



**TELEDYNE TEST SERVICES**

Everywhereyoulook™

Valve Diagnostic Testing and Maintenance

# Seventh Annual QUIKLOOK Users Group Meeting

August 14 & 15, 2013



Presented by: **Eric A. Solla**



**TELEDYNE TEST SERVICES**

Everywhereyoulook™

Valve Diagnostic Testing and Maintenance

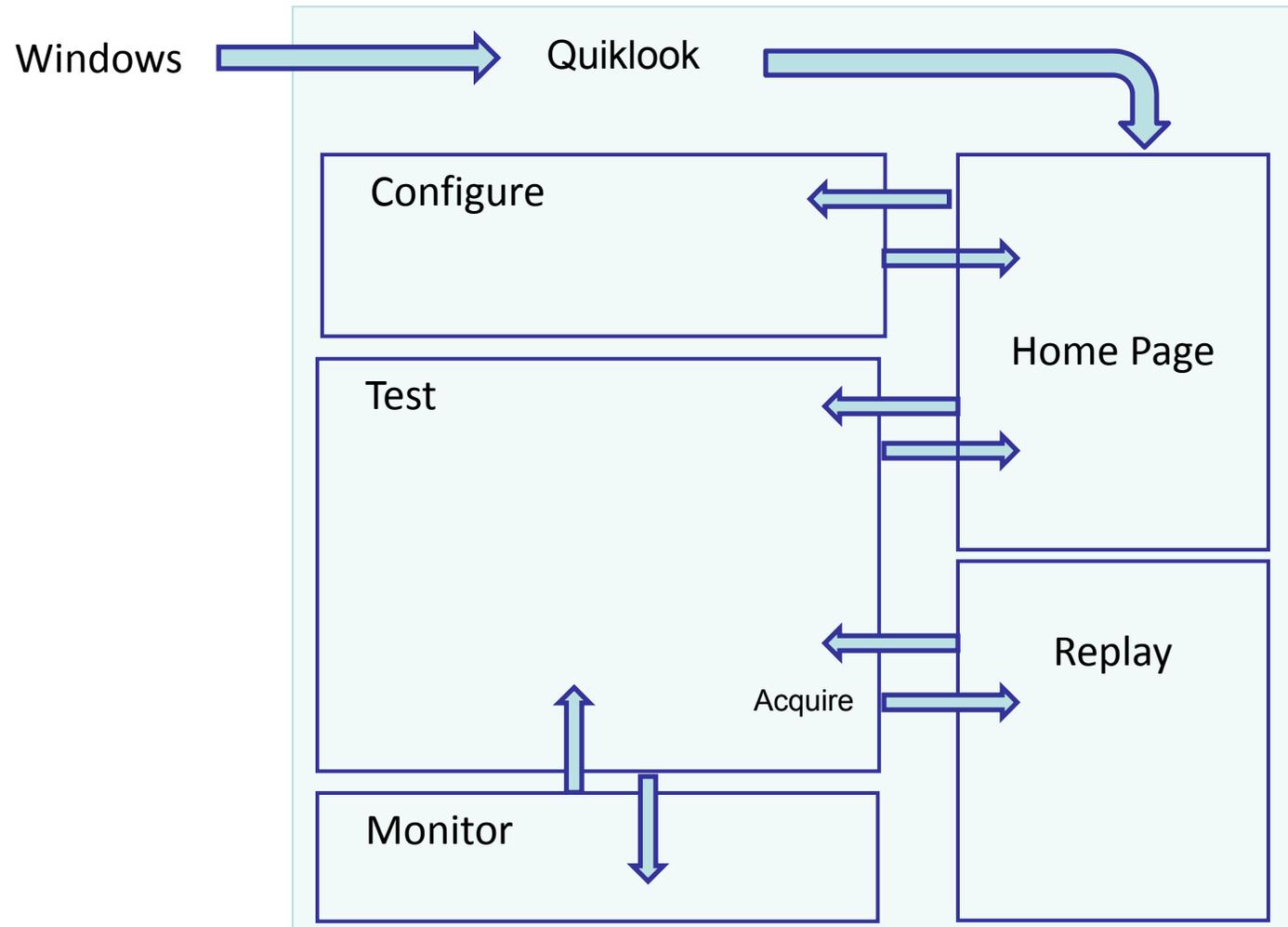
