

Open Architecture Control Integrated System

OACIScom

Version 04.01.04.03



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I. INTRODUCTION

OACIScom is the special software for OACIS users. In this document, OACIS represents multi Axes servo controller itself and OACIScom represents the user interface software. Especially, you can do followings with OACIScom.

- Make and edit program.
- Configure your system.
- Monitor your system in real time.
- Set the system with manual motion control.
- Save test results and graphs.
- Review and analyze the saved data.

It is our pleasure to introduce OACIScom. We are sure that it is easy and powerful tool for our smart controller, OACIS. If you have any problem with either OACIS or OACIScom, please do not hesitate to contact us (<u>ata@atainc.com</u>)



II. HOW TO INSTALL

A. General Requirements

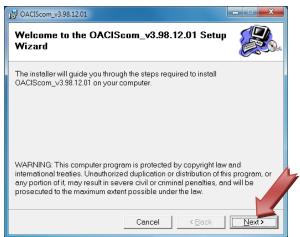
- A computer running Windows XP or later with 32bit or 64bits CPU.
 - > You need to install OACIScom v3.93.4 or later for 64bits OS system.
- Microsoft .Net Framework 2.0 is installed (If not, you can download from MICROSOFT website, it is free). If your OS is windows 7, it may be pre-installed with OS.
- You'd better select one of English, Chinese or Korean as your standard format of your OS. (Control Panel -> Regional and Language Options -> Regional Options). You may be able to use other local language. Some of languages make unexpected problems with OACIScom.

(Windows XP) Control Panel->Regional and Language Options-> Standards and formats (Windows 7) Control Panel->Change display language->Formats

Regional and L	anguage Options	2	🔗 Region and Language	
Regional Option:	Languages Advanced		Formats Location Keyt	d Languages Administrative
- Standards and	d formats		Eormat:	
This option a dates, and tir	ffects how some programs for finbers, currencies, ne.		English (United State	3)
Select an iter your own forr	m to match its preference in the click Customize to choos nats:	e	Date and time forma	ats
English (Uni	ted States) 🗸 🗸 Customize.		Short date:	M/d/yyyy
Samples			Long date:	dddd, MMMM dd, yyyy
Number:	123,456,789,00		S <u>h</u> ort time:	h:mm tt 🔹
Currency:	\$123,456,789.00	=	Long time:	h:mm:ss tt
Time:	2:32:05 PM	-	First day of <u>w</u> eek:	Sunday 🗸
Short date:	7/30/2013	-	What does the notat	tion mean?
Long date:	Tuesday, July 30, 2013		Examples Short date:	7/30/2013
- Location			Long date:	Tuesday, July 30, 2013
			Short time:	2:26 PM
	ces provide you with local information, such as news a ect your present location:	nd	Long time:	2:26:02 PM
Korea		✓	<u>Go online to learn abo</u>	Additional settings
	OK Cancel	pply	L	OK Cancel Apply

- B. Double Click "...\OACIScom_V0.00\setup.exe". Please do not run "OACIS.msi".
 - OACIS-1X/2X : OACIScom_v3.00.00.00
 - **OACIS-1XC/2XC :** OACIScom_v4.00.00.00





DACIScom



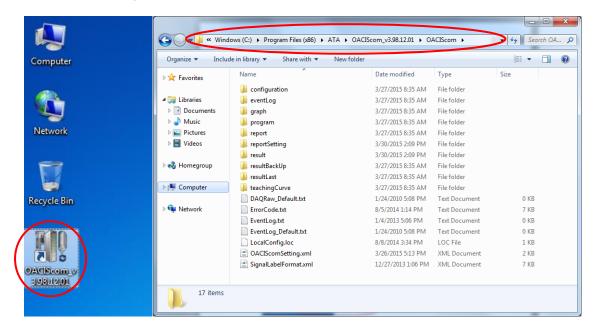
C. Click "Next >"

10 OACIScom_v3.98.12.01	1 OACIScom_v3.98.12.01
Select Installation Folder	Confirm Installation
The installer will install OACIScom_v3.98.12.01 to the following folder.	The installer is ready to install OACIScom_v3.98.12.01 on your computer.
To install in this folder, click "Next". To install to a different folder, enter it below or click "Browse".	Click "Next" to start the installation.
Eolder: [C:₩Program Files (x86)₩ATA₩OACIScom_v3,98,12,01₩ <u>Br</u> owse <u>D</u> isk Cost	
Install OACIScom_v3.98.12.01 for yourself, or for anyone who uses this computer:	
© Everyone	7
⊂ Just <u>m</u> e	
Cancel < Back Next	Cancel < Back Next

- You can specify the folder in where the OACIScom would be installed.
- D. Installation Complete... Click "Close"



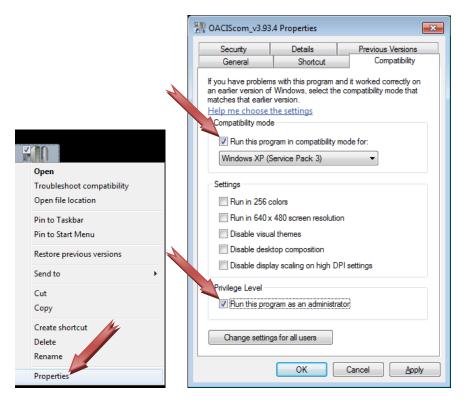
E. You can see "C\Program Files\ATA\OACIScom" created and short cut on the desktop





F. Special Settings for Window 7

 Desktop->OACIScom Icon-> right click-> Properties->Compatibility mode check-> Privilege Level check



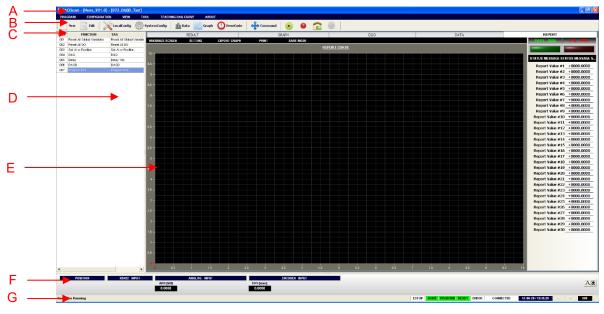
- Check "Run this program in compatibility mode"
- > Check "Run this program as an administrator"
- > Otherwise, OACIScom can't save data properly.
- > In case, you have to do same thing for "Change settings for all users".





III. OVERVIEW

: Now, you are ready to run OACIScom. Please double click the shortcut on your desktop then you can see something like as below.



- A. Title Bar: It shows System Name [Configuration Name] [Program Number and Name]
 - In the above picture, you can specify the System Name in "Local Configuration" window.
- B. Menu Strip
 - PROGRAM: It has "New"/"Edit"/"Open(Read Only)/Program Manager and "Exit" sub menu.

• **CONFIGURATION:** It has sub menu such as "System Configuration", "Local Configuration", "Change OACIS IP Address" and "Change OACIS IP Address".

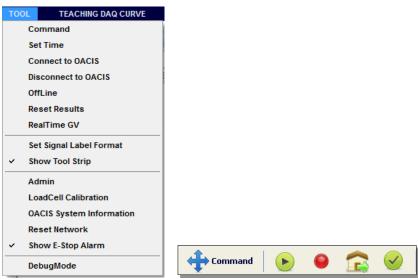


• VIEW: It has "Data", "Graph", "Event Log" and "Error Code" sub menu.

Data Graph Event Log	
Event Log	
Error Code 🛄 Data 📈	Graph () ErrorCode



 TOOL: It has "Command", "Set Time", "Connect to OACIS", "Disconnect to OACIS", "Off Line", "Reset Results", "Real Time GV", "Set Signal Label Format", Admin", "LoadCell Calibration", "OACIS System Information", "Reset Network" and "DebugMode" sub menu.



• **TEACHING DAQ CURVE:** OACIS user can gage with teaching curves that have upper and lower limits.

TE	ACHING DAQ C	URVE	ABOUT	
	RESULT			
E NO	SERIAL NO	DATETIM	E FAIL	.UR

- **ABOUT:** You can see the OACIScom information including Main/Control firmware version.
- C. Buttons: You can execute mainly programs with hot buttons.

	New DEdit	🞸 LocalConfig 🔅 SystemCo	nfig 🛛 🏦 Data 📈 Gr	raph 🚺 ErrorCode	Command	•	🟫 🥑
--	-----------	--------------------------	--------------------	------------------	---------	---	-----

D. Program View: It shows current running program. This grid view has "Step", "Function" and "Tag" columns.

E. Main View: It has four different views.

 RESULT: This gird view shows results. On completing a cycle, it updates new results. Each result has Cycle No, Serial No (scanned information), Date and Time, Failure Mode and Results (Global Variable #1 ~ Global Variable #100 and System Variable #1 ~ System Variable #20 that checked in "Save" check box on the program configuration)

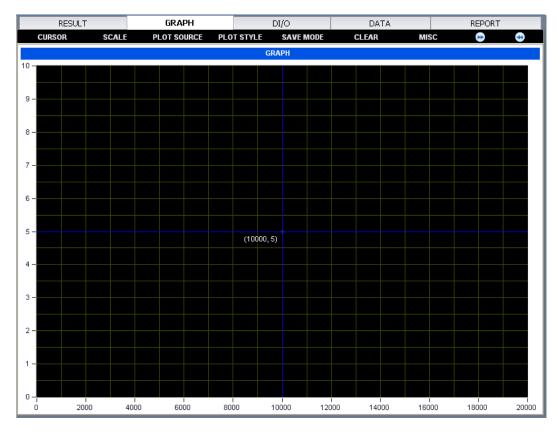
RESULT GRAPH		н	DI/O	DATA	REPORT	
CYCLE NO	SERIAL NO	DATETIME	FAILURE			







• **GRAPH:** You can see the DAQ graph on this screen. And also you can see real time graph. It is very useful for machine setup and calibration.



DI/O: It shows the status of all Digital Inputs and Outputs. It differs on OACIS type.

OACIS-1X : Status Bin(4 bit), DI(6 ch), DO(5 ch), Axis(1)	OACIS-1X : Status	Bin(4 bit), DI(6	5 ch), DO(5	ch), Axis(1)
--	-------------------	------------------	-------------	--------------

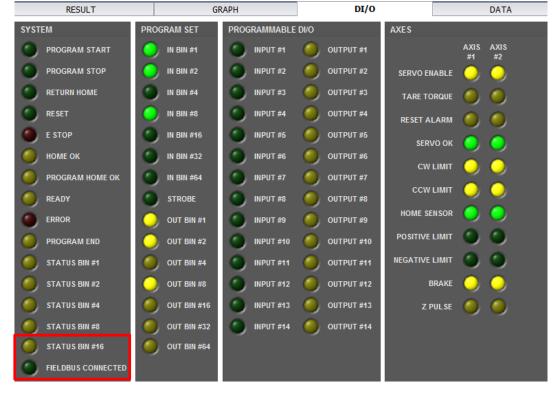






OACIS-2X : Status Bin(4 bit), DI(14 ch), DO(14 ch), Axis(2)







• DATA: It shows data summary of test result. Users can see the test result with cycle information in the DATA view, after an OACIS program cycle finishes. DATA view does not offer the result GRAPH, but very useful information such as Cycle #, Serial #, Cycle Time, Pass/Fail count as below. Reset Count Initializes Pass/Fail count.

