

	<p>Quartzdyne, Inc. A Dover Company 4334 W. Links Drive Salt Lake City, Utah 84120-8202 USA Tel (801) 266-6958 Fax (801) 266-7985</p>	<p>QCOM Test Procedure</p>	<p>D30-352</p>	<p>A4</p>
---	--	-----------------------------------	-----------------------	------------------

DOCUMENT HISTORY:				
REV	ECO	DATE	AUTHOR	DESCRIPTION
A0	EC2514	06/21/2011	Noji Ratzlaff	Initial release
A1	EC2868	9/29/2011	D. Sealey	Specify use of analog/frequency transducer for testing
A2	EC3140	01/05/2012	D. Sealey	Add serial-number verification step
A3	EC3239	04/11/2012	D. Sealey	Updates to match GUI changes
A4	EC3595	08/15/2012	Noji Ratzlaff	Updated to include missing steps

1.0 PURPOSE/SCOPE

The QCOM module is a piece of hardware used to connect a computer with a transducer through a USB port. The tester will use the operations designed into the QCOM software to test the module, according to the steps outlined in this document.

2.0 SAFETY
N/A

3.0 CHEMICALS
N/A

4.0 FIXTURES
N/A

5.0 TOOLS
N/A


6.0 EQUIPMENT

- 6.1 1 known-good and calibrated Analog/Frequency transducer and accompanying data cable
 - To emphasize, the transducer must**
 - **Be a frequency (not digital) type**
 - **Have passed calibration**
 - **Be fully operational**
- 6.2 1 150-ohm test resistor plug
- 6.3 1 503-ohm test resistor plug
- 6.4 1 computer with Windows 7, Windows 8, Windows XP, Windows Vista, or Windows Server installed, including
 - 2 GB memory
 - 2 GB minimum hard disk drive space available
 - QCOM software and driver installed (the software will ensure the memory and disk space requirements are satisfied)
 - Must be connected to the Quartzdyne internal network
- 6.5 Type A male-to-Type B male USB cable



7.0 MATERIALS
N/A

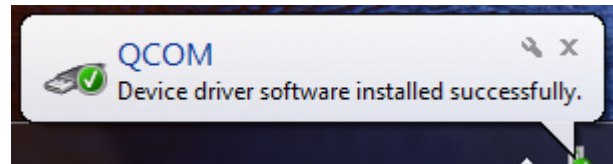
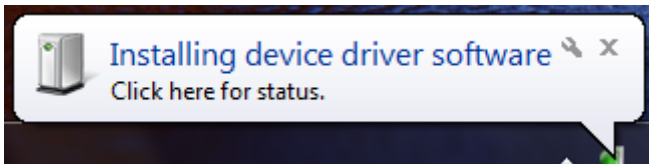
<p>The information contained herein is confidential and proprietary and may not be reproduced, used, or disclosed without prior written consent by Quartzdyne, Inc.</p>	<p>Page 1 of 6</p>	<p>Source: \source\proc\d30\d30-352a4.docx</p>
---	--------------------	---

	<p>Quartzdyne, Inc. A Dover Company 4334 W. Links Drive Salt Lake City, Utah 84120-8202 USA Tel (801) 266-6958 Fax (801) 266-7985</p>	<p>QCOM Test Procedure</p>	<p>D30-352</p>	<p>A4</p>
---	--	-----------------------------------	-----------------------	------------------

8.0 PROCEDURE

<p>8.1 Log onto the computer</p>	<p>8.1.1 Turn on the computer or make sure it's already on.</p> <p>8.1.2 Log in as flooruser with the password of flooruser.</p>	<p>8.1 Sets up the operating environment</p>
----------------------------------	--	--

<p>8.2 Connect the transducer to the computer through the QCOM module under test</p>	<p>8.2.1 Connect one end of the USB cable to a USB port on the computer.</p> <p>8.2.2 Connect the other end of the USB cable to the QCOM module.</p> <p>8.2.3 Wait until the Installing device driver software and QCOM Device driver software installed successfully message bubbles disappear completely. If the QCOM bubble doesn't disappear after thirty seconds, move the mouse, and the bubble should disappear.</p>	<p>8.2 Provides the hardware and driver connections between the QCOM module and the computer</p>
--	--	--



<p>8.3 Start the QCOM software</p>	<p>8.3.1 Connect your transducer to the QCOM module.</p> <p>8.3.2 Double-click the QCOM icon on the computer desktop.</p> <p>8.3.3 The Installing device driver software and QCOM Device driver software installed successfully message bubbles will appear a second time; wait for them to disappear completely again.</p>	<p>8.3 Starts the QCOM software running</p>
------------------------------------	---	---



Quartzdyne, Inc.