# QUIKLOOK 3 SOFTWARE

## New Program Features

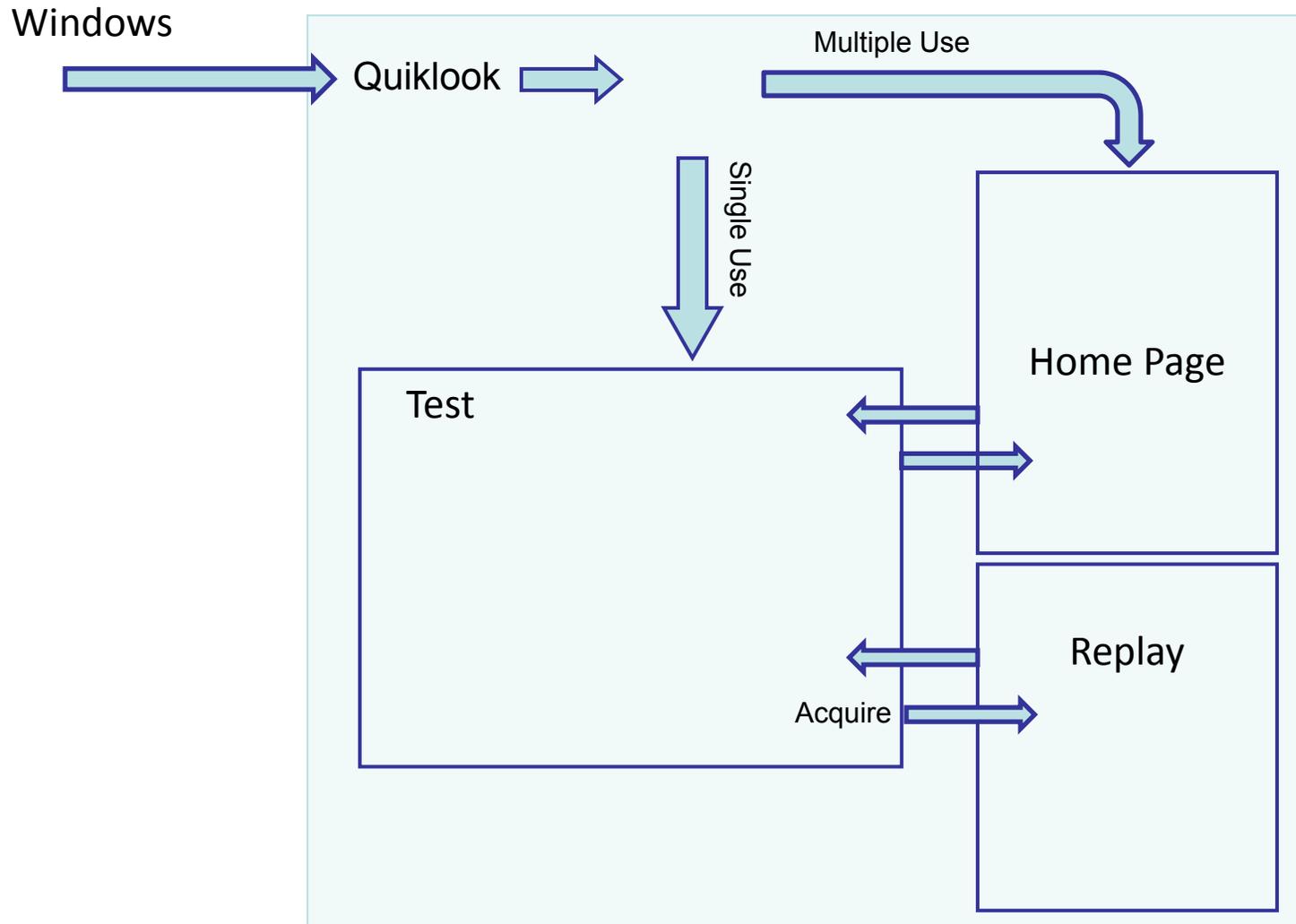
Software Engineer

Eric A. Solla

# QUIKLOOK II Software



# QUIKLOOK 3 Software



# QUIKLOOK 3 Software Acquisition Screen

QUIKLOOK MOV - Valve ID Undefined

File Define Graph Trigger Mode View MOV Settings Channels Edit Sensors Return Help