TEACHING DAQ CURVE ABOUT	ſ			
nConfig 🚺 Data 📈 Graph	🚺 ErrorCode 🛛 💠 Comma	and 🕞 🔍 📻	\checkmark	
RESULT	GRAPH	DI/O	DATA	
INESOE1	GKAPH	DI/O	DATA	
CYCLE #: 00000066 SERIA	.: 2884777 8 14:08:23 CYCLE TIME : 0.0	PASS : 00000	RESET COUNT: 2014-08-18 오후 2:05:23	

 REPORT: User can see at a look elaborate graphs included teaching curves and others as test results and also can check PASS/FAIL with LED on/off.

RESULT	GRAF	ЭН	DI	/0	DATA	REPORT
MAXIMIZE SCREEN	SETTING	EXPORT G	RAPH	PRINT	PASS : 00	00 FAIL : 0000
	REPOR	RT CURVE			_	
10 -						
					STATUS MES	SAGE STATUS MESSAGE S
9					Report V	alue #1 +0000.0000
					Report V	alue #2 +0000.0000
8					Report V	alue #3 +0000.0000
					Report V	alue #4 +0000.0000
					Report V	alue #5 +0000.0000
7					Report V	alue #6 +0000.0000
					Report V	alue #7 +0000.0000
6-					Report V	alue #8 +0000.0000
					Report V	alue #9 +0000.0000
-					Report Va	lue #10 +0000.0000
5					Report Va	lue #11 +0000.0000
					Report Va	lue #12 +0000.0000
4					Report Va	lue #13 +0000.0000
					Report Va	lue #14 +0000.0000
3					Report Va	lue #15 +0000.0000
					Report Va	lue #16 +0000.0000
					Report Va	lue #17 +0000.0000
2					Report Va	lue #18 +0000.0000
					Report Va	lue #19 +0000.0000
1					Report Va	lue #20 +0000.0000
					Report Va	lue #21 +0000.0000

F. Analog Signal Window: It shows real time analog signals value of 6 Analog Inputs, 4 RS422 Inputs, 4 Axes Positions and 2 Encoder Inputs per System Configuration.

POSITION		RS422 INPUT		ANALOG INPUT				ENCODE	R INPUT		
AXIS1	AXIS2	Ch1	Ch2	AI#1	AI#2	AI#3	AI#4	EI#1	EI#2	EI#3	EI#4
1234.57	-1234.57	-1234.5678	-1234.5678	-1234.5678	-1234.5678	-1234.5678	-1234.5678	-1234.5678	-1234.5678	-1234.5678	-1234.5678

G. Status Strip: It shows message and connection status

2/15/2013 10:45:03 AM:: Fail to Connect - Connection Time Out	ESTOP	HOME PRGH	OME READY	ERROR	DISCONNECTED	00:00:00	-	000



IV. CONNECT TO OACIS

: We will connect to OACIS now and change System Name.

A. Run OACIScom by double clicking the shortcut on your desktop.



- You may see no information on the title bar like "OACIScom [_V00.0] [000_]"
- And you may see "DISCONNECTED" message on the status strip.
- B. Install proper Ethernet cable between OACIS and your PC that is running OACIScom.
- **C.** If the IP address of OACIS and your local configuration is matched, you will see the connected status and OACIScom will update main screen with current configuration and program of OACIS.
 - Connection -> OACIScom reads configuration and program information -> OACIScom updates main screen
- D. If the IP address does not match, you need to set proper configuration of OACIScom.
 - Default IP address is "192.168.000.003"
 - If you try to connect to OACIS. And its IP Address is "192.168.000.003", open LocalConfig window and change IP Address of OACIScom.

	1. Input correct IP Address of target OACIS
OACIScom - LocalConfig STATUS UPDATE PERIOD (ms) 00 TARGET OACIS (###.###.####.####) 192.168.0.3	2. Click "UPDATE" button
SYSTEM NAME	
OACIScom	
PASSWORD *	CHANGE PASSWORD





STEP 001 Program	Edit FUNCTION	TAG Program End	Systen MA 10- 9.5 - 9-	RES		SETTING	GRAPH	ErrorCode ORT GRAPH	DI/O PRINT	and	DATA	PASS:0000	REPORT FAIL : 0
			10 - 9.5 -	XIMIZE SCF		SETTING	EXPO				DATA	PASS:0000	REPORT FAIL : 0
001 Program	End	Program End	10 - 9.5 -		REEN	SETTING			PRINT			PASS:0000	FAIL : 0
			9.5 -				REPORT	CURVE					
4			8.6 - 7.5 - 7.5 6.5 - 6.5 5.5 - 4.6 - 3.5 - 3.5 - 2.6 - 2.6 - 1.5 - 1.5 - 1.5 - 1.5 - 1.5 - 1.5 - 1.5 - 1.5 -									ATUS MESSAG lobal Variable #: lobal Variable #: lobal Variable #: lobal Variable #i lobal Variable #i lobal Variable #i lobal Variable #i	1 0.000 2 0.000 3 0.000 4 0.000 5 0.000 5 0.000 7 0.000 8 0.000 9 0.000
POS	SITION	R\$422 II	NPUT	Al#1 [Nm] 0.1650]	NALOG INF	TUT		El#1 [mm] 0.0000	ENCODE	R INPUT	El#6 [mm] 0.0000	

E. Now, you will see the updated screen with connected status as below.

Title Bar shows: OACIScom – [Nut Runner 1 Axis_V01.0] – [001_My First Program]

OACIScom - [Nut Runner 1 Axis_V01.0] - [001_My First Program]

- > OACIScom: System Name
- > Nut Runner 1 Axis: System Configuration Name
- V01.0: Configuration Version
- > 001: Current Program Number
- My First Program: Current Program Name
- Status Strip shows

Ready for Running	ESTOP	HOME	PRGHOME	READY	ERROR	CONNECTED	15-03-31 / 09:50:41	-	 000

- > Ready for Running: Message from OACIS. It shows status of OACIS and error notice.
- > CONNECTED: It shows connection status between your PC and OACIS.



F. Then, you can change System Name with more meaningful one.

	1. Input your new S	YSTEM NAME
OACIScom - LocalConfig STATUS UPDATE PERIOD (ms) 50 TARGET OACIS IP ADDRE8S (###.###.####) 192.168.0.3	UPDATE	2. Click "UPDATE" button
SYSTEM NAME My OACIS		
PASSWORD *	CHANGE PASSWORD	

Now, you can see the changed System Name in the Title Bar.





V. SET OACIScom WITH YOUR OWN NAME

: You can customize your OACIScom per your application of OACIS.

- A. You can see some default files and folders.
 - If you installed OACIScom successfully, you can find several files and folders at "C:\Program Files\ATA\OACIScom V0.00.0\OACIScom"

Organize 🔻 🛛 Inclu	de in library 🔻 Share with 🔻 New	folder		iii 🔹 🚺 🧕
☆ Favorites	Name	Date modified	Туре	Size
	le configuration	3/27/2015 8:35 AM	File folder	
🥽 Libraries	eventLog	3/27/2015 8:35 AM	File folder	
Documents	🖟 graph	3/27/2015 8:35 AM	File folder	
🖻 🎝 Music	\mu program	3/27/2015 8:35 AM	File folder	
🖻 🔛 Pictures	퉬 report	3/27/2015 8:35 AM	File folder	
🖻 📑 Videos	퉬 reportSetting	3/30/2015 2:09 PM	File folder	
	퉬 result	3/30/2015 2:09 PM	File folder	
🝓 Homegroup	퉬 resultBackUp	3/27/2015 8:35 AM	File folder	
	퉬 resultLast	3/27/2015 8:35 AM	File folder	
🜉 Computer	퉬 teachingCurve	3/27/2015 8:35 AM	File folder	
	DAQRaw_Default.txt	1/24/2010 5:08 PM	Text Document	0 KB
📬 Network	ErrorCode.txt	8/5/2014 1:14 PM	Text Document	7 KB
	EventLog.txt	1/4/2013 5:06 PM	Text Document	0 KB
	EventLog_Default.txt	1/24/2010 5:08 PM	Text Document	0 KB
	LocalConfig.loc	8/8/2014 3:34 PM	LOC File	1 KB
	OACIScomSetting.xml	3/26/2015 5:13 PM	XML Document	2 KB
	SignalLabelFormat.xml	12/27/2013 1:06 PM	XML Document	7 KB

- ▶ [configuration] folder: System Configuration will be saved here with "*.oac" extension.
- [eventLog] folder: Event Log files will be saved here as "EventLog_Year 4 digits_Month 2digits.txt"
- [graph] folder: DAQ graph will be saved here with "*.gph" extension or "*.gif" extension depending on saving type.
- > [program] folder: Program files will be saved here with "*.prm" extension.
- [report] folder: Report files will be saved here with "*.gif" extension according to the format defined by a user.
- [reportSetting] folder: Report setting files will be saved here.
- [result] folder: Here are DB files for test results as *.mdb
- > [resultBackUp] folder: Backup data will be saved here.
- [resultLast] folder: Last cycle data will be saved here with the name of "resultLast.txt".
- ▶ [teachingCurve] folder: Teaching Curve files will be saved here with "*.tch" extension.
- Note: You are not allowed to modify or delete anything here. If you want to do something you have to copy a folder or file then you have to use the copied. If you modify or delete any folder or program, you will have severe problem with the OACIScom.
- And you can find "OACIScom.exe" file as well at "C:\Program Files\ATA\OACIScom".

OACIScom.exe



- B. Sometimes you may want to set the above things with your own name.
 - Copy and paste "OACIScom_Default" folder and "OACIScom.exe" file as below.