A Dover Company
4334 W. Links Drive
Salt Lake City, Utah 84120-8202 USA
Tel (801) 266-6958 Fax (801) 266-7985

QCOM Test Procedure

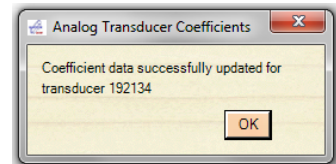
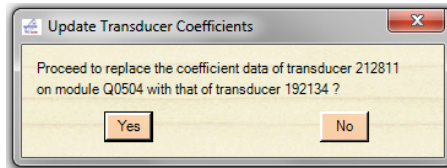
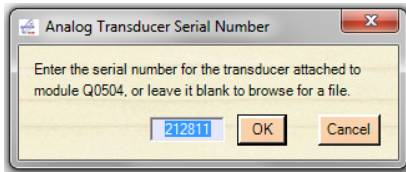
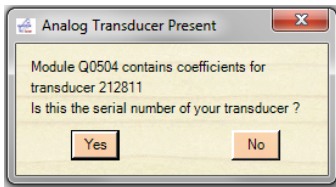
D30-352

A4

8.4 Load the appropriate coefficient data

- 8.4.1 When the **Analog Transducer Present** window appears, click **No**.
- 8.4.2 In the **Analog Transducer Serial Number** window enter the actual serial number of your transducer and click **OK**.
- 8.4.3 When the **Update Transducer Coefficients** window appears, click **Yes**.
- 8.4.4 When the **Analog Transducer Coefficients** window appears, click **OK**.

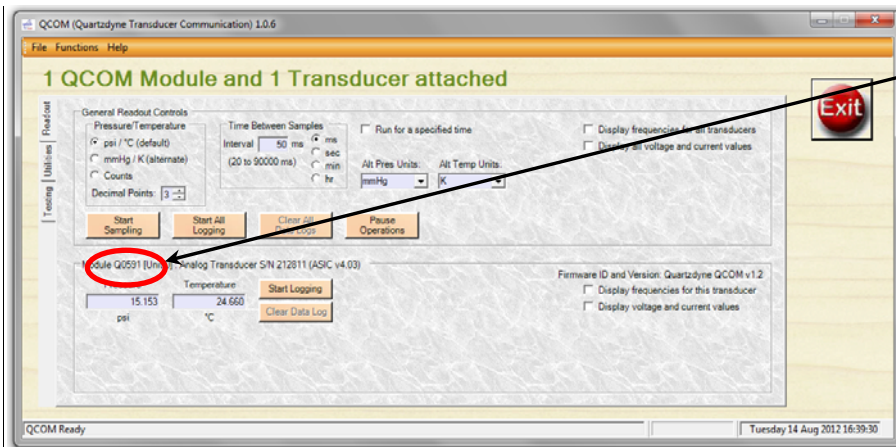
8.4 Installs the correct coefficient data into both the software memory and the QCOM memory



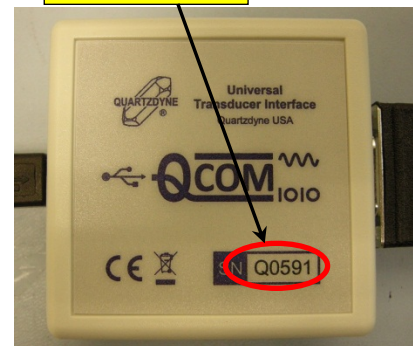
8.5 Verify the module serial number

8.5.1 Ensure the module serial number displayed on the computer screen matches serial number on the QCOM box label.

8.5 Ensures the QCOM module is stamped with the correct serial number



Make sure the serial numbers match!





