MiX4000 for Beginners

The goal of this document to give FM3xxx users a quick overview of the differences between a MiX 4000 OBC and FM3xxx OBC and answer some of the frequently asked questions. It does not replace the Installation and User manuals or MiX Fleet Manager help files – it merely gives you a view of the questions asked by the average user.

The Confluence section for “FAQs” can be found at the following link:

[https://confluence.mixtelematics.com/display/MFHF/MiX+4000+-+Frequently+Asked+Questions](https://confluence.mixtelematics.com/display/MFHF/MiX%2B4000%2B-%2BFrequently%2BAsked%2BQuestions)

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# CAN and Serial Scripts

MiX 4000 supports all the serial and CAN scripts that can run on an FM3xxx with the following exceptions:

* Any CAN script with “**TRACER**” in the name. These scripts can only run on an FM Tracer and is not compatible with FM Communicator or MiX 4000.
* The following OBDII scripts (with **Auto Ign** in the name):
	+ [CAN-OBDII Petrol AutoIgn Tracer - V1.3.0.3](https://confluence.mixtelematics.com/display/MFHF/CAN-OBDII%2BPetrol%2BAutoIgn%2BTracer%2B-%2BV1.3.0.3)
	+ [CAN-OBDII Petrol AutoIgn - V1.3.0.3](https://confluence.mixtelematics.com/display/MFHF/CAN-OBDII%2BPetrol%2BAutoIgn%2B-%2BV1.3.0.3)
	+ [CAN: 1FT-EW1C82 Ford\_F150 2016 AUTO IGN v1.0.0.1](https://confluence.mixtelematics.com/display/MFHF/CAN%3A%2B1FT-EW1C82%2BFord_F150%2B2016%2BAUTO%2BIGN%2B%2Bv1.0.0.1)
	+ [CAN-OBDII Petrol AutoIgn Ford F250 - V1.3.0.0](https://confluence.mixtelematics.com/display/MFHF/CAN-OBDII%2BPetrol%2BAutoIgn%2BFord%2BF250%2B-%2BV1.3.0.0)

On the FM Communicator, these script could physically override the Ignition Input of the OBC and therefore they could simulate Ignition by looking at CAN bus activity. This however requires that the OBC stays awake and never go to sleep, which will drain the battery and prevent the vehicle from starting or set off an alarm if the vehicle is switched off (BMW) because the device draws more than 20mA.

*The “Auto Ign” scripts cannot be used on a MiX4000 since the Ignition works differently and the script cannot override the functionality*.

# TACHO Data

|  |  |
| --- | --- |
| On the MiX 4000 timeline Tacho is displayed almost like a “bar code” and not a continuous block as on an FM3xxx. The reason for this is that the MiX 4000 Tacho is send in real-time (while the trip is busy) and in small blocks, while the FM Communicator tacho is only uploaded at the end of a trip in one big block. Therefore, it is only the display that shows it differently on the timeline, the actual Tacho data is identical. |  |

# Positive Drive

|  |  |
| --- | --- |
| On the FM3xxx device there is only 1 Positive Drive and it is configured in the Mobile Device template shown on the right.This positive Drive came out as a wire on the main harness and on the serial port cables and controls everything. (Modem / GPS / Rovi / MiX Vision etc.) |  |
| The MiX 4000 actually has 4 “Positive Drives” and currently they have a single configuration that can be found under the “Mobile Device” as “**Peripheral power management**”Currently this setting will apply to the wire that comes out of the main harness as well as the connections on the serial ports, but in future, that will change and allow the user to configure each one individually. |  |

# Frequency Counters and Input Lines

|  |  |  |
| --- | --- | --- |
| Description | MiX 4000 | FM3xxx |
| On the MIX4000 the Speed is not coupled to F1 anymore and RPM is not coupled to F2 anymore.It is therefore possible to set up F1 and F2 as either frequency counters or normal analogue inputs.You must configure the Speed, RPM and Fuel on separate lines. |  |  |

# Configuring the Immobilizer

On the FM3xxx the immobilizer was not explicitly configured. If you wire it up and insert a Relay, it will work with a “Driver Based” configuration.

|  |  |
| --- | --- |
| On the MiX 4000 you must implicitly configure the Immobilizer on Output 2 (O2)O1 is the same as “FM3xxx Relay Drive” and if you do not use an immobilizer you can also configure O2 as a “Relay Drive Output” |  |

# Fuel Inputs

On the FM3xxx you could get Fuel from a Fuel Flow meter or pulse counter that is configured on a Frequency input, but then you had to use a “No Fuel” CAN script to prevent the CAN from overwriting the fuel values.

|  |  |
| --- | --- |
| On the MiX 4000 the “Fuel Input” is now visible and you can configure the input source (either Frequency Counter or CAN script). If the value is “**Not connected**”, older scripts will default to CAN Fuel.New scripts will offer an explicit configuration item “**J1708/CAN – Fuel (extended device)”** |  |
| In order to get fuel from an EDM Fuel Flow Meter, first configure it on F1 or F2 and then select “**Fuel from EDM**” on the Fuel input. |  |

# DDR and DDM

The MiX4000 does not have separate device drivers and CAN module firmware. It has only one firmware packaged that also contains the CAN functionality.