rganize 🔻 💼 Open 🛛 New folder			Organize 👻 😭 Open New folder		
ame	Date modified	Туре	Name	Date modified	Тур
myImages	3/30/2015 2:09 PM	File f	🐌 myImages	3/30/2015 2:09 PM	File
OACIScom	3/30/2015 2:09 PM	File f	OACIScom	3/30/2015 2:09 PM	File
OACIScom Default	3/30/2015 2:09 PM	File f	ACIScom_Default	3/30/2015 2:09 PM	File
ProgramExample	3/30/2015 2:09 PM	File f	OACIScom_Default - Copy	3/31/2015 10:58 AM	File
All 01.ico	10/30/2012 12:38	Icon	ProgramExample	3/30/2015 2:09 PM	File
DevExpress.Charts.v11.1.Core.dll	9/13/2014 1:24 PM	Appl	All_01.ico	10/30/2012 12:38	Icc
DevExpress.Data.v11.1.dll	9/13/2014 1:24 PM	Appl	DevExpress.Charts.v11.1.Core.dll	9/13/2014 1:24 PM	Ap
DevExpress.Printing.v11.1.Core.dll	9/13/2014 1:24 PM	Appl	DevExpress.Data.v11.1.dll	9/13/2014 1:24 PM	Ap
DevExpress.RichEdit.v11.1.Core.dll	9/13/2014 1:24 PM	Appl	DevExpress.Printing.v11.1.Core.dll	9/13/2014 1:24 PM	Ap
DevExpress.Utils.v11.1.dll	9/13/2014 1:24 PM	Appl	DevExpress.RichEdit.v11.1.Core.dll	9/13/2014 1:24 PM	Ap
DevExpress.XtraBars.v11.1.dll	9/13/2014 1:24 PM	Appl	DevExpress.Utils.v11.1.dll	9/13/2014 1:24 PM	Ap
DevExpress.XtraCharts.v11.1.dll	9/13/2014 1:24 PM	Appl	DevExpress.XtraBars.v11.1.dll	9/13/2014 1:24 PM	Ap
DevExpress.XtraCharts.v11.1.UI.dll	9/13/2014 1:24 PM	Appl	DevExpress.XtraCharts.v11.1.dll	9/13/2014 1:24 PM	Ap
DevExpress.XtraEditors.v11.1.dll	9/13/2014 1:24 PM	Appl	DevExpress.XtraCharts.v11.1.UI.dll	9/13/2014 1:24 PM	Ap
DevExpress.XtraGrid.v11.1.dll	9/13/2014 1:24 PM	Appl	DevExpress.XtraEditors.v11.1.dll	9/13/2014 1:24 PM	Ap
DevExpress.XtraLayout.v11.1.dll	9/13/2014 1:24 PM	Appl	DevExpress.XtraGrid.v11.1.dll	9/13/2014 1:24 PM	Ap
DevExpress.XtraNavBar.v11.1.dll	9/13/2014 1:24 PM	Appl	DevExpress.XtraLayout.v11.1.dll	9/13/2014 1:24 PM	Ap
DevExpress.XtraPrinting.v11.1.dll	9/13/2014 1:24 PM	Appl	DevExpress.XtraNavBar.v11.1.dll	9/13/2014 1:24 PM	Ap
DevExpress.XtraRichEdit.v11.1.dll	9/13/2014 1:24 PM	Appl	DevExpress.XtraPrinting.v11.1.dll	9/13/2014 1:24 PM	Ap
DevExpress.XtraTreeList.v11.1.dll	9/13/2014 1:24 PM	Appl	DevExpress.XtraRichEdit.v11.1.dll	9/13/2014 1:24 PM	Ap
NationalInstruments.Analysis.Enterprise.dll	4/15/2008 6:03 PM	Appl	DevExpress.XtraTreeList.v11.1.dll	9/13/2014 1:24 PM	Ap
NationalInstruments.UI.Design.dll	4/15/2008 6:05 PM	Appl	NationalInstruments.Analysis.Enterprise.dll	4/15/2008 6:03 PM	Ар
NationalInstruments.UI.dll	4/15/2008 5:48 PM	Appl	NationalInstruments.UI.Design.dll	4/15/2008 6:05 PM	Ap
NationalInstruments.UI.Styles3D.dll	4/15/2008 5:42 PM	Appl	NationalInstruments.UI.dll	4/15/2008 5:48 PM	Ap
NationalInstruments.UI.WindowsForms.dll	4/15/2008 5:56 PM	Appl	NationalInstruments.UI.Styles3D.dll	4/15/2008 5:42 PM	Ap
OACIScom.exe	3/26/2015 5:16 PM	Appl	NationalInstruments.UI.WindowsForms.dll	4/15/2008 5:56 PM	Ap
onesconicke	5/ 25/ 2015 5/10 F IVI	.446	OACIScom - Copy.exe	3/26/2015 5:16 PM	Ap
			OACIScom.exe	3/26/2015 5:16 PM	Ap

• And specify copied folder "OAISCom_Default – Copy", file "OACIScom - Copy.exe" to your own name. (here we specified as "My Machine")

Name
👪 My Machine
🌗 myImages
) OACIScom
OACIScom_Default
ProgramExample
💷 My Machine.exe
OACIScom.exe

- > Note: Name for the folder and executable file should be same.
- Then, make a shortcut of "My Machine.exe" file on your desktop.
 Do right-click on "My Machine.exe" and select "Desktop (create shortcut)".

Send to	۲	0	Bluetooth
Cut		-	Compressed (zipped) folder
Сору			Desktop (create shortcut)



- Change Icon 3 📰 My Machine Properti Look for icons in this file: Computer 7 C:₩Program Files (x86)₩ATA₩OA<mark>C</mark> Browse... Security vly Machine General Select an icon from the list below: My Machir 7 Network Target type: Applica Target location: OACIS ГА₩О. Target: **Recycle Bin** Start in: "C:₩F None Shortcut key: OACIScon OK Cancel Run: Norma 1 Comment: Change Icon. Advanced. Open File Location 2 My Machine
- Please change icon and name with right-click on "My Machine.exe" shortcut.

- > 1. Do right-click on "My Machine.exe" and select "Properties".
- 2. Do click "Change Icon ...".
- > 3. Select icon file at "C:\Program Files\ATA\OACIScom".



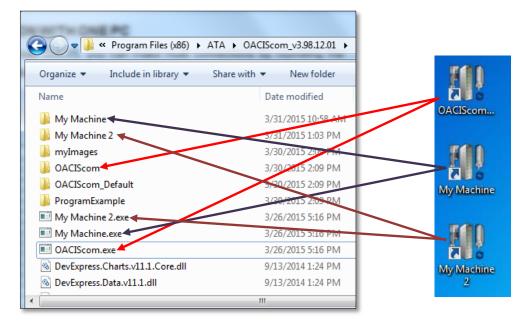
- Please try to run with new shortcut. You can see new OACIScom is running. Surely, all results and files, including configuration and program will be saved in the new folder.
- For sure, you need to configure new IP Address and System Name for new connection.

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VI. MAKE MULTI CONNECTION WITH ONE PC

A. If your PC is connected with multi OACIS, you can make multi connections by repeating the procedure of "V. MAKE OACIScom WITH YOUR OWN NAME".



B. Now, you can run three different applications and they will be connected with different OACIS as below if IP Address setting is configured correctly.

👔 My OACIS	- [_V00.0] - [0	00_]				
PROGRAM	CONFIG	URATION VIEW	TOOL TEACH	ING DAQ CURVE ABOUT	Г	
New	a Edit	LocalConfig	SystemConfig	Data Graph	🚺 ErrorCode 🛛 💠	Command 👳
STEP	FUNCTION	TAG	RESULT	GRAPH	DI/O DATA	REPORT
			MAXIMIZE S	CREEN SETTING	PASS:0000	FAIL : 0000
🛔 My Machin	e 2 - [Nut Ru	nner 1 Axis_V01.0] - [00	1_My First Program]			
PROGRAM	CONFIG	URATION VIEW	TOOL TEACH	IING DAQ CURVE ABOUT	ſ	
New	Edit	LocalConfig	SystemConfig	Data Graph	🕕 ErrorCode 🛛 🕂	Command -
STEP	FUNCTION	TAG	RESULT	GRAPH	DI/O DATA	REPORT
▲				FEN SETTING	PASS:0000	FAIL - 0000
🕴 My Machin	e - Nut Runn	er 1 Axis_V01.0] - [001_	_My First Program]		mart. mart	
PROGRAM	CONFIG	URATION VIEW	TOOL TEACH	IING DAQ CURVE ABOUT	ī l	
New	J Edit	LocalConfig	SystemConfig	<u>iii</u> Data 📈 Graph	🚺 ErrorCode 🛛 💠	Command
STEP	FUNCTION	TAG	RESULT	GRAPH	DI/O DATA	REPORT
001 Program	n End	Program End	MAXIMIZE SCR	EEN SETTING	PASS:0000	FAIL : 0000
•			•			





VII. COMMAND

: You can move an axis forward or backward manually by operating COMMAND menu. It comes in quite handy when you build the machine up for the first time or some errors happen with high load.

Note: If a shot pin or air lock system is installed due to heavy tooling, you should pay attention to jogging. You can make COMMAND disable by setting PROGRAM STOP signal On when you want to prevent from moving by mistake with locking on.

A. Jog

• You can open "`" window by pressing [TOOL] – [Command] button in the Menu Strip.

OACIScom - COMMA	AND				_ _ x
JOG	INCREMENTAL	OPERATING	PROGRAM	SET PROGRAMMABLE DO	MISC.
CONTINUOUS MODE					
AXIS	SPEED [mm/s]			ADVANCE	RETRACT
	▼ 0.000				
AXIS #1 [mm]					
0.00					

• Select a proper Axis then you can see "ADVANCE" and "RETRACT" buttons are activated in blue

🗐 OACIScom - COM	MAND				
JOG	INCREMENTAL	OPERATING	PROGRAM	SET PROGRAMMABLE DO	MISC.
CONTINUOUS MOD	DE				
AXIS	SPEED [mm/s]			ADVANCE	RETRACT
AXIS AXIS #1	▼ 5				
-					
AXIS #1 [mm] 0.00					

Now, you can input required speed and move the selected axis with "JOG" mode.

B. Incremental

• Select "INCREMENTAL" tab on the Command window.

OACIScom - COMN	IAND				
JOG	INCREMENTAL	OPERATING	PROGRAM	SET PROGRAMMABLE DO	MISC.
INCREMENTAL MOD	E				
AXIS	SPEED [mm/s]	ACC. [mm/s^2]	MAX LOAD LIMIT [kN]	MIN LOAD LIMIT [kN]	
AXIS #1	▼ 5.000	5.0000	1.0000	-1.0000	
	POSITION [mm]	Absolute			
	150	Absolute			
AXIS #1 [mm]					
0.00					

- You can select the specific Axis and input proper values for the required parameters.
- Then you can see the selected Axis begins to move by pressing the running button ([>]).
- This is same as "Move to Position" function.



C. Operating

• Select "OPERATING" tab on the Command window.

🕼 My OACIS - COM	MMAND					X					
JOG	INCREMENTAL	OPERATING PROGRAM SET P		SET PRO	GRAMMABLE DO	MISC.					
PROGRAM COMMAND											
RUN PROGRAM	RUN STEP	PAUSE	STOP	SOFT-STOP	HOMING	RESET					

- **RUN PROGRAM**: You can run the current program.
- **RUN STEP**: You can run the program step by step. It will run current step.
- **PAUSE**: While a program is running, you can pause the running by clicking this button. If you click this button, OACIS will pause on completing current step. And you can resume the program by pressing the "RUN PROGRAM" button again.
- **STOP**: OACIS complete current running step and program ends. And the OACIS will become one of "Homing Required #1", "Ready for Running" or "Error" status depending on stopping condition.
- **SOFT-STOP**: OACIS stops immediately and it becomes "Error" status.
- **HOMING**: All Axes will get back to Home position.
- **RESET**: You can reset "Error" status. If there is physical error source, you need to eliminate physical error source first otherwise you will see "Error" message again.

D. Program

• Select "PROGRAM" tab on the Command window.