Quartzdyne, Inc.
 A Dover Company
 4334 W. Links Drive
 Salt Lake City, Utah 84120-8202 USA
 Tel (801) 266-6958 Fax (801) 266-7985

QCOM Test Procedure

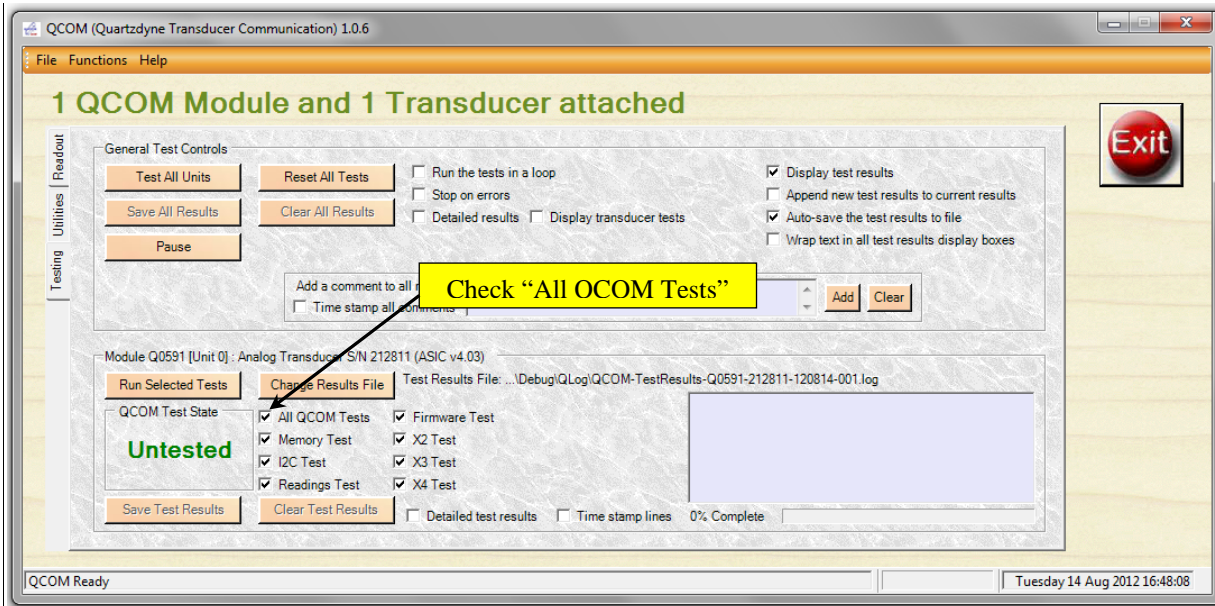
D30-352

A4

8.6 Set up the software to run the tests

- 8.6.1 Click the **Testing** tab.
- 8.6.2 In the lower section check **All QCOM Tests**.

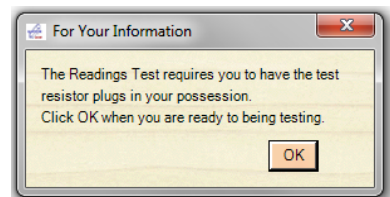
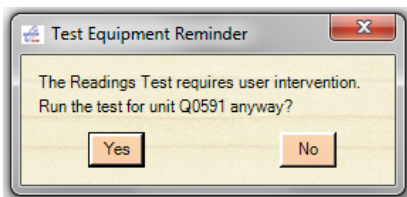
8.6 Prepares the software to run the appropriate tests for the QCOM module



