

Test Instructions

Document Title:	MiX 2000 MK4: Final Test		
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Document Approval

Production Testing:	Winston Arendse	
Date:	<u>25th July 2025</u>	Signature: _____



1. Overview

The purpose of this document is to define the procedures required to perform production testing on the MiX 2000 MK4 PCB Sub-Assembly and Electronic Unit Sub-Assembly:

Refer to the latest Assembly Family Tree for details regarding the PCB Sub-Assemblies and higher-level assemblies.

Attention: Observe proper ESD handling and storage precautions for handling electrostatic-sensitive devices while performing the following procedures.

1.1. Abbreviations

PCB	Printed Circuit Board
UUT	Unit Under Test
EU	Electronic Unit
GSM	Global System for Mobile Communications
PC	Personal Computer
UPS	Uninterruptible Power Supply
BoN	Bed of Nails
SA	Sub-Assembly

1.2. Test Equipment / Jig and Fixtures / Tools

See Appendix for images of the below-mentioned items:

- [A] MiX 2000 MK4 Final Test PC
- [B] Programmable DC Power Supply
- [C] Label Printers
- [D] MiX 2000 MK4 Final Test Bed-of-Nails
- [E] UPS

1. Final Test Procedure

1.1. Test Description

This test will be performed by the TestStand PC test software. The user will be required to insert the UUT to the Final Test BoN and start the appropriate PC test.

1.2. Pre-test Requirements

1.2.1. Ensure that the following items are powered up (NOTE: Switch these on if they are not already powered up):

- UPS
- MiX 2000 MK4 Final Test PC
- Programmable DC Power supply
- UPS
- MiX 2000 MK4 Final Test BoN
- Label Printer

Allow 5-minutes for all the equipment to power up and enter a ready state before proceeding with the Windows log in.

1.2.2. Windows should automatically log into the Tester profile. In the event that the Windows log-in screen, however, does appear, use the following details to log into Windows:

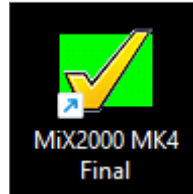
- Domain: MIX
- Username: MiXTestOperator
- Password: AccOp123!

Wait 3-minutes for Windows to completely log in before launching the MiX 2000 MK4 Final Test Application.

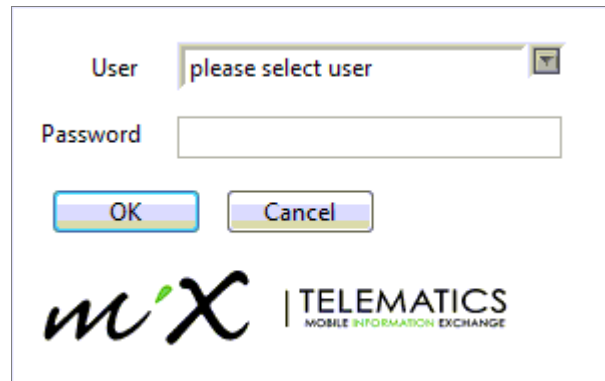
1.2.3. NOTE: If/When shutting down Windows after all testing has been completed; first ensure that all test software has been completely exited. DO NOT "force shutdown" or "force close" any test software. Contact MiX Telematics Test Engineering in the event that the test software stops responding.

1.3. Test Procedure

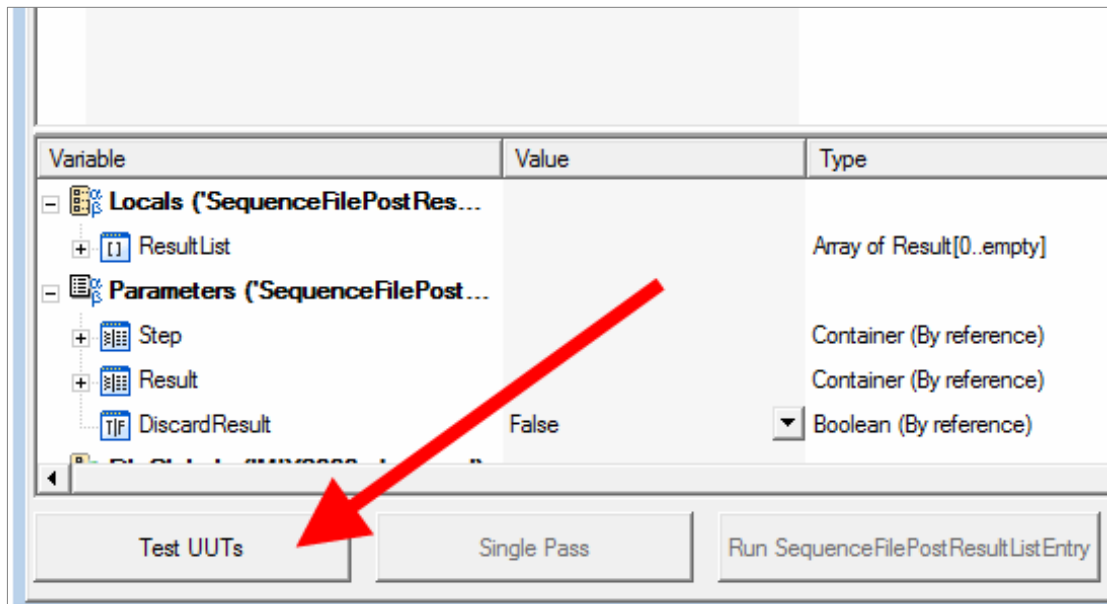
- 1.3.1. On the Test PC, double-click the MiX2000 MK4 Final Test icon located on the desktop. The test application will launch and a Login dialog box will appear.