OACIScom - COMMAND				_ _ ×
JOG INCREMENTAL	OPERATING	PROGRAM	SET PROGRAMMABLE DO	MISC.
PROGRAM				
				•
READ PROGRAM LIST IN OACIS	s	CALL PROGRAM	ERASE PRO	▼ OGRAM
	S	CALL PROGRAM	ERASE PRO	▼ DGRAM
READ PROGRAM LIST IN OACIS AXI5 #1 [mm] 0.00	s	CALL PROGRAM	ERASE PRO	GRAM

- READ PROGRAM LIST IN OACIS: It will read all programs list and update in the combo box.
- CALL PROGRAM: Select a program in the combo box and click this button. You can call the selected program from OACIS.
- ERASE PROGRAM: You can erase the selected program in the OACIS

E. Set Programmable DO

• Select "SET PROGRAMMABLE DO" tab on the Command window

m - COMM	AND											
	INCREMEN	ITAL	OP	ERATING		PROGRAM		SET PRO	GRAMMA	BLE DO		MISC.
SET PROGRAMMABLE DIGITAL OUTPUT												
DO #2	DO #3	DO #4	DO #5	DO #6	DO #7	DO #8	DO #9	DO #10	DO #11	DO #12	DO #13	DO #14
-	-	-	-	-	-	-	-	-	-	-	-	
[mm]												
0.00												
	GRAMMABI	GRAMMABLE DIGITAL	INCREMENTAL GRAMMABLE DIGITAL OUTPUT DO #2 DO #3 DO #4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	INCREMENTAL OP GRAMMABLE DIGITAL OUTPUT DO #2 DO #3 DO #4 DO #5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	INCREMENTAL OPERATING GRAMMABLE DIGITAL OUTPUT DO #2 DO #3 DO #4 DO #5 DO #6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	INCREMENTAL OPERATING GRAMMABLE DIGITAL OUTPUT DO #2 DO #3 DO #4 DO #5 DO #6 DO #7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	INCREMENTAL OPERATING PROGRAM SRAMMABLE DIGITAL OUTPUT DO #2 DO #3 DO #4 DO #5 DO #6 DO #7 DO #8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	INCREMENTAL OPERATING PROGRAM GRAMMABLE DIGITAL OUTPUT DO #2 DO #3 DO #4 DO #5 DO #6 DO #7 DO #8 DO #9	INCREMENTAL OPERATING PROGRAM SET PRO GRAMMABLE DIGITAL OUTPUT DO #2 DO #3 DO #4 DO #5 DO #6 DO #7 DO #8 DO #9 DO #10 DO #2 DO #3 DO #4 DO #5 DO #6 DO #7 DO #8 DO #9 DO #10 (mm]	INCREMENTAL OPERATING PROGRAM SET PROGRAMMA SRAMMABLE DIGITAL OUTPUT DO #2 DO #3 DO #4 DO #5 DO #6 DO #7 DO #8 DO #9 DO #10 DO #11 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	INCREMENTAL OPERATING PROGRAM SET PROGRAMMABLE DO SRAMMABLE DIGITAL OUTPUT DO #2 DO #3 DO #4 DO #5 DO #6 DO #7 DO #8 DO #9 DO #10 DO #11 DO #12	INCREMENTAL OPERATING PROGRAM SET PROGRAMMABLE DO I SRAMMABLE DIGITAL OUTPUT DO #2 DO #3 DO #4 DO #5 DO #6 DO #7 DO #8 DO #9 DO #10 DO #11 DO #12 DO #13 O #0 O O O O O O O O O O O O O O O O O O



- You can turn on or off Programmable Digital Output by pressing each button.
- F. MISC
 - Select "MISC." tab on the Command window

OACIScom - COMMAND		
JOG INCREMENTAL OP	ERATING PROGRAM	SET PROGRAMMABLE DO MISC.
DISABLE AXIS	AXIS #1	•
	SIGNAL INPUT Ch.	SET VALUE
SET AS ABSOLUTE VALUE	Encoder Input #1 (TTL)	- 0.0000
SET SERIAL NUMBER	Serial	
SET AS HOME	AXIS #1	•
	F/AIG #1	
AXIS #1 [mm]		
0.00		

- DISABLE AXIS
 - You can temporarily protect AXIS #1 or AXIS #2 from unexpected moving. See "Disable" function in MOVE for more detail.
- SET AS ABSOLUTE VALUE
 - You can set the selected Signal Input Channel as the specified set value. The Set Value will become a new absolute value. See "Set As Abs Value" function in SIGNAL for more detail.
- SET SERIAL NUMBER
 - Serial Number is normally entered by a Barcode reader. But you can simply put it in by typingin and pressing this button.
- SET AS HOME
 - You can set AXIS #1 or AXIS #2 as Home. Only the Nut Runner without Home and Limits is available.

Do not mix and use PC COMMAND with Remote COMMAND.

- When you need "Return Home" during PC Command operation, you should give the signal by PC Command, not by Remote Command (DI/O).
- For example, if Home OK & Ready On → Jog Moving (PC command) → Return Home (Remote Button), then some errors may occur. You should do homing via PC Command.
- This strategy is set up for safety.



VIII. SET TIME

- A. You can set date and time of OACIS. It will be used to save results.
 - You can open "SET OACIS TIME" window by pressing [TOOL] [Set Time] button in the Menu Strip.

OACIScom ·	- SET	OACIS TI	ME						x
DATE				HOUR		MINUTE		SECOND	
Monday	,	March	30, 201! 🔻	01	•	00	•	00	•
	SET OACIS TIME				SET OACIS TIME SAME AS PO			С	
	<u> </u>								

- Set new "DATE", "HOUR", "MINUTE" and "SECOND"
- SET OACIS TIME: Set the OACIS time with new value.
- SET OACIS TIME SAME AS PC: It sets the OACIS time same as your local PC.
- Then, you can see current time of OACIS in the status strip on the bottom of main window.

ANALOG INPUT	ENCODER INPUT
Al#1 [Nm]	El#1 [mm]
0.1637	0.0000
ESTOP HOME PRGHOME READY ERROR CONNECTED	15-03-31 / 13:23:19 000 .::



IX. QUICK START – How to program

Note: We will make a simple program here. The program is going to work with several Move, DAQ, Analysis and Gage functions. The OACIS program is basically working through Move -> DAQ -> Analysis -> Gage. And if you want to implement different steps depending on interim results, you can use Sequence functions like Jump to Step or Loop Start. And also if you need to communicate with external device like PLC you can use Signal Functions like Set DO and Wait for DI.

- A. We will make a program to press a solid shaft into a hollow shaft. And the program will monitor the curve of press load vs distance. Based on the curve the program is going to decide if the part is good or bad. Finally, the program will notify the result to the PLC by digital signal. Here is brief a functional flow.
 - Move to Position -> Move to Load -> DAQ -> Analysis Press -> Gage -> Move to Program Home

B. Open Program Edit window [PROGRAM] – [New].

Note: It will require you to input password. If you didn't change the password, default is "1".

• You can see the initial screen of program edit window.

NoProgram											- 0 X
SAVE (PC & OACIS) SAVE (PC onl	y)	OPEN (from	OACIS) OP	EN (from PC)	1	EXPORT	r - 1			
DELETE COPY PASTE CUT	CON	IFIGURATION	MOVE	SIGNAL	SEQUENCE	MEASURE	AN	ALYSIS	GAGE	MATH	FIELDBUS
FUNCTI TAG											
001 Assign Fi FieldbusOut	PRO	DGRAM INFORMATI	ION								
002 Assign Fi Fieldbusln		PROGRAM NUMBE	ER	PF	ROGRAM NAME			DATETIME			
> 003 Program Program End	>	0 my New Program 170602083755									
	PRO	OGRAM HOME POSI	ITION								
		AXIS NUMBER				POSITION					
	>	AXIS #1				0					
		AXIS #2				0					
		AXIS #3				0					
		AXIS #4				0					
1001	GLC	DBAL VARIABLES a	nd SYS	TEM VARIABLE	s			IMPORT G	V INFO	RE	SET FIELDBUS
		PARAMETER			NAME		SAVE	Fieldbus In	Fieldbus .		^
	>	Global Variable #	1 Glo	bal Variable #1				0	0		
		Global Variable #		bal Variable #2	!			0	0		
		Global Variable #		bal Variable #3				0	0		
		Global Variable #		bal Variable #4				0	0		
		Global Variable #						0	0		
		Global Variable #	6 Glo	bal Variable #6	i			0	0		-
	PRO	GRAM LIST IN OAC	CIS						_		-
							-	READ	PROGRAM L	.IST	
											_
<											

C. Input Program Information and Program Home Position.

PROGRAM NUMBER	PROGRAM NAME	DATETIME
101	Press shaft	150331131422
AVIC NUMPED	POSITION	
AXIS NUMBER	POSITION	
AXIS NUMBER Axis #1	30	
Axis #1	30	
Axis #1	30	

- Program Number: **101** (you can input one of 1 ~ 120)
- Program Name: Press Shaft
- Program Home Position: **30**



D. Input Global Variables

VARIABLES a	nd SYSTEM VARIABLES	IMPORT GV
PARAMETER	NAME	SAVE
Global Var#1	RunMinLoad	✓
Global Var#2	RunMaxLoad	V
Global Var#3	EndPos	V
Global Var#4	EndPosMaxLoad	V
Global Var#5	EndSlope	
Global Var#6	Global Variable #6	
Global Var#7	Global Variable #7	
Global Var#8	Global Variable #8	
Global Var#9	Global Variable #9	

- IMPORT GV INFO: You can bring global Variables from the other OACIS program.
- We will use five global variables in this program. Global Variables checked as "SAVE" will be shown at "RESULT" and "REPORT" tab after one cycling. You can also update Global Variables information while you are programming.

E. Insert "Reset All DO"

2	#101-P	Press shaft								
	SAVE	(PC & OACIS)	SAVE (PC only) 0	PEN	(from OACIS)	OPEN (1	from PC)	EXPORT	* [
DE	LETE	COPY PASTE	CUT		CONFIGURATION	MOVE	SIGNAL	SEQUENCE	MEASURE	ANALYSIS GAGE
	STEP	FUNCTION	TAG		Set AI or Position	Set DO	Reset All DO	Set Status Binary	Set Signal Filte	er Set DO by Signal
	001	Reset All DO	Reset All DO						\sim	
>	002	Program End	Program End		STEP Tag Reset/	All DO			INSERT	MODIFY

- You can insert a function by pressing "INSERT" button on right top.
 - Tag: Reset All DO
 - > Normally, you need to initialize Digital Outputs before you start new cycle.

F. Insert "Set Status Binary"

2	#101-F	Press shaft									
	SAVE	(PC & OACIS)	SAVE (PC only) OPEN (from OACIS)	1	OPEN (fro	om PC)	EXPORT	-		
DE	LETE	COPY PASTE	CUT	CONFIGUE	ATION	MOVE	SIGNAL	SEQUENCE M	EASURE ANAL	YSIS GAGE	
	STEP	FUNCTION	TAG	Set Al or Po	sition	Set DO	Reset All DO	Set Status Binary	Set Signal Filter	Set DO by Signal	
	001	Reset All DO	Reset All DO							··	
<	002	Set Status Binary	Reset Status Binary as Zero	STEP Tag Reset Status Binary as Zero					IN SERT MODIFY		
>	003	Program End	Program End								
					SET VA	LUE					
						0					

- Tag: Reset Status Binary as Zero
- Set Value: 0
 - > It will set all Status Bin DO as Off

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G. Insert "Reset All Global Variables"

2	#101-	Press shaft														
	SAVE	(PC & OACIS)	SAVE (PC only) OPEN	(fr	om OACIS)	I	OPEN (fr	om P	C)	1	EXPORT		•]			
DE	LETE	COPY PASTE	CUT		CONFIGUR	TION	MOVE		SIGNAL	-	SEQUENCE	MEAS	SURE	ANALYSI	S GA	GE
	STEP	FUNCTION	TAG		Reset All G	lobal V	ariables	Set 0	Slobal Va	ariable	Math1	Math2	Math3	Math4	MathA	Slope
	001	Reset All DO	Reset All DO		1		L									
	002	Set Status Binary	Reset Status Binary as Zero		STEP Tag	Reset	All Global	Varia	bles				INSE	रा	MODIF	Y
	003	Reset All Global Va	Reset All Global Variables													
>	004	Program End	Program End													

- Tag: Reset All Global Variables
 - It will set all Global Variables (#1 ~ #100) as zero. (It doesn't change System Variables)

H. Insert "Set Global Variable"

🕜 #101-	Press shaft									
SAVE	(PC & OACIS)	SAVE (PC only)	OPEN (1	from OACIS)	OPEN (from PC)	EXPORT	- 1		
DELETE	COPY PASTE	CUT		CONFIGURA	ATION MOV	E SIGNAL S	EQUENCE	MEASURE	ANALYSIS	GAGE
STEP	FUNCTION	TAG		Reset All Glo	bal Variables	Set Global Variable	Math1	Math2 Math3	Math4	MathA Slope
001	Reset All DO	Reset All DO				1				
002				STEP Tag	Set PrePress F	Position		INSEF	RT	MODIFY
003	Reset All Global Va	Reset All Global Variables								
004	Set Global Variable	Set PrePress Position			GLOBAL VARIA	BLE TO SET				
> 005	Program End	Program End			001;PrePress	Position				•
					SET VALUE					
					100	.0000				
					100	.0000				

- Select proper global variable (001; PrePress Position)
- Tag: Set PrePress Position
- Set Value: 100
 - > This global variable is to be used at following "Move to Position by Var" function.