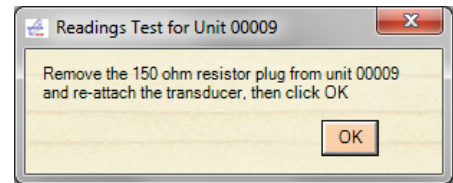
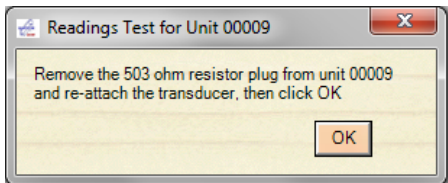
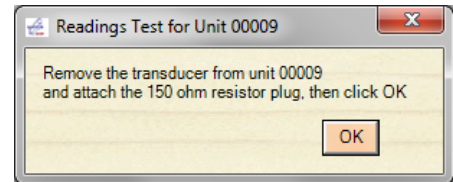
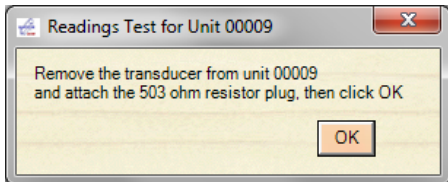
8.7 Begin running the tests

- 8.7.1 Click **Run Selected Tests**
- 8.7.2 When the **Test Equipment Reminder** window appears, click **Yes**.
- 8.7.3 When the **For Your Information** window appears, click **OK** if you have the test resistor plugs ready for you to use.

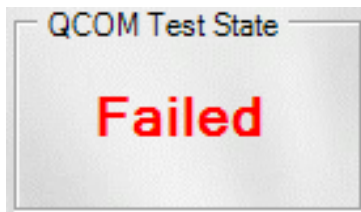
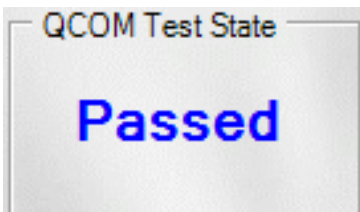
8.7 Warns the tester of the impact of user-intervention by subsequent tests



<p>8.8 Swap the transducer with the resistor plugs, as required</p>	<p>8.8.1 Follow the instructions to remove and replace the 503 ohm resistor plug.</p> <p>8.8.2 Follow the instructions to remove and replace the 150 ohm resistor plug.</p>	<p>8.8 Instructions for user-intervention during the Readings Test</p>
---	---	--



<p>8.9 Conclude the tests</p>	<p>8.9.1 If all the tests passed, the QCOM Test State box will read Passed.</p> <p>8.9.2 If one or more of the tests failed, the QCOM Test State box will read Failed.</p> <p>8.9.3 If all the tests passed but the QCOM Test State box reads Incomplete, all the tests that were selected had passed, but not all required tests were selected.</p> <p>8.9.4 Click the large Exit button, then the smaller Exit button to exit the QCOM software completely.</p>	<p>8.9 Indicates how the software displays the final test results, and ensures the hardware is prepared to run subsequent tests</p>
-------------------------------	---	---





Quartzdyne, Inc.
A Dover Company
4334 W. Links Drive
Salt Lake City, Utah 84120-8202 USA
Tel (801) 266-6958 Fax (801) 266-7985

QCOM Test Procedure

D30-352

A4

QCOM (Quartzdyne Transducer Communication) 1.0.6

File Functions Help

1 QCOM Module and 1 Transducer attached

Testing Utilities | Readout

General Test Controls

Test All Units Reset All Tests Run the tests in a loop Display test results

Save All Results Clear All Results Stop on errors Append new test results to current results

Pause Detailed results Display transducer tests Auto-save the test results to file

Wrap text in all test results display boxes

Add a comment to all results: Add Clear

Time stamp all comments

Module Q0591 [Unit 0]: Analog Transducer S/N 212811 (ASIC v4.03)

Run Selected Tests Change Results File Test Results File: ...Debug\QLog\QCOM-TestResults-Q0591-212811-120814-001.log

QCOM Test State

Passed

All QCOM Tests Firmware Test

Memory Test X2 Test

I2C Test X3 Test

Readings Test X4 Test

Save Test Results Clear Test Results Detailed test results Time stamp lines Completed

Readings Test... Passed
Firmware Test... Passed
X2 Test... Passed
X3 Test... Passed
X4 Test... Passed
Tests Final Result: Passed
Total test time elapsed: 0 days 0 hours 2 minutes 39.294 sec

Tests have concluded Tuesday 14 Aug 2012 17:07:42