- 1.3.2. Select the appropriate User name from the drop-down menu. Enter your assigned Password and then click OK.

A login dialog box with a white background. It contains a "User" label, a drop-down menu with the text "please select user", a "Password" label, and a text input field. Below these are "OK" and "Cancel" buttons. At the bottom is the "mX | TELEMATICS" logo with the tagline "MOBILE INFORMATION EXCHANGE".

- 1.3.3. Click the "Test UUTs" button in the lower left corner of the window to initialise the test sequence.

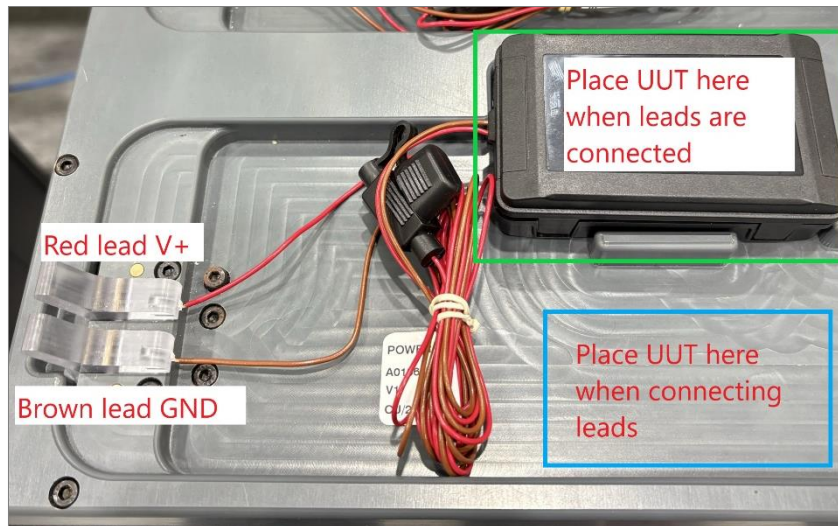
A screenshot of the test application window. It features a table with columns "Variable", "Value", and "Type". The table contains sections for "Locals" and "Parameters". A red arrow points to the "Test UUTs" button in the bottom left corner. Other buttons include "Single Pass" and "Run SequenceFilePostResultListEntry".

Variable	Value	Type
Locals ('SequenceFilePost Res...)		
ResultList		Array of Result[0..empty]
Parameters ('SequenceFilePost...)		
Step		Container (By reference)
Result		Container (By reference)
DiscardResult	False	Boolean (By reference)

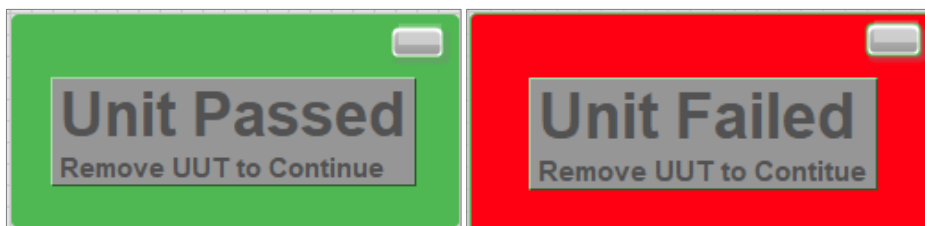
1.3.4. The user will be requested to insert the UUT into the test jig.



1.3.5. Connect the UUT power supply leads using the clips on the BoN, ensure correct polarity. Place the UUT into the cradle on the Final Test BoN. The test will begin automatically once the camera detects the unit.



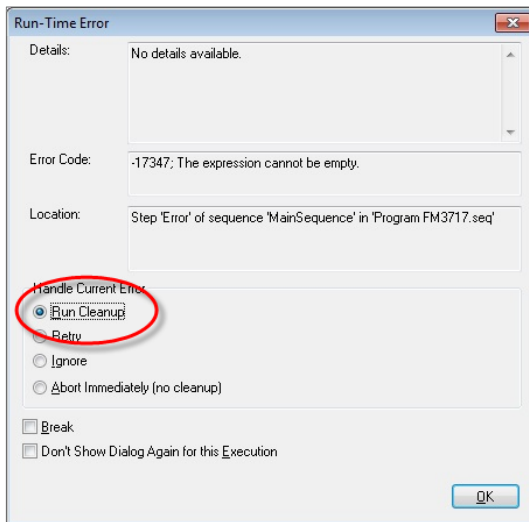
1.3.6. A PASS/FAIL prompt will be displayed once the test has completed.



