



TDAS Control Software Application Note

How a Test Setup File (TSF) loads Sensor Information Files (SIF) and how to control a users ability to modify a TSF

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When Creating a New Test (TSF)

- When you create a new Test Setup File (TSF), what information does TDAS Control (TDC) load from the Sensor Information File (SIF)?
 - The user first places (SIF's) or Groups onto the appropriate channel
 - At this time, **ALL** values from the SIF are loaded into the TSF
 - You will notice that certain fields can be modified by the user while other fields are locked out and cannot be modified
- Determine the "TSF READ SIF PROTOCOL" setting in the tdas.ini file
 - View a channel setup screen in the TSF to determine the current tdas.ini value for the "TSF READ SIF PROTOCOL"
 - The "locked out" or grayed areas of a sensor screen reveals the read protocol settings
 - Options:
 - READ ALL
 - READ MINIMUM
 - READ NONE
 - The "C:\DTS\TDAS Control\tdas.ini" file will show the current value!

---- TSF Read SIF's Protocol - Options are: READ NONE, READ ALL, or READ MINIMUM -
READ MINIMUM

TSF SIF Unlocked Fields

Only read during the TSF creation (when a SIF is loaded). These fields will no longer be updated from the SIF. The users last input will remain

- Certain fields are never re-read from the SIF file
 - Channel Description
 - Software Filter
 - Initial Engineering Value
- Once changed in a TSF the values will remain in the TSF unless the sensor is re-installed
- Note the "Actual Range & Gain" field cannot be edited directly at any time. This field is calculated by the:
 - Desired Max Range
 - Sensitivity
 - Excitation

DATA CHANNEL 1 TDAS DR0162 MODULE 1 CHANNEL 1 NEXT PgDn PREV PgUp RETURN

SELECT SENSOR CLEAR CHANNEL

SENSOR S/N Endevco 7264C-2000

SENSOR TYPE Full Bridge Half Bridge

USE SHUNT CALIBRATION Yes No

PROPORTIONAL TO EXCITATION Yes No

INITIAL ENGINEERING UNIT VALUE

0.000

Value during PreCAL - EDIT

Avg. value over time - Start Time -0.025

End Time -0.005

Eng. Units Recorded as:

CHANNEL DESCRIPTION Endevco 7264C-2000 ISO CODE HEADCG ACX_

ACTUAL RANGE & GAIN

	Range	Gain
PRO	520.83	96.0
G5	520.83	48.0

OFFSET CONFIGURATION

Tolerance (mV) Remove Offset?

50 High Yes No

-50 Low

Excitation Voltage 5.0

Shunt Resistor Emulation

Bridge Res. 500.000

Check

SENSITIVITY (mV/V/EngUnit) 0.020000000000

DESIRED MAX RANGE 500.00

ANTI-ALIAS FILTER (HZ) BYPASS (PRO Only)

GAIN

INVERT DATA No Yes

SOFTWARE FILTER SAE Class 600

Frequency 1000

PRINT SCREEN

Sensor Category Normal Last Calibration Date 1/1/2007

Engineering Units G Sensor ID READ

AG0000015F688714

READ SIF PROTOCOL-Read All

Note the areas that are “grayed or locked out” to prevent a user from altering a SIF value

- These fields normally edited in a SIF screen are now locked in the TSF
- These “locked out” fields will always be updated by a change in SIF file
- This option prevents errors to a test setup that can affect the collected data
 - e.g: a sensor is re-calibrated with a new sensitivity
- Using or opening a TSF will re-read the SIF file for the locked values

Note: The “ISO Code” field and the “Eng. Units Recorded as” may be edited but the SIF will overwrite this setting when the TSF is used or saved and re-opened for editing

READ SIF PROTOCOL-Read Minimum

TSF fields that are "grayed" or "locked out" to prevent a user from altering a SIF value

TSF fields that may be changed by a user and are not re-read from a SIF

- Certain values may be changed in a TSF
- Will always use critical settings from the SIF (highlighted fields in red)
 - Sensor Type
 - Proportional to Excitation
 - Sensitivity
 - Sensor ID
- Allows for changes in a test without jeopardizing critical SIF values that can affect data