1	Current	<b>2.986 (Amps)</b>	<input checked="" type="checkbox"/> Graph	200 Amp Probe
2	Thrust	<b>1.002 (Lbs)</b>	<input checked="" type="checkbox"/> Graph	QSS - Thrust
3	Torque		<input checked="" type="checkbox"/> Graph	
4	CST		<input checked="" type="checkbox"/> Graph	
5	Open		<input type="checkbox"/> Graph	
6	Close		<input type="checkbox"/> Graph	
7	ByPass		<input type="checkbox"/> Graph	
8	SprPack	<b>0.0001 (In)</b>	<input type="checkbox"/> Graph	

Primary Name

Test Number  Date

**Start**

Secondary Name

Description

Title

Comment

Comment

Technician

Type of Test

Condition

Direction

Stroke

AF / AL

Max Seconds

Limits

Thrust/Torque

Open TSS

Close TSS

Display Time

Acquisition Rate

Additional Comments

**Excitation Voltage OK**

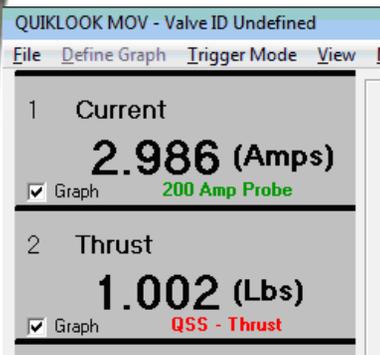
	Va 9
<input type="checkbox"/> Graph	
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Vc 13	
<input type="checkbox"/> Graph	
Ic 14	
<input type="checkbox"/> Graph	
15	
<input type="checkbox"/> Graph	
16	

C:\Test Data\QLIIN Fully Charged 8/7/2013 2:56 PM

# QUIKLOOK 3 Software

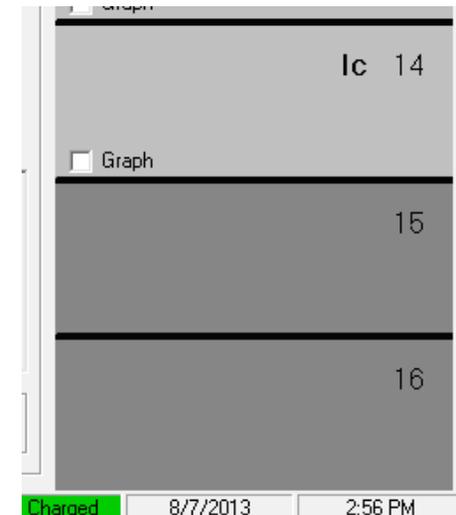
## TEDS – Transducer Electronic Data Sheet

IEEE Standard - IEEE P1451.4/2.0



- All Sensors will have a TEDS Chip
- TEDS Chip may contain all - none of the configuration data.
- When sensor is present Channel Values and Units Appear
- Sensor Description is Shown
  - Green – All sensor data is on chip no further configuration is necessary
  - Red – Some configuration data is missing. Configuration should be reviewed
  - Black – Configuration has been reviewed

- Dark Gray Box – Channel Inactive
- Light Gray Box - Channel Active
- Red Box – Channel is Over Ranging
- Channel Name Shows for Active Channels
- Channels without Sensors will Not be Acquired and will be Turned Off



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Additional Comments

Excitation Voltage OK

Va 9  Graph

Ia 10  Graph

Vb 11  Graph

Ib 12  Graph

Vc 13  Graph

Ic 14  Graph

15  Graph

16  Graph

C:\Test Data\QLIIN

Fully Charged 8/7/2013 2:56 PM

# QUIKLOOK 3 Software

## Battery Status

- Run Time to Empty
- Battery Status:
  - Voltage
  - Current
  - Charge
  - Capacity
  - Temperature

Current	-2.511	Amps
Power	40.7	Watts
Avg Charge	99 %	
Status	Discharging	
Run Time to Empty	4 hrs 53 mins	
Battery	1	2
Status		Fc
Voltage (volts)	16.229	16.199
Current (amps)	-1.5	-0.98
Temp C	28.1	27.1
Charge	99 %	100 %
Capacity (Amp-hrs)	6.45	5.85