- **If the test PASSED:** The result is written to the test results database after which the Label Printer will automatically print one Product Housing Label. Unclip the leads and remove the UUT from the BoN. NOTE: Refer to the Factory Work Instruction for the position and placement of the labels. Place the UUT in the appropriate PASS tray.
- **If the test FAILED:** Unclip the lids and remove the UUT from the BoN and retest the UUT. If it fails a second time, remove the UUT from the BoN and refer to the appropriate factory work instruction for further actions.

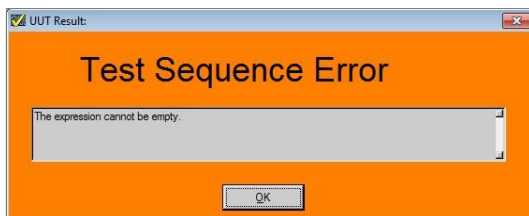
2. Troubleshooting

2.1.1. In the event that an error occurs during the test sequence, the following steps shall be followed:

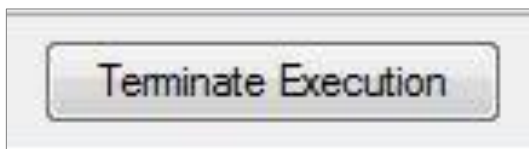


If an unrecoverable error occurs within an individual test sequence, a "Run-Time Error" window will appear.

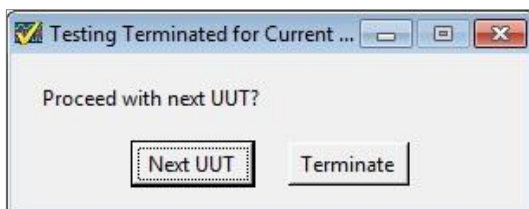
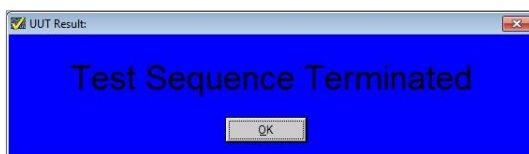
- Select "Run Cleanup" under the Handle Current Error heading and click OK. This will execute a test software cleanup to recover the test sequence.
- Once the CleanUp has been completed, a "Test Sequence Error" message will appear. Click OK to restart the test sequence.
- Remove the UUT from the test jig.
- If the fault persists after three consecutive tries, exit all test software and restart Windows.



2.1.2. If a test sequence hangs for some reason and the user wishes to terminate the test sequence, the following steps shall be followed:



- Click the "Terminate Execution" button to abort the test sequence.
- Wait until the "Test Sequence Terminated" message appears before removing the UUT from the Test Jig. Click OK.
- A prompt will appear asking whether the user would like to proceed with the next UUT. Clicking "Next UUT" will restart the test procedure.

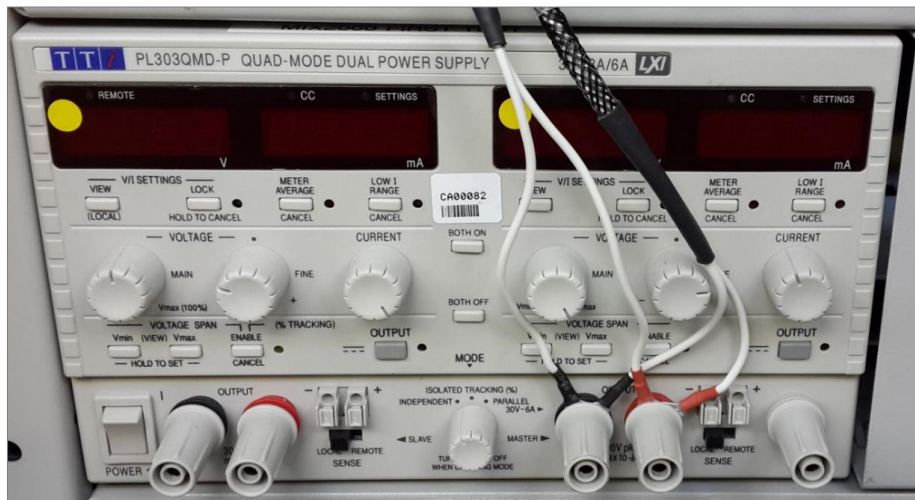


3. Appendix

[A] MiX 2000 MK4 Final Test PC



[B] Programmable DC Power Supply



[C] Label Printer



[D] MiX 2000 MK4 Final Test Bed-of-Nails



[E] UPS