I. Insert "Move to Position by Var"

2	#101-	Press shaft	ADA THEY	
	SAVE	(PC & OACIS)	SAVE (PC only) OPEN (rom OACIS) OPEN (from PC) EXPORT
D	LETE	COPY PASTE	CUT	CONFIGURATION MOVE SIGNAL SEQUENCE MEASURE ANALYSIS GAGE
	STEP	FUNCTION	TAG	Move to DI Move to Press Disable Move to Program Home Move to Position by Var Move to
	001	Reset All DO	Reset All DO	
	002	Set Status Binary	Reset Status Binary as Zero	STEP Tag Move to PrePress Position INSERT MODIFY
	003	Reset All Global Va.	. Reset All Global Variables	
	004	Set Global Variable	Set PrePress Position	AXIS #1 (Enabled)
<	005	Move to Position by	Move to PrePress Position	Position [mm] Speed [mm/s] Acc. [mm/s ²]
>	006	Program End	Program End	001;PrePress Position 50.0000 50.0000
				Max Load Limit [kN] Min Load Limit [kN] Absolute

- Tag: Move to PrePress Position
- Axis #1 Enabled
- Position: 001; PrePress Position
- Speed (mm/s): 50
- Acc (mm/s²): 50
- Max Load Limit (kN): 2
- Min Load Limit (kN): -2
- Absolute





J. Insert "Move to Load"

2 #101	-Press shaft			
SAV	E (PC & OACIS)	SAVE (PC only) OP	(from OACIS) OPEN (from PC) EXPORT	
DELETE	COPY PASTE	CUT	CONFIGURATION MOVE SIGNAL SEQUENCE MEASURE ANALYSIS GAGE	MATH
STE	P FUNCTION	TAG	Move to Position Move to Load Move to DI Move to Press Disable Move to Program Home I	Mor 🔍 🕨
001	Reset All DO	Reset All DO		
002	Set Status Binary	Reset Status Binary as Zero	STEP Tag Press Shaft INSERT MODIFY	
003	Reset All Global Va	Reset All Global Variables		
004	Set Global Variable	Set PrePress Position	AXIS #1 (Enabled)	
005	Move to Position by	Move to PrePress Position	Target Load Ch. Target Load [kN] Holding Time [sec]	
006	Move to Load	Press Shaft	Analog Input #1 5.0000 0.0000	
> 007	Program End	Program End	Speed [mm/s] Acc. [mm/s [*] 2] Max Position Limit [mm] Min Position Limit [n	am]
			1.0000 5.0000 150.0000 100.0000	

- Tag: Press Shaft
- Axis #1 Enabled
- Target Load Ch.: Analog Input #1
- Target Load [kN]: 5
- Holding Time [sec]: 0
- Speed [mm/s]: 1
- Acc [mm/s^2]: 5
- Max Position Limit [mm]: 150
- Min Position Limit [mm]: 100

K. Insert "DAQ"

2	#101-6	Press shaft												
	SAVE	(PC & OACIS)	SAVE (PC only) OP	N (from OACIS)	OPE	l (from	PC)	I	EXPORT	- 1				
DE	ETE	COPY PASTE	CUT	CONFIGUE	ATION N	OVE	SIGN/	AL S	EQUENCE	MEASUR	E A	NALYSIS	GAGE	MATH
	STEP	FUNCTION	TAG	Measure Al	or Position	DAQ	DAQ2	DAQD	DAQA	CAPTURE	Count DI			
	001	Reset All DO	Reset All DO											
	002	Set Status Binary	Reset Status Binary as Zero	STEP Tag	DAQ Press	Shaft				IN	SERT	N	IODIFY	
	003	Reset All Global Va	Reset All Global Variables											
	004	Set Global Variable	Set PrePress Position		TARGET STEE	•								
	005	Move to Position by	Move to PrePress Position		Press Shaft							•	•	
	006	DAQ	DAQ Press Shaft	>										
>	007	Move to Load	Press Shaft		DAQ X Value			DAQ Y Va	lue				-	
	800	Program End	Program End		Axis#1 Posi	tion	•	Analog I	nput #1	-	Yes S	AVE		
					DAQ Samplin	a Data		DAQ Fron		DAG	Te			
					-	-				DAG		000	-	
					0.0	0100			174.0000		187.0	000		
					Acceptable N	lin. Sam	pling Ra	ite (Refer	ence Only)				
					0.0	033								

- Insert DAQ function before target step.
 - > You need to select a step in the left program grid view where you want to insert new step before.
 - DAQ function should be located in front of target step. For example, if the target step number is 007, new DAQ step number should be smaller than that (001 ~006).
- Tag: DAQ Press Shaft
- Target Step: Press Shaft
- DAQ X Value: Axis #1 Position
- DAQ Y Value: Analog Input #1
- Yes SAVE
- DAQ Sampling Rate: 0.01
- DAQ From: 174
- DAQ To: 187

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 Acceptable Min. Sampling Rate (Reference Only): auto calculated value for DAQ Sampling Rate. DAQ Sampling Rate should be greater than or equal to this value.

DELE	ETE	COPY PASTE	CUI	CONFIGU	JRATION	MOV	E	SIGNAL	SEQUENCE	MEASURE ANAL
5	STEP	FUNCTION	TAG	Set Al or Po	sition	et BO Re	set All DO	Set Status Bina	ry Set Signal Fir	ter Set DO by Signal
	001	Reset All DO	Reset All DO					_	_	
1	002	Set Status Binary	Reset Status Binary as Zero	STEP Tag	Reset Sta	tus Binary a	as Zero		INSERT	MODIFY
	043	Reset All Gial Va	Reset All Globar Variables	1						
	04	Set Global Variable	Set PrePress Position		SET VALUE					
	0 5	Move to Postion by	Move to PrePress Position			0				
	006	DAO	DAO Press Shat							
1		1								

Tip: How to select a specific step on the "Program Grid View"

- > You can select a specific step by pressing one of program grid view columns (1 ~ 4).
- If you click step head (#1), it will cause to update Function Description Window per the selected step.
- Pressing #2 (Step Number Column), #3 (Step Function Column) and #4 (Step Tag Column) is same. It does nothing to Function Description Window.

L. Insert "Move to Program Home"

2	#101-Press shaft													
	SAVE	(PC & OACIS)	SAVE (PC only) OP	EN (fro	om OACIS)	OP	EN (from PC)	1	EXPORT	× 1				
DE	LETE	COPY PASTE	CUT		CONFIG	URATION	MOVE	SIGNA	L	SEQUENCE	MEASURE	ANALYSIS		
	STEP	FUNCTION	TAG		Disable	Move to Pro	gram Home	Move to Posit	ion by Var	Move to Pos	sition by Var #2	Dynamic Move to Position		
	001	Reset All DO	Reset All DO	- I										
	002	Set Status Binary	Reset Status Binary as Zero		STEP Tag	Move to Pro	ogram Home			INSE	RT M	DDIFY		
	003	Reset All Global Va	Reset All Global Variables											
	004	Set Global Variable	Set PrePress Position		AXIS	#1 (Enabled)								
	005	Move to Position by	Move to PrePress Position		AXIS #1									
	006	DAQ	DAQ Press Shaft		Speed [m	nm/s]	Acc. [m	m/s^2]	M	ax Load Limit [k	(N) Min L	oad Limit [kN]		
	007	Move to Load	Press Shaft			50.0000		50.0000		10.0000		-10.0000		
	008	Move to Program H	Move to Program Home	>										
>	009	Program End	Program End		AXIS	#2 (Disabled)								

- It is exactly same as "Move to Position" except that the position is specified by program configuration (see the I. Insert "Move to Position by Var")
 - Tag: Move to Program Home
 - Speed [mm/s]: 50
 - > Acc [mm/s^2]: 50
 - Max Load Limit [kN]: 10
 - Min Load Limit [kN]: -10



M. Insert "Analysis MinMaxAve"

🖌 #101-	Press shaft								
SAVE	(PC & OACIS)	SAVE (PC only) OPEN	(from OACIS)	OP	EN (from PC)) D	(PORT -		
DELETE	COPY PASTE	CUT	CONFIGU	JRATION	MOVE	SIGNAL	SEQUENCE	MEASURE	ANALYSIS
STEP	FUNCTION	TAG	Analysis N	linMaxAve	Analysis Turning	Torque #1	Analysis Press #1	Analysis Press #2	Analysis Fx Line
001	Reset All DO	Reset All DO	ľ					·	
002	Set Status Binary	Reset Status Binary as Zero	STEP Tag	Analysis P	ress Shaft		11	ISERT MODI	Y
003	Reset All Global Va	Reset All Global Variables			-				
004	Set Global Variable	Set PrePress Position		TARGET DA	-				1
005	Move to Position by	Move to PrePress Position		DAQ Pres	s Shaft			•	
006	DAQ	DAQ Press Shaft		ANALYSIS F	RANGE From	ANALYSIS RAI	NGE To		
007	Move to Load	Press Shaft		17	76.0000	184.	0000		
008	Move to Program H	Move to Program Home							
009		Analysis Press Shaft		GLOBAL VA	ARIABLE to Save I	Min			
> 010	Program End	Program End		003;Min Lo	bad			•]
				GLOBAL VA	ARIABLE to Save I	Max			
				002;Max L	.oad			•	
				GLOBAL VA	ARIABLE to Save A	Average			
				004;Avera	ge Load			•	
				GLOBAL VA	ARIABLE to Save \	/ariation			
				005;Load	Variation			•	

- Tag: Analysis Press Shaft
- Target DAQ: DAQ Press Shaft.
- Analysis Range From: 176
- Analysis Range To: 184
 - > Target DAQ range is normally to be wider than Analysis Range.
- Global Variable to Save Min: 003; Min Load
- Global Variable to Save Max: 002; Max Load
- Global Variable to Save Average: 004; Average Load
- Global Variable to Save Variation: 005; Load Variation

N. Insert "Gaging Global Variable" (Gaging Max Load)

1	#101-P	ress shaft	:														□ ×
ĺ	SAVE	(PC & OA	cis) (SAVE	(PC only)	OPEN (1	rom OACIS)) OPE	EN (from	PC)	EXPOR	т -				
DEL	ETE	COPY	PASTE	CUT				CONFIGUR		NOVE	SIGNAL	SEQUENCE	MEASU	E A	ANALYSIS	GAGE	MATH
	STEP	FUN	CTION	TAG				Gaging Glo	bal Variable	Gaging	Al or Position	Gaging	Global Variable	by Var	Check	Global Variable	
	001	Reset All	DO	Reset All	00			r									
	002	Set Status	s Binary	Reset Sta	tus Binary	as Zero		STEP Tag	Gaging Ma	x Load				INSERT		MODIFY	
	003	Reset All	Global Va	Reset All	Global Va	iables											
	004	Set Globa	I Variable	Set PrePre	ess Positio	n			GLOBAL VA		O GAGE					•	
	005	Move to P	osition by	Move to P	rePress P	osition			002;Max Lo							•	
	006	DAQ		DAQ Pres					LOWER LIM			UPPER LIM			_		
	007	Move to L		Press Sha						2.0000			4.0000				
	008		rogram H	Move to P	-												
	009		MinMaxAve			ft			CASE: PAS	s							
			lobal Vari						STEP TO JU	MP							
a.	011	Program B	End	Program E	nd				011-Progra	m End						•	
									SET STATU	S BIN (-1:	Don't Change	e Status Binar	y)		1		
									CASE: HIG	H REJEC	т						
									STEP TO JU	MP							
									011-Progra	m End						•	
									SET STATU	S BIN (-1:	Don't Change	e Status Binar	y)		2		
											_						
									CASE: LOV								
									STEP TO JU								
									011-Progra	m End						•	
									SET STATU	S BIN (-1:	Don't Change	e Status Binar	у)		3		