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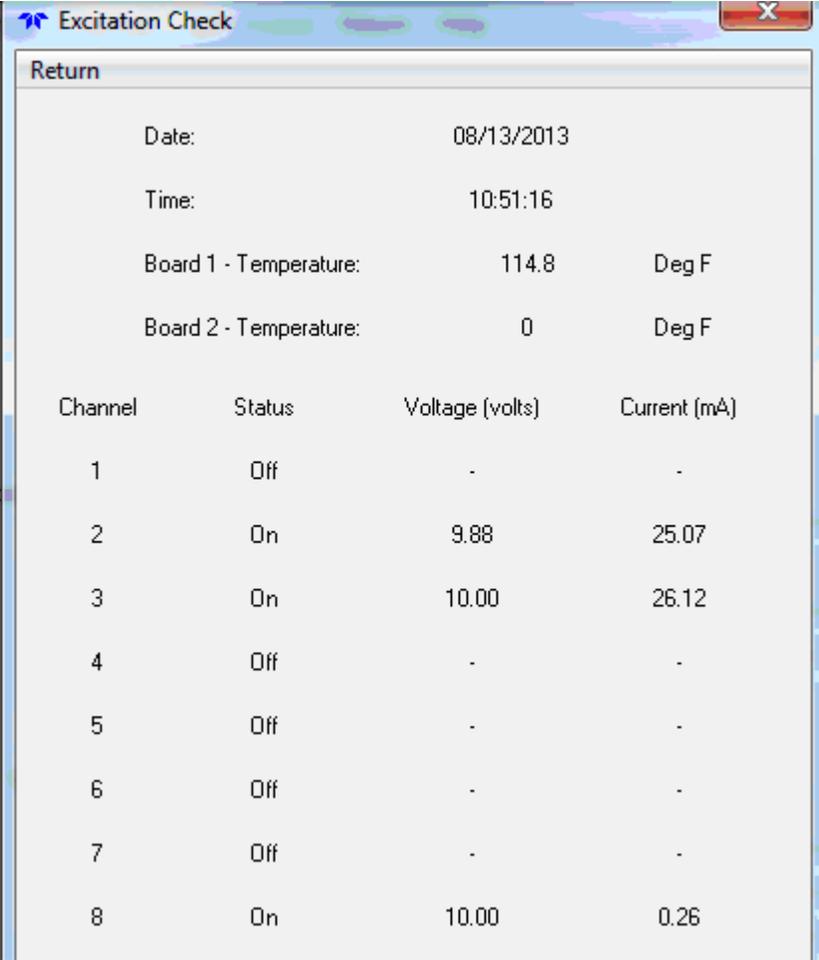
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<input type="checkbox"/> Graph		

C:\Test Data\QLIIN Fully Checked 8/7/2013 2:56 PM

# QUIKLOOK 3 Software

## Excitation Check

- Each Channel has independent Excitation
- Shorting out one channel will not effect the others
- Only Channels with Excitation are Checked
- Board Temperatures are shown
- Excitation Voltage
- Excitation Current



Channel	Status	Voltage (volts)	Current (mA)
1	Off	-	-
2	On	9.88	25.07
3	On	10.00	26.12
4	Off	-	-
5	Off	-	-
6	Off	-	-
7	Off	-	-
8	On	10.00	0.26

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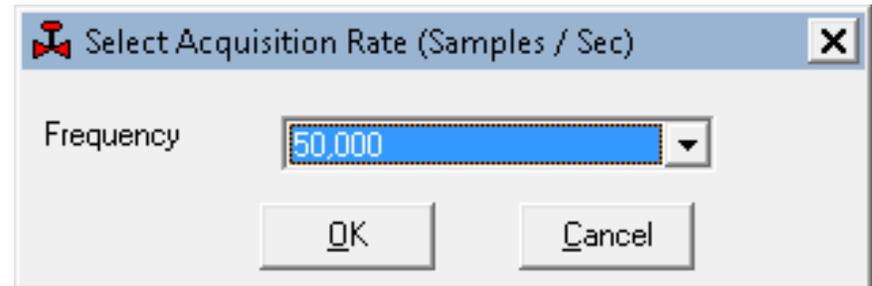
16  Graph

