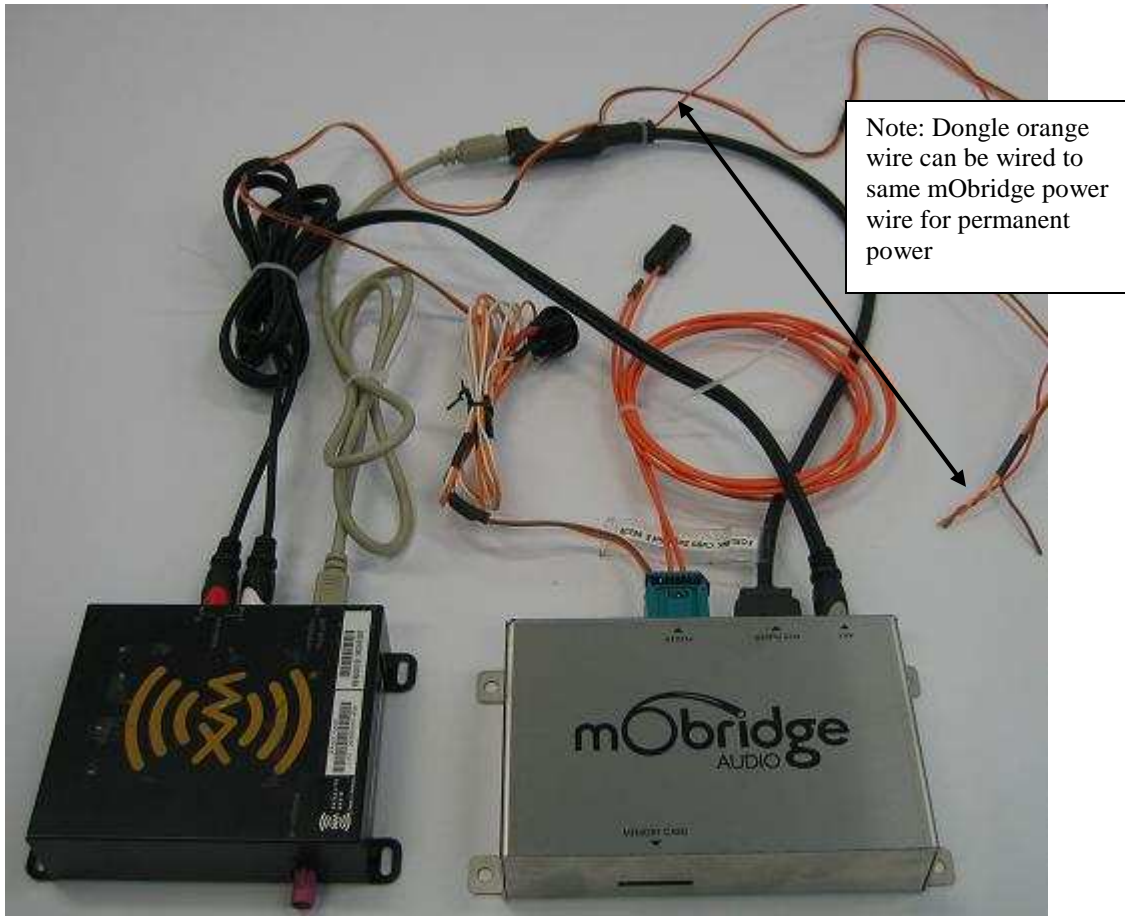


Figure 7 Complete XMD1000 connected to mObridge Audio

Figure 7 illustrates the complete connected XMD1000. The mObridge dongle contains a single orange wire that needs to be wired to permanent power and this can be sourced from the same permanent power source as the mObridge interface is wired to.