- Tag: Gaging Max Load
- Global Variable to Gage: 002; Max Load



- Lower Limit: 2
- Upper Limit: 4
 - > 2<= Max Load (Global Variable #2) <= 4 then it becomes "Pass Case".
- Case Pass Step to Jump: 011; Program End
- Case Pass Set Status Bin: 1
- Case High Reject Step to Jump: 011; Program End
- Case High Reject Set Status Bin: 2
- Case Low Reject Step to Jump: 011; Program End
- Case Low Reject Set Status Bin: 3
- O. Insert "Gaging Global Variable" (Gaging Min Load)

🥜 #101	Press sł	naft																
SAVE	(PC & (DACIS)	SAVE	(PC only)	I	OPEN (f	rom OACIS)	I	OPEN	l (from P	ic) (EXPORT	ſ	- 1			
DELETE	COPY	PASTE	CUT				CONFIGUE	ATION	M	DVE	SIGNAL	S	EQUENCE	MEAS	URE	ANA	ALYSIS	GAGE
STEF	F	UNCTION	TAG				Gaging Glo	obal Var	iable	Gaging /	Al or Position		Gaging G	lobal Varial	ole by	Var	Check	Global Variab
001	Reset	All DO	Reset All	DO			ľ											
002	Set St	atus Binary	Reset Sta	atus Binary as 2	Zero		STEP Tag	Gagir	ıg Min I	load					INS	ERT		MODIFY
003	Reset	All Global Va	Reset All	l Global Variable	s													
004	Set GI	obal Variable	Set PrePr	ress Position						IABLE TO	D GAGE							
005	Move	to Position by	Move to F	PrePress Positio	n			003;M	in Load	1								•
006	DAQ		DAQ Pres	ss Shaft				LOWE	RLIMIT			U	IPPER LIMI	т				
007	Move	to Load	Press Sh	aft						0.0000				1.5000				
008	Move	to Program H	Move to F	Program Home														
009	Analys	sis MinMaxAve	Analysis	Press Shaft				CASE	PASS									
010	Gagin	g Global Vari	Gaging M	lin Load		>		STEP 1	O JUM	Р								
011	Gaging	g Global Vari	Gaging M	lax Load				011-G	aging N	Aax Load								•
012	Progra	im End	Program	End							on't Chang	o Ste	atue Binan	0			1	
						-		CASE	нтен	REJECT								
									TO JUM									
								012-P	rogram	End								•
								SET ST	ATUS	BIN (-1: D	on't Change	e Sta	atus Binary	()			4	
								CASE	LOW	REJECT								
								STEP 1	го јим	Р								
								012-P	rogram	End								•
											on't Chang	e Sta	atus Binary	0			5	

- Tag: Gaging Min Load
- Global Variable to Gage: 003; Min Load
- Lower Limit: 0
- Upper Limit: 1.5
 - > 0<= Min Load (Global Variable #3) <= 1.5 then it becomes "Pass Case".
- Case Pass Step to Jump: 011; Gaging Max Load
- Case Pass Set Status Bin: 1
- Case High Reject Step to Jump: 012; Program End
- Case High Reject Set Status Bin: 4
- Case Low Reject Step to Jump: 012; Program End
- Case Low Reject Set Status Bin: 5



	SAVE (PC & OAC	CIS)	SAVE	(PC only)	OPE	N (from OACIS)		OPEN	(from PC)	I	E
DEL	.ETE	COPY	PASTE	CUT			CONFR	GURATION	I	MOVE		ę
	STEP	FUN	CTION	TAG			Reset All G	ilobal Var	iables	Set Global Va	riable	Set
-	001	Reset All	Global Va	Reset All G	lobal Variables							
	002	Set Multi G	v ∘	Set Multi G	Vs		STEP Tag	ResetA	ll Globa	l Variables		
	003	Jump by C	Condition #2	Jump by Co	ondition #2							
	004			PASS				and s	oloct ·	the step		
	DE	LETE	inary	Set Status	Binary as PASS				ciect	the step		
)PY	,	Jump to Ste	ер							
				FAIL								
		STE	inary	Set Status	Binary as FAIL							
Ĩ.,	CU	л 		Program Er	nd							

P. EDIT Program

- **DELETE**: If you want to remove step 001, left click the step and press DELETE on the menu.
- **COPY**: If you want to copy the specific step, left click the step and press COPY on the menu.
- **PASTE**: It is common for PASTE to be used with COPY or CUT. If you want to copy step 001 into step 003, copy step 001 and select step 003. And then press PASTE on the menu.
- CUT: It is same as "COPY" except that the selected original step is removed when you press CUT.

You can also select one of DELETE, COPY, PASTE and CUT on the pop-up menu by right clicking the step. And it is possible to select multiple steps by using Ctrl or Shift button as well.

	SAVE	(PC & OACIS)	SAVE (PC only) OPEN	(from OACIS)	OPEN (from PC)
DE	LETE	COPY PASTE	CUT		CONFIGURATION
	STEP	FUNCTION	TAG		Jump Tag Jump to Step
	001	Reset All Global Va	Reset All Global Variables		
1	002	Set Multi GVs	Set Multi GVs		STEP TagFAIL
	003	Jump by Condition #2	Jump by Condition #2		
	004	Jump Tag	PASS	<	Shift + Click
	005	Set Status Binary	Set Status Binary as PASS		
	006	Jump to Step	Jump to Step		Ctrl + Click
6	007	Jump Tag	FAIL	<	
	008	Set Status Binary	Set Status Binary as FAIL		
	009	Program End	Program End		
		-	-		

Q. SAVE Program

🖌 #101-P	ress shaft										_ D _ X
SAVE	(PC & OACIS)	SAVE (PC only)	OPEN (f	irom	OACIS)		OPEN (from PC)	l	EXPORT	- I	
DELETE	COPY PASTE	CUT		С	ONFIGURA	TION	MOVE SIGNAL S	Е	*.txt	RE ANALYSI	S GAGE MATH
STEP	FUNCTION	TAG							*.xls		
001	Reset All DO	Reset All DO		1	PROGRAM	INFORM	ATION		*.pdf		
002	Set Status Binary	Reset Status Binary as Zero			PROG	RAM NUM	IBER.	PRO	GRAM NAME	· · · · ·	DATETIME
003	Reset All Global Va	Reset All Global Variables			>	101		P	ress shaft		150331211423
004	Set Global Variable	Set PrePress Position									

- SAVE (PC & OACIS): Download the program to OACIS and save it at local PC.
 - Only one program is to be assigned for one program number. So if there is an existing program with same program number, it will overwrite the existing one.
- SAVE (PC only): Save the program at local PC only.
 - > You can save various programs with same program number if the program name is different.

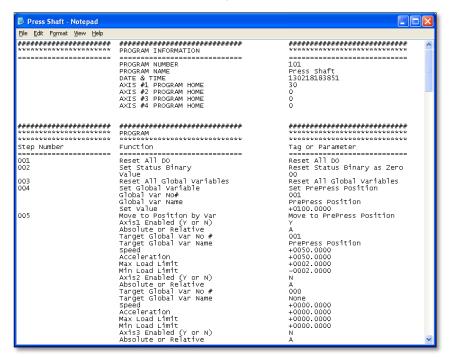


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• OPEN (from OACIS): You can open a program from the OACIS

PROGRAM LIST IN OACIS

- Read program list from OACIS.
- Select a program.
- OPEN (from OACIS)
- **OPEN (from PC)**: You can open a program from local PC.
- EXPORT *.txt: You can export the program with *.txt format



- **EXPORT *.xls**: You can export the program with *.xls format
- **EXPORT *.pdf**: You can export the program with *.pdf format.
- R. Program Manager

			PROGRAM LIST IN OACIS	
	SELEC	CT ALL	UNSELECT ALL	UPDATE PROGRAM LIST OF OACIS
		#	PROGRAM NAME	
Þ		001	None	
		002	None	ERASE SELECTED PROGRAM(s) IN OACIS
		003	None	
		004	None	ERASE ALL PROGRAMS IN OACIS
		005	None	
		006	None	
		007	None	DOWNLOAD SELECTED PROGRAM(s) TO OACIS
		008	None	
		009	None	DOWNLOAD ONE PROGRAM TO SELECTED No.
		010	None	DOWNLOAD WITHOUT CONFIRMATION
		011	None	BOWNEORD WITHOUT CONFIRMATION
		012	None	
		013	None	
		014	None	BACK UP ALL PROGRAMS FROM OACIS

- Select All: Select all programs.
- Unselect All: Deselect them all.



- Update Program List of OACIS: Show all the programs on OACIS.
- Erase Selected Program(s) in OACIS: Remove selected programs from OACIS.
- Erase All Programs in OACIS: Remove all the programs on OACIS except for a current loaded program.
- Download Selected Program(s) to OACIS: Download from selected programs on a local PC to OACIS at a time.
- **Download One Program to Selected No.:** Download from one program on a local PC to OACIS as many programs as selected on Program List In OACIS.
- Back Up All Programs From OACIS: Upload from all the programs on OACIS to a local PC.
- S. Now, you are ready to run your own program. Please try...



X. GRAPH VIEW OF MAIN SCREEN

: There are two different modes for this screen. One is "DAQ in Program" the other one is "Real Time" mode. You can see a graph in this screen from DAQ in the program or real time depending on the mode selection.

	My OACIS	- [Nut Runner 1 Axis_V	01.0] - [002_my N	ew Program]					
	PROGRAM	CONFIGURATION	VIEW	TOOL TEA	CHING DAQ CURV	/E ABOUT			
	New	🛃 Edit 🛛 💥	LocalConfig	SystemConfig	<u> Ila</u> Data	Graph	() ErrorCode		mmand
		RESULT		GRAPH		DI	/0		DATA
	CURSOR	SCALE	PLOT SOURCE	PLOT STYLE	SAVE MODE	CLEAR	MISC	Þ	•
			DAQ in Pr			GRA	PH		
	10 -		DAQ in Pr Real Time X Signal S	•					
1	9-		Y Signal S	ource					
	8-		Enable Plo	,					
			Enable Plo	ot3 ►					

A. [DAQ in Program] mode

 It will be updated on completing each cycle. Then you can select a DAQ and it will show you the last graph of the selected DAQ.

B. [Real Time] mode

• It is useful function to debug machine when you set up new equipment. You can see the graph in real time. And if you need, you can monitor multi plots at the same time as well.

C. How to Set [Real Time] mode.

: Default mode is [DAQ in Program], so you need to set some parameters to see the graph in real time.