C:\Test Data\QLIIN Fully Charged 8/7/2013 2:56 PM

# QUIKLOOK 3 Software

## Available Acquisition Rates

- 10 Hz (AOV Default)
- 25 Hz
- 50 Hz
- 100 Hz
- 200 Hz
- 500 Hz
- 1,000 Hz (MOV Default)
- 2,000 Hz
- 5,000 Hz
- 10,000 Hz
- 20,000 Hz (CV Default)
- 50,000 Hz
- 100,000 Hz (Optional)
- 200,000 Hz (Optional)



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Graph

16

C:\Test Data\QLIIN Fully Charged 8/7/2013 2:56 PM

# QUIKLOOK 3 Software

## Channel Setup

- Same Basic Setup Form as Previous Versions

- Information fill in by TEDS:

- Same as “Load Sensor”
- Type
- Range
- Excitation
- Sensitivity
- Sensor Information

- Graph showing live values
- Actual Voltage on left
- Scaled values using setup on right
- Green band shown representing noise band
- (Peak to Peak values for current)
- Zero button next to offset to zero channel

Channel Data

Previous Channel 4 Next

Status Primary

Name CST

Units (mA)

Description

Type Single Ended

Range +10 Vdc

Excitation Default

Sensitivity 1.0000 (mA) /VV

Offset 0 Zero

Show Over Ranging

Close QSS Rotary Basic

PreTension Bar Graph Hide Graph

Sensor Information

Type Potentiometer

Manufacturer Teledyne

Model PT 1

Serial Number 12345

Cal Date 7/1/2013

Cal Due Date 7/1/2014

TEDS Load Sensor

Voltage Scaled Value

1 VV 1 (mA)

0.4832 VV 0.4832 (mA)

-1 VV -1 (mA)

# QUIKLOOK 3 Software

## Channel Setup

- Hide Graph
  - Gives access to Calculated Channels (MOV only)

**Channel Data**

Previous Channel 2 Next

Status Primary

Name Thrust

Units (Lbs)

Description

Type 4-Wire Strain Gage

Range +3.0 mV/Vdc

Excitation Default

Sensitivity 1.0000 (Lbs) /mV/V

Offset 0 Zero

Show Over Ranging

Close QSS Rotary Basic

**Sensor Information**

Type Strain Gauge

Manufacturer Teledyne

Model Volt 1

Serial Number 22345

Cal Date

Cal Due Date

**TEDS** Load Sensor

**Calculated Channels**

Generate Calculated Channel

Display Channel Default

Low Pass Filter Cut Off Frequency 50

**Apply Calibration**

Apply Calibration

Display Channel Default

Apply Calibration to Calculated Channel

Load Calibration

PreTension  Bar Graph  Hide Graph

# QUIKLOOK 3 Software

## Channel Setup

- Red on Sensitivity Field indicates that setup information was not on the TEDS chip
- Red background will only appear on first review
- After review TEDS description on main form will turn Black

Channel Data

Previous Channel 2 Next

Status: Primary  
Name: Thrust  
Units: (Lbs)  
Description:  
Type: 4-Wire Strain Gage  
Range: +3.0 mV/Vdc  
Excitation: Default  
Sensitivity: 1.0000 (Lbs) /mV/V  
Offset: 0 Zero  
 Show Over Ranging

Close QSS Rotary Basic

PreTension Bar Graph  Hide Graph

Sensor Information

Type: Strain Gauge  
Manufacturer: Teledyne  
Model: Volt 1  
Serial Number: 22345  
Cal Date:  
Cal Due Date:

TEDS Load Sensor

Calculated Channels

Generate Calculated Channel  
 Display Channel Default  
Low Pass Filter Cut Off Frequency: 50

Apply Calibration

Apply Calibration  
 Display Channel Default  
 Apply Calibration to Calculated Channel

Load Calibration

# QUIKLOOK 3 Software

## Channel Setup

- An out of date calibration will also cause a Red Flag
- This Red Flag will not go away and will remain on main screen