Even though the drop down box will still list all the DDMs on the server, it is not possible to select or apply any of them to configuration because the CAN2 Bus option is grey out.

# Schedules for configuration uploads and firmware upgrades

Unlike the FM3xxx, the MiX 4000 does not have a scheduler and all configuration uploads and firmware uploads are managed from the “Config Groups page”.

# MiX Vision

The new MiX Vision MVR 2214 ships with a serial cable that plugs directly into the serial port of the MiX4000. This means you do not have to use an extra “Twin Serial Harness” like on the FM3xxx and it is no longer necessary to connect the “Green Wire” to Positive Drive. The Positive drive is on the serial cable connector that controls the MiX Vision.

If you want to use the MiX Vision MVR2214 with an FM3xxx communicator, you also need an optional converter cable

* [A0005MT](https://confluence.mixtelematics.com/download/attachments/8228286/033-00136%206way%20to%20db9%20converter.pdf?version=1&modificationDate=1526299587757&api=v2) - MiX Vision MK46 Serial to DB9 converter
* [A0006MT](https://confluence.mixtelematics.com/download/attachments/8228286/033-00135%20%28006%29%206way%20to%2010way%20molex%20converter.pdf?version=1&modificationDate=1526299588191&api=v2) - MiX Vision MK46 Serial to 10-way Molex Converter

# Frequently Asked Questions

| **Question No** | **Question** | **Answer** |
| --- | --- | --- |
| **1.** | Where can I find the Marketing Material for the MiX 4000?  | We no longer create brochures for our onboard computers. These are simply HW enablers that support the delivery of our various solutions (for which we do have marketing material). All MiX 4000 product material is available on Confluence. |
| **2.** | Does the MiX 4000 automatically PIN SIMs that require it to have a PIN? | Yes – it is a standard feature of all new HW platforms (MiX 2000/4000/6000). Refer to the Product Information Guide (PIG) for more info. |
| **3.** | Does the MiX 4000 support MiX Vision?  | Yes |
| **4.** | Will the MiX 4000 support MiX Rovi II?  | There will be a different approach to supporting in-cab display devices that leverages the MiX 4000’s onboard Bluetooth capability, and newer connected Android devices (Rovi-X). Details remain TBD. |
| **5.** | Will the MiX 4000 support Iridium SatComms?  | It is technically possible to implement and will be supported in a future release.  |
| **6.** | What is the cost price of the MiX 4000?  | Refer to the Price List |
| **8.** | Is the MiX 4000 certified for use in Australia and Brazil?  | CSO provides general certification for CE, E11 and PTCRB. Regional certification is the responsibility of each RSO.ANATEL and Australian certification is completed. |
| **9.** | Will the MiX 4000 work with the new global SIM from Aeris?  | Yes it will work. It must be noted that the MiX 4000 requires a nano SIM, so when ordering SIMs form Aeris for use in a MiX 4000, nano SIMs should be ordered specifically. |
| **10.** | Will the MiX 4000 support a driver white-list / black-list option? | Yes in future releases, but it will work different than the current implementations. MiX 4000 will be able to work with a Bluetooth Driver ID that can store more information and attributes than a Blue Plug. |
| **11.** | Does the MiX 4000 support driver ID via serial device? | Yes. |
| **12.** | Does the MiX 4000 supports VSS and analogue RPM signal? | Yes, The calibration is via MiX Tech Tool and not via calibration plugs. |
| **13.** | Is there an MLC training module for MiX 4000? | The following is in place:* A MiX 4000 Community on the MLC (similar to the [DynaMiX Community](http://training.mixtelematics.com/course/view.php?id=202))
* All relevant training, installation and product material is available through the MiX 4000 Community.
* The online MiX 4000 Assessment consists of 15-20 questions relating to the material available in the MiX 4000 community. Who takes the assessment and whether they pass/fail will be recorded by the MLC
* Over time, the MiX 4000 community will grow in content and we can adapt the assessment as and when necessary.
* The CAN Compatibility List is also available from MiX4000 page.
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| **14.** | What settings and operational conditions were the MiX 4000 tested with that supports the claim of the internal backup battery supporting “24 hours in the absence of vehicle battery power, dependent on operational conditions”? | Refer to [Application Note - Battery Power Management on the MiX 4000](https://confluence.mixtelematics.com/download/attachments/15901315/Application%20Note%20-%20Battery%20Power%20Management%20on%20the%20MiX%204000.pdf?version=1&modificationDate=1488455925102&api=v2) |