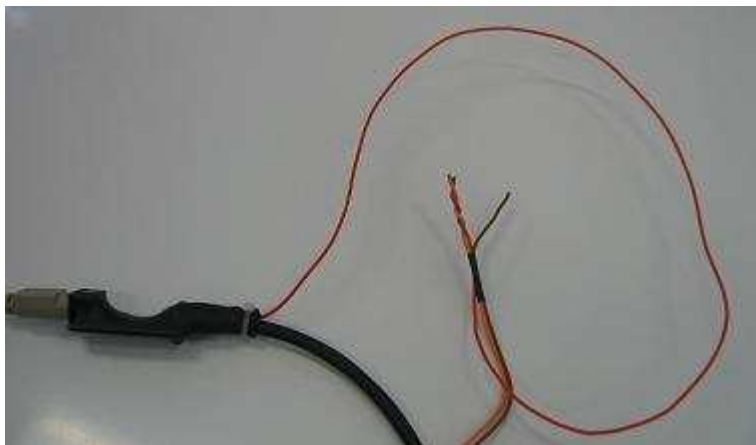


Figure 8 Close up of dongle orange wire connected to mObridge power

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XMD1000 Operating Use

Upon first power up, the XMD1000 receiver will require that it needs to sync with the network to acquire all network channels and categories. Upon a subsequent power down and sleep mode, the channels will be stored so the next power of the unit, all channels will be in sync with the system.

Once the unit is up and running, the head unit of the vehicle will display the list of channels and categories as well as the playing song artist and title (so long as the factory interface supports these two features of artist and title). It is now possible to browse the complete XM channel listing.

The functionality of the XM will be exactly the same as the factory Sirius control. Please refer to your vehicle specific user guide on Sirius control.

Software Version

Channel 184 on the head unit is always the 'mObridge' channel. If the user selects the mObridge channel it is possible to view the artist and title and this contains the software version of the mObridge unit.



Figure 9 mObridge channel with software version

As we can see in figure 7, the Artist contains the Boot loader version and the Title contains the software version of the mObridge unit.

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Bypass Switch

The bypass switch is provided to allow for the mObridge unit to become 'invisible' on the MOST vehicle bus system. The main use of this function is to facilitate dealer services when the diagnostic computer is in use and to ensure the mObridge unit does not interfere with the vehicle diagnostics.

The function can be enabled by toggling this switch 5 times. Once the bypass feature has been activated, the MOST bus will be broken for 2 seconds and the feature cannot be activated again for a further 10 seconds.

Once the bypass switch has been activated, it will remain activated across power cycles until the bypass is de-activated by toggling the switch again 5 times within a 5 second time frame.

Firmware Updates & Vehicle Configuration

The mObridge range of products provides the ability to update the firmware of your unit as well as configure the unit for any vehicle type, vehicle settings and specific vehicle setup. mObridge is constantly striving for perfection in all products as well as adding new features.

The latest firmware can be found on our webpage here:

www.mobridgeinc.com/support/updates

The mObridge Wizard also provides an easy to use step by step guide on vehicle setup and will automatically produce an SD memory card file mObridge.ini allowing users to make changes to the mObridge setup such as vehicle type.

The mObridge Wizard can be downloaded here:

www.mobridgeinc.com/node/109

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Trouble Shooting

Upon first install it is advisable to let the entire car go to 'sleep' for 10 minutes and recover gracefully. Optical fiber equipped vehicles do not take kindly to installs without a graceful startup.

Q) The Head Unit no longer wakes up?

A) Double check the optical connections.

If the head unit can not see the entire loop being completed with light, then the head unit is likely to turn itself off as it has a problem.

See if there is light coming into the mObridge connector and check the arrow on top of the connector itself and make sure light is traveling in the correct direction.

Q) I've installed the unit, the optical ring is working but the unit does not appear in the head unit?

A) Vehicle may need coding.

BMW vehicle in particular require coding to enable options such as the CD changer and Sat radio interfaces. Mercedes does not require coding for the Sat Radio.

Also double check the bypass mode switch.

Q) The XM connection causes erratic wakeup on startup?

A) The mObridge interface is not wired to permanent power.

Check the wiring connection. This needs to be permanent power.

Q) I cannot browse the XM interface?

A) Please refer to the vehicle specific user manual