**Channel Data**

Previous Channel 1 Next

Status: Primary  
Name: Current  
Units: (Amps)  
Description:  
Type: Single Ended  
Range: +30 mVdc  
Excitation: N/A  
Sensitivity: 1.0000 (Amps) /mV  
Offset: 0 Zero  
 Show Over Ranging

Close QSS Rotary Basic

PreTension  Bar Graph  Hide Graph

**Sensor Information**

Type: Voltage  
Manufacturer: Teledyne  
Model: Volt 1  
Serial Number: 112233  
Cal Date: 8/1/2012  
Cal Due Date: 8/1/2013

**TEDS** Load Sensor

**Voltage Scaled Value**

Voltage	Scaled Value
30 mV	30 (Amps)
2.983 mV	2.983 (Amps)
-30 mV	-30 (Amps)

# QUIKLOOK 3 Software

## Channel Setup

- PreTension Graph (C Clamps)
- Same as Monitor Screen in QLII
- Turns Green between -2.7 & -3.0 mV/V

Channel Data

Previous Channel 2 Next

Status Primary

Name Thrust

Units (Lbs)

Description

Type 4-Wire Strain Gage

Range +3.0 mV/Vdc

Excitation Default

Sensitivity 17,187.8 (Lbs) /mV/V

Offset 24586 Zero

Show Over Ranging

Close QSS Rotary Basic

Sensor Information

Type Strain Gauge

Manufacturer Teledyne

Model Volt 1

Serial Number 22345

Cal Date

Cal Due Date

TEDS Load Sensor

**-2.997**

PreTension  Bar Graph  Hide Graph

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Primary Name

Test Number  Date

**Start**

Secondary Name

Description

Title

Comment

Comment

Technician

Type of Test

Condition

Direction

Stroke

AF / AL

Max Seconds

Limits

Thrust/Torque

Open TSS

Close TSS

Display Time

Acquisition Rate

Additional Comments

Excitation Voltage OK

Va	9
Ia	10
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C:\Test Data\QLIIN Fully Charged 8/7/2013 2:56 PM

# QUIKLOOK 3 Software Acquisition Screen







# QUIKLOOK 3 Software Acquisition Screen - AOV



# QUIKLOOK 3 Software

## Embedded Windows

### Advantages:

- Increased Virus & Malware Protection
- Only necessary programs and services will be installed
- System will run faster
- System will always reboot to the same state each time.

### Disadvantages:

- Upgrade to system will be more difficult
- System will no longer act as a computer but will be a piece of test equipment