DATA CHANNEL 52 **TDAS** DR0037 **MODULE** 1 **CHANNEL** 1 **NEXT** PgDn **PREV** PgUp **RETURN**

SELECT SENSOR **CLEAR CHANNEL** **SENSOR S/N** Endeveco 7264c-2000

SENSOR TYPE Full Bridge Half Bridge

USE SHUNT CALIBRATION Yes No

PROPORTIONAL TO EXCITATION Yes No

INITIAL ENGINEERING UNIT VALUE 0.000 **EDIT**

Eng. Units Recorded as: Avg. value over time Equals 0 mV Start Time -0.050 End Time -0.010

CHANNEL DESCRIPTION Head X **ISO CODE** HEADCG ACX_

ACTUAL RANGE & GAIN

	Range	Gain
PRD	195.31	256.0
G5	195.31	128.0

OFFSET CONFIGURATION

Tolerance (mV) Remove Offset? Yes No

High 50 Low -50

DESIRED MAX RANGE 150.00

Excitation Voltage 5.0

Shunt Resistor Emulation **Bridge Res.** 500.000 **Check**

ANTI-ALIAS FILTER (HZ) **BYPASS (PRO Only)**

SENSITIVITY (mV/V/EngUnit) 0.020000000000

INVERT DATA No Yes

SOFTWARE FILTER SAE Class 1000 **Frequency** 1650

Sensor Category Normal **Last Calibration Date** 1/1/2007

Engineering Units G **Sensor ID** READ **AG0000015F688714**

PRINT SCREEN

READ SIF PROTOCOL-Read None

ALL TSF fields may be changed by a user

- All fields may be edited in a TSF
- Once a SIF value is loaded into a TSF, the SIF value is never re-read
- If changes are made to a SIF, the SIF must be re-loaded manually

The screenshot displays a software interface for configuring a sensor. Key elements include:

- Navigation:** DATA CHANNEL 1, TDAS DR0162, MODULE 1, CHANNEL 1, NEXT, PREV, RETURN.
- Sensor Info:** SENSOR S/N Endevco 7264C-2000, CHANNEL DESCRIPTION Endevco 7264C-2000, ISO CODE HEADCG ACK.
- Configuration Panels:**
 - SENSOR TYPE:** Full Bridge (selected), Half Bridge.
 - USE SHUNT CALIBRATION:** Yes (selected), No.
 - PROPORTIONAL TO EXCITATION:** Yes (selected), No.
 - INITIAL ENGINEERING UNIT VALUE:** 0.000, Value during PreCAL, Avg. value over time, Start Time, End Time.
 - ACTUAL RANGE & GAIN:** Table with columns Range and Gain.
 - OFFSET CONFIGURATION:** Tolerance (mV), Remove Offset? (High/Low).
 - DESIRED MAX RANGE:** 500.00.
 - SENSITIVITY (mV/V/EngUnit):** 0.020000000000.
 - ANTI-ALIAS FILTER (HZ):** BYPASS (PRD Only).
 - SHUNT RESISTOR:** Emulation, Bridge Res. 500.000, Check.
 - Excitation Voltage:** 5.0.
 - INVERT DATA:** No (selected), Yes.
 - SOFTWARE FILTER:** SAE Class G00, Frequency 1000.
 - PRINT SCREEN:** Button.
 - Bottom Panels:** Sensor Category (Normal), Last Calibration Date (1/1/2007), Engineering Units (G), Sensor ID (AG000015FG00714).

How to change the setting

- The values for this setting are not accessible from the TDC setup/options window
- They must be changed by edited the "tdas.ini" file
 - Open the file: "C:\DTS\TDAS_Control\tdas.ini"
 - Look for the "TSF Read SIF's Protocol"

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---- TSF Read SIF's Protocol - Options are: READ NONE, READ ALL, or READ MINIMUM ----  
READ MINIMUM
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- Replace the existing value with the desired value
 - READ ALL
 - READ MINIMUM
 - READ NONE

Ensure TDAS software is not open, changes made to the .ini will not be saved



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