• Select "Real Time" mode: [PLOT SOURCE] – [Real Time]

📕 My OA	CIS - [Nut l	Runner 1 Axis_V0)1.0] - [002_m	ny New Progra	am]								
PROGRA	M C	ONFIGURATION	VIEW	TOOL	TE	ACHING	DAQ CU	RVE	ABOUT				
 Ne	w Q	Edit 🛛 💥	LocalConfig	Syste	emConfi	g	Data		Graph	() Er	rorCode	÷	Command
	RE	SULT		GR	APH				D	i/O			DATA
CUF	SOR	SCALE	PLOT SOUR	CE PLOT	STYLE	SAV	VE MODE		CLEAR		MISC	۲	•
			Real T	ïme	•				GRA	PH			
10 -	_		DAQ L	ist	•								
c	off		X Sign	al Source	•								
9-	a,		Y Sign	al Source	•								
			Enable	e Plot2	+								
8 -			Enable	e Plot3	•								

Select "X" Signal Source

RESULT		GRAPH		DI/O	DAT	ΓA	REPC	RT
CURSOR	SCALE	PLOT SOURCE PL	OT STYLE	SAVE MODE	CLEAR	MIS	SC 🕑	•
		Real Time	-	SRAPH				
		DAQ List	+					
Off		X Signal Source	• •	Time (ms)	•			
) – Ø		Y Signal Source	• •					
		Enable Plot2	•					
8 -		Enable Plot3	•					





> "Time (ms)" is selected as "X" signal source

RESULT	Г		GRAPH		DI/C)	D	ATA		REPOR	т
CURSOR	SCALE	PI	OT SOURCE	PLOT STY	LE S	AVE MODE	CLEAF	1	MISC	Þ	
			Real Time	•	GRAP	н					
0 -			DAQ List		•						
Off			X Signal So	urce	•						
- a.			Y Signal So	urce	<u>۲</u>	Analog Inpu	t #1 👻				
			Enable Plot	2	 ▶ 						
-			Enable Plot	3		Analog Inpu Analog Inpu					
						Analog Inpu	t #3				
						Analog Inpu Analog Inpu					
						Analog Inpu					
						Analog Inpu Analog Inpu					
						Analog Inpu Analog Inpu					
; - 					÷,	Analog Inpu	t #11				
					(Analog Input					

Select "Y" Signal Source

- > "Analog Input #1" is selected as "Y" signal source
- > And you can select multi signal for "Y" source by pressing "Enable Plot2" and "Enable Plot3".

• Set "X" scale mode: [SCALE] – [X Axis]

RESUL	Г	GRAPH		DI/O	DATA		REPORT	-
CURSOR	SCALE	PLOT SOURCE	PLOT STYLE	SAVE MODE	CLEAR	MISC	Þ	•
	X Axi	S ►	Auto	-				
10-	Y Axi	s 🕨	Auto					
Off	 X Axi 	s Grid Visible	Flow Fixed					
9-	 Y Axi 	s Grid Visible	- Nea					

- > You can select one of "Auto", "Flow" and "Fixed"
- > "Flow" is best option of X scale for the Time signal source in the "Real Time Mode"
- Default: "Auto"
- Set "Y" scale mode: [SCALE] [Y Axis]

RESULT	Г	GRAPH		DI/O	DA	TA	F	REPORT
CURSOR	SCALE	PLOT SOURCE	PLOT STY	LE SAVE MODE	CLEAR	MI	SC	•
	X Axis	÷ ▶		GRAPH				
10 -	Y Axis	3 -	Auto	-				
9 – 0 (1		Grid Visible						
	(2234.2, 8	4305)						
8 -		La at an a af "Arat						

- You can select one of "Auto", "Flow" and "Fixed"
- Default: "Auto"
- "Auto" is selected
- > If you want to use "Fixed" scale, you need to set proper scale.



OACIScom



Set Cursor mode: [CURSOR]

RESULT	r i i i	GRAPH		DI/O	DATA		REPOR	г
CURSOR	SCALE	PLOT SOURCE	PLOT STYLE	SAVE MODE	CLEAR	MISC	▶	•
On Plot	•			GRAPH				
On Plot Floating								
9- 0.								
8-	(2234.2, 8.4305))						

You can select one of "On Plot" and "Floating"

Default: "On Plot" ≻

Set Cursor Visibility: [CURSOR] - check the "check box"

	RESULT			GRA	PH			DI	0		DA	TA			RE	PORT	
(CURSOR	SCALE		PLOT SC	DURCE	PLO	t styl	E	SAVE I	IODE	CLEAR		MI	SC		*	•
	On Plot	•						GRA	PH								
~	Cursor Visi	ble															
	Off																
9-	0.																
		(2234.2, 8	.4305)														
8 –																	

[&]quot;Visible" is checked. \triangleright

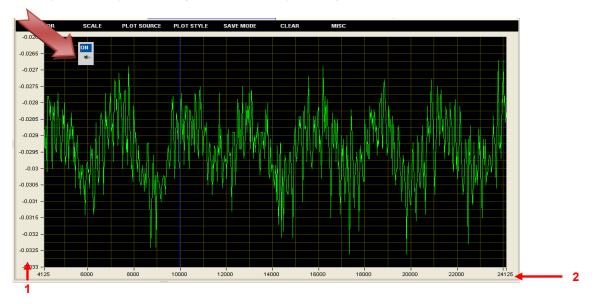
You can see the blue Cursor on the screen ⊳

DAQ Graph moving :

RESULT		6	GRAPH			DI/	0			DA	TA			RE	PORT	
CURSOR	SCALE	PLO	T SOURCE	PLO	T STYLE		SAVE N	IODE	(CLEAR		MI	SC		•	•
						GRA	PH									
0 – Off																
9- 0																
8 -	(2234.2, 8.4	305)														

۶ If the number of DAQ graphs is more than two, user can explore a different DAQ graph with arrow keys.

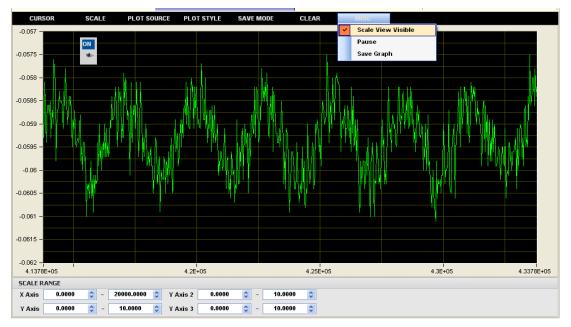
Now, you are ready to see the graph in real time by pressing the switch on the screen.



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- 1: You can see auto scale on the Y Axis
 - 2: You can see flow scale on the X Axis
 - > Scale width is 20,000. It is settable on the scale inputs



- Check "Scale View Visible"
- > Then, you can see "Scale Range" view at the below of Graph view.
- > Current set of X Axis is $0 \sim 20,000$. So the width is 20,000.
- > You also can set Y Axis scale.(if you selected "Fixed" mode for Y Scale above "e" step)
- > Y Axis2 is the range of "Plot2".
- Y Axis3 is the range of "Plot3".

D. You can clear the screen by pressing [CLEAR] menu button.

RESUL	T	GRAPH			DI/O			DATA	A			R	PORT	
CURSOR	SCALE	PLOT SOURCE	PLO	T STYLE	SAVE M	ODE	C	LEAR		MIS	C		*	₹
				GI	RAPH									
) -														
Off														
-														
×.														
3 -	(2234.2, 8	4305)												

E. [SAVE MODE]

			~								
RESULT		GRAPH	10		DATA					REPORT	
CURSOR	SCALE	PLOT SOURCE	PLOT STYLE	S/	VE MODE	(CLEAR	MIS	sc	•	•
				G 🗸	Image (.g	if)					
Off				ž	Data (.gph Text (.txt)						
9- 0.											
8 -	(2234.2, 8.430	5)									

- It is applicable with only "DAQ in Program" mode.
- OACIScom saves checked item on completing each cycle.
- If you are using with default setting, saving location is to be ".....\OACIScom\graph.

XI. VIEW - DATA

You can see and export test results and graph with specific format (like .xls or .txt) by using [VIEW] menus.

A. DATA - COMMAND



You can open data view by pressing [VIEW] - [Data].

P	ROGRAM :	OACIScom_	Result_001 2:49:02 PM		/3/2015 2:49:(• •	VIE	W from PC	SEAR	CH for DB and	I VIEW		
	SERIAL :	1/24/2014	2:49:02 PM) ~ 4	5/2015 2:49:	02 PM 🕃		1		1			
	CN1 :	0	с		d			g		h			
	CN2	Save	Var1	Var2	Var3	Var4	Var5	Var6	Var7	Var8	Var9	Var 10	Var1
	135	YYYYYYYYY	EngagedPo	EngagedLoad	SlidingMinLoad	SlidingMaxL	SeatingPosi	SeatingMinL	SeatingMax	Pull_RetenS	Pull_RetenL	PressDepth	Globa
	143	YYYYYYYYY	EngagedPo	EngagedLoad	SlidingMinLoad	SlidingMaxL	SeatingPosi	SeatingMinL	SeatingMax	Pull_RetenS	Pull_RetenL	PressDepth	Globa
	148	YYYYYYYYY	EngagedPo	EngagedLoad	SlidingMinLoad	SlidingMaxL	SeatingPosi	SeatingMinL	SeatingMax	Pull_RetenS	Pull_RetenL	PressDepth	Globa
>	156	YYYYYYYYY	EngagedPo	EngagedLoad	SlidingMinLoad	SlidingMaxL	SeatingPosi	SeatingMinL	SeatingMax	Pull_RetenS	Pull_RetenL	PressDepth	Globa
		į					j			k		I	
<													
	DACIS MEMOR	MANAGER					+			+		•	
		OATA of OACI				_		3 FILE SIZE		K UP LOCAL		BACK UP fr	

- a. **SELECT TARGET PROGRAM:** Firstly you should select a program number to view test results.
- b. TIME: If you want to view test results with time period, check this item.
- c. **FROM TIME:** You can select time period within you want to see the data. It is beginning time selection.
- d. TO TIME: You can select time period within you want to see the data. It is end time selection.
- e. **SERIAL:** If you want to search test results with a serial number, check this item and input the serial number you want.
- f. CN1: If you want to search test results with a CN1 number, check it and type in the number.
- g. VIEW from PC: You can read data from the selected target program.
- h. SEARCH for DB and VIEW: You can select target DB file from not a default location.
 - If you did back-up a DB file in a specific location or in your portable memory device and you want to see the data from the file. In this case, you can use this button.
- i. **ERASE DATA of OACIS:** You can delete all data of OACIS in consideration of OACIS's performance improvement. But you should be careful to execute erasing data.
- j. SHOW LOCAL DB FILE SIZE: You can check Hard Disk Drive (in local computer) usage capacity about OACIScom data.
- k. **BACK UP LOCAL DB**: If you want to format the local computer for OACIS, above all you should backup local DB in local computer.



- I. BACK UP from OACIS: You can read data from your OACIS and save them in your local PC.
 - If you ran your OACIS without connection with your local PC, you may need this function to see ≻ previous data.