# QUIKLOOK 3 Software

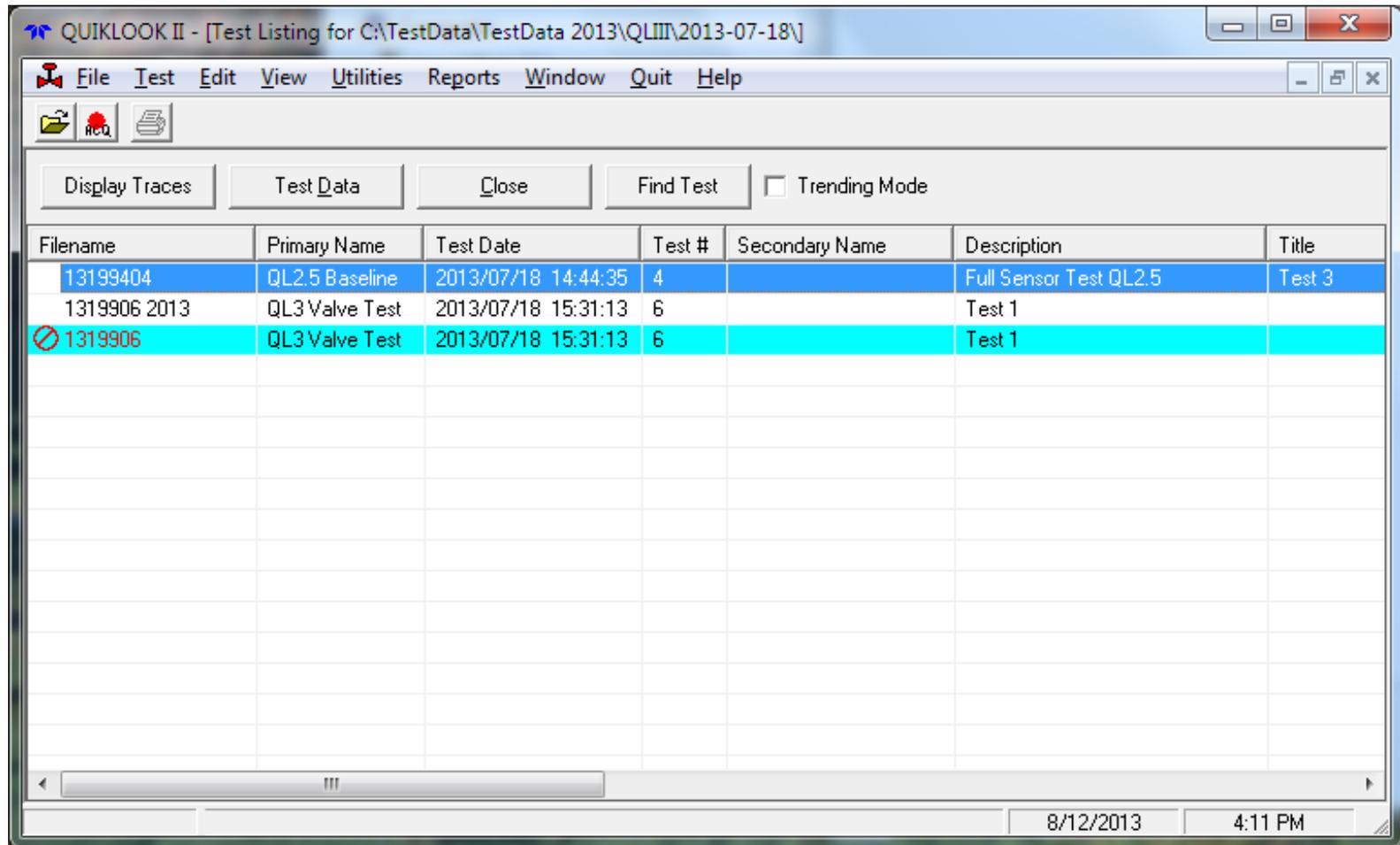
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## Software Compatibility

- Tests taken with Quiklook 3 will be incompatible with previous versions of Quiklook.
- Tests taken with previous versions of Quiklook will be compatible with QL 3
- The c00 file will still be maintained for compatibility with Midas
- When purchasing a Quiklook 3 all desktop installs of Quiklook should be upgraded
- Quiklook II systems do not have to be upgraded but may be
- Marker Names will be increased from 3 characters to 5

# QUIKLOOK 3 Software

## Software Compatibility



The screenshot displays the QUIKLOOK II software window. The title bar reads "QUIKLOOK II - [Test Listing for C:\TestData\TestData 2013\QLIII\2013-07-18\]". The menu bar includes File, Test, Edit, View, Utilities, Reports, Window, Quit, and Help. Below the menu bar are icons for a folder, a red circle with a white 'X', and a printer. A toolbar contains buttons for "Display Traces", "Test Data", "Close", "Find Test", and a checkbox for "Trending Mode". The main area is a table with the following data:

Filename	Primary Name	Test Date	Test #	Secondary Name	Description	Title
13199404	QL2.5 Baseline	2013/07/18 14:44:35	4		Full Sensor Test QL2.5	Test 3
1319906 2013	QL3 Valve Test	2013/07/18 15:31:13	6		Test 1	
 1319906	QL3 Valve Test	2013/07/18 15:31:13	6		Test 1	

The status bar at the bottom shows the date "8/12/2013" and the time "4:11 PM".

# QUIKLOOK 3 Software

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## Redirector built into Quiklook

- Preference Setting would set a base directory
- Each Subdirectory Name would be a Valve ID
- Each Directory will contain one configuration file
- When Quiklook starts you will be presented with a list of Valve IDs based on directory names
- Quiklook will then go directly into the acquisition screen using the configuration for the selected valve



# QUIKLOOK 3 Software

## QUESTION?

Does there need to be a preference setting so that acquisition may be performed using the QLII approach with separate Configuration / Test / Monitor screens?



# QUIKLOOK 3 Software

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*Thank you*

***USER FEEDBACK?***