B. VIEW from PC

1	🚹 My OAG	CIS - D	ATA	-	~ <u> </u>	_	-	-		4	_		1.00	
			COMMAND			RAV	V DATA			CHART			SPC	
	☑ TIN	4E : [Result_001 2:03:36 PM	⋛ ~ 4/	/3/2015 9:03::	▼ 36 PM 😂	VIE	W from PC	SEAR	CH for DB and	IVIEW		
	CN2		Save	Var 1	Var2	Var3	Var4	Var5	Var6	Var7	Var8	Var9	Var 10	Var11
		135	YYYYYYYYY	EngagedPo	EngagedLoad	SlidingMinLoad	SlidingMaxL	SeatingPosi	SeatingMinL	SeatingMax	Pull_RetenS	Pull_RetenL	PressDepth	Global
		143	YYYYYYYYY	EngagedPo	EngagedLoad	SlidingMinLoad	SlidingMaxL	SeatingPosi	SeatingMinL	SeatingMax	Pull_RetenS	Pull_RetenL	PressDepth	Global
		148	YYYYYYYYY	EngagedPo	EngagedLoad	SlidingMinLoad	SlidingMaxL	SeatingPosi	SeatingMinL	SeatingMax	Pull_RetenS	Pull_RetenL	PressDepth	Global
	8.	156	YYYYYYYYYY	EngagedPo	EngagedLoad	SlidingMinLoad	SlidingMaxL	SeatingPosi	SeatingMinL	SeatingMax	Pull_RetenS	Pull_RetenL	PressDepth	Global

- Set the time period to see the data as above and select proper Program then click "VIEW from PC" • button.
- You will see some update like the above picture.
- The selected program may have three "save" box checked global variables in the program configuration with names, "Angle Difference", "Angle1" and "Angle2".
- You may see different results depending on your actual system.

C. DATA - RAW DATA

Please try to click the "RAW DATA" tab. And you will see the raw data view as below.

	(COMNAND			RAW D	ATA		CHART		SPC	
N1	CN2	Date NTime	FM	Serial No	Engaged Position	Engaged Load	Sliding Min Load	Sliding Max Load	Seating Position	Seating Min Load	Seating Max
142	135	140124191357	1	None	33.8107	0.0100000	0 1977999	0.8087	53 5533	0.7535	17
146	143	140124193901	1	None	33.9712	0.6801	0.214	0.897	53.7165	0.8954999	
147	143	140124194917	1	None	33.8874	0.8663	0.1867	0.8165	53.6342	0.8172	
151	148	140124195602	1	None	33.9792	0.5193	0.1804	0.9089	53.6014	0.9091999	
152	148	140124200803	1	None	33.9484	0.7504	0.1959999	0.7123999	53.4032	0.7111999	
153	148	140204153058	15	None	5.1312	1.2834999	0	0	0	0	
154	148	140204153505	1	None	4.8784	0.6191999	0.5754	0.9324999	23.5992	0.8596999	
155	148	140204163233	7	None	5.0295	1.2474999	0	0	9.9902	0.6628999	
159	156	140204170248	15	None	4.5442	1.1761	0	0	0	0	
160	156	140204170741	7	None	5.992	0.3371	0.3885999	0.8014	23.402	0.8214	
161	156	140204211343	1	None	5.9929	0.3983	0.4443	1.0281	23.600198	0.7683	
III MAND		V ALL RECORD	S		A SHOW AI	LL COLUMNS	EXPORT T	O EXCE	XPORT TO TEXT	EXPORT TO)») 0 PD /
SHO	V SELI	ECTED RECO	S ONI	Y	SHO N SELECTI	ED COLUI <mark>AIS</mark> OF	VLY				

CN1: Unique cycle number defined by OACIS automatically. a.



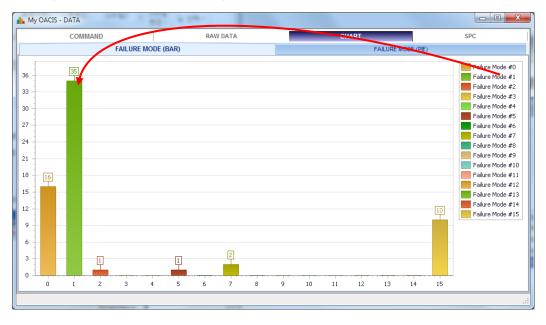
- b. **CN2:** Global Variable Information Number to be matched with the unique cycle number.
- c. **DateNTime:** Saved date and time information.
- d. FM: Failure Mode. It is matched with status binary information.
- e. **Serial No:** Scanned information is to be saved here. If you don't have connected scanner, you will see "None".
- f. You might set the global variables as below.

	PARAMETER	NAME	SAVE
	Global Var#1	EngagedPosition	V
	Global Var#2	EngagedLoad	
	Global Var#3	SlidingMinLoad	
	Global Var#4	SlidingMaxLoad	V
	Global Var#5	SeatingPosition	
	Global Var#6	SeatingMinLoad	V
	Global Var#7	SeatingMaxLoad	V
2.	Global Var#8	Global Variable #8	
	Global Var#9	Global Variable #9	
	Global Var#10	Global Variable #10	
	Global Var#11	Global Variable #11	

- g. SHOW ALL RECORDS: Show all records.
- h. **SHOW SELECTED RECORDS ONLY:** Show records per the selected global variable information on the "COMMAND" tab.
- i. SHOW ALL COLUMNS: Show all columns.
- j. SHOW SELECTED COLUMNS ONLY: Show only "SAVE" checked global variables.
- k. **EXPORT TO EXCEL:** Export the raw data with "*.xls" format.
- I. **EXPORT TO TEXT:** Export the raw data with "*.txt" format.
- m. EXPORT TO PDF: Export the raw data with "*.pdf" format.

D. DATA - CHART - FAILURE MODE (BAR)

Please try to click the "CHART" tab. And you will see the bar chart as below.



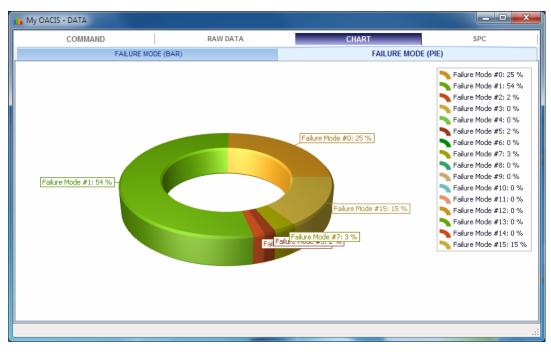
- It shows a bar chart per the raw data. Each bar represents quantity of each failure mode.
- In the above picture, 42 parts out of 62 parts cycled with "Failure Mode #1".



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E. DATA - CHART - FAILURE MODE (PIE)

You also can see the pie chart with same data of bar chart.



F. DATA – SPC (Statistical Process Control)

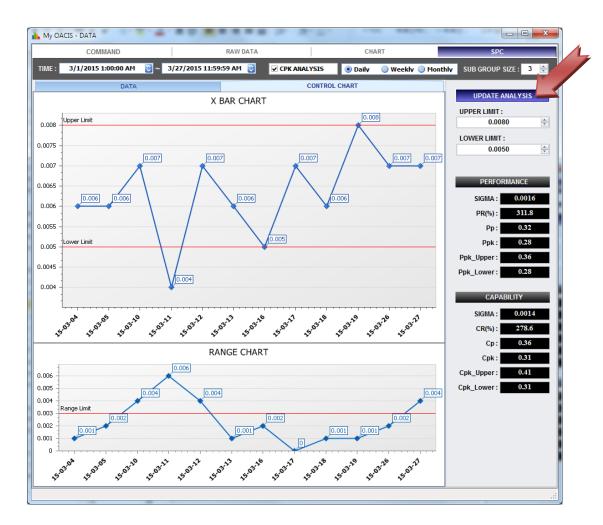
With OAICIS's test result data, user can evaluate sigma, PR(%), Pp, Ppk values for Statistical Process Control and see X BAR chart, RANGE chart of control chart

• Above all, user must select a column in RAW DATA TAB with clicking the column.

_		C	OMMAND	COMMAND						CHART		SPC	
	CN1	CN2	Date NTime	FM	Serial No	Initial Lash	Final Lash	1st Trial Lash	2nd Trial Lash	3rd Trial Lash	4rd Trial Lash	5th Trial Lash	Initial Max To
>	3885	1262	150303151438		8950610002	7.991144	0.0061687	0.0131688	0.0061687	0			30
	3886	1262	150304161740	1	8950630002	6.384822	0.0060127	0.0148169	0.0121751	0.0060127	0	0	
	3887	1262	150304162130	1	8950630004	5.781192	0.0057845	0.015146	0.0114841	0.0057845	0	0	
	3888	1262	150304165414	1	8950630008	6.8083904	0.006598	0.0170174	0.011524	0.006598	0	0	34
	3889	1262	150304170927	1	8950630010	7.125068	0.0049622	0.0150102	0.0102285	0.0049622	0	0	30
	3890	1262	150304171044	1	8950630011	6.8815432	0.006191	0.0190029	0.0153028	0.006191	0	0	
	3891	1262	150304171550	1	8950630007	6.7732488	0.0070012	0.0141091	0.0070012	0	0	0	3
	3892	1262	150304175340	1	8950630013	7.0452192	0.0084967	0.0167056	0.0084967	0	0	0	
1	3893	1262	150305145913	4	8950640001	6.6546624	0.0066943	0.0134193	0.0066943	0	0	0	

- And user should start in SPC tab.
 - 1. Set start time, end time.
 - 2. If you want to use CPK ANALYSIS, check the option.
 - 3. Set the proper sub group size, upper limit and lower limit
 - 4. As clicking UPDATE ANALYSIS, you can see the result as sigma, PR(%), Pp. Ppk value.
 - 5. DATA tab-> X Bar, Range / CONTROL tab-> X BAR CHART, RANGE CHART









XII. VIEW - GRAPH

: You can see a graph that stored in your local PC. And you also export it with several different formats.

💧 My	OACIS - [Nut Runner 1 Axis_	V01.0]	- [101_Press shaft]		1_			
PROC	GRAM CONFIGURATIO	N	VIEW TOO		FEACHING DAQ CUR	RVE A		
	New 💽 Edit 🛛 💥	Loca	Data Graph		Config 🛛 🛄 Data	Gr	aph () ErrorCoc	le 🔶 Command
STEP	FUNCTION	TAG	Event Log		RESULT		GRAPH	DI/O
001	Reset All DO	Reset	Error Code		IMIZE SCREEN	SETTING	EXPORT GRA	PH PRINT
002	Set Status Binary	Reset		_			REPORT CURVE	
003	Reset All Global Variables	Reset	All Global Variable:				REPORT CORVE	
004	Set Global Variable	Set Pre	Press Position	10 -				
005	Move to Position by Var	Move t	o PrePress Position					
006	DAQ	DAQ P	ress Shaft	9-				
007	Move to Load	Press	Shaft					
800	Program End	Progra	m End					
				- 8 -				

A. [VIEW] - [Graph]

My OACIS - Graph					• X
SINGLE OPEN	MULTI OPEN	CLEAR	SAVE		
		OLDER C:\Prog	ram Files (x86)₩ATA₩OAC	1. Zoom: <shift> + Mouse Left Button 2. Undo Zoom: <shift> + Mouse Right But 3. Pan: <ctl> + Mouse Left Button</ctl></shift></shift>	tton Click
10 -					

- B. [OPEN] [SINGLE OPEN] / [MULTIN OPEN] / [BROWSE FOLDER]
 - **SINGLE OPEN**: You can open a file of graph.
 - MULTI OPEN: You can open many graph files at the same time.
 - **BROWSE FOLDER**: You can select a graph folder and open all the graphs in the folder by pressing the left or right arrow button.
- **C.** Select a graph file (*.gph) and press "Open".

SELECT GRAPH FILE				×
OACISc	om 🕨 graph 🕨 2015 🕨 2015-03 🕨 2015-03-31	- ↓	Search 2015-03-31	Q
Organize 👻 New fol	der		!≡ ▼	
🔆 Favorites	Name	Date modified	Туре	Size 🔺
	001_00000300_DAQ1_150331102643.gph	3/31/2015 10:26 AM	GPH File	165
🥽 Libraries	001_00000300_DAQ2_150331102643.gph	3/31/2015 10:26 AM	GPH File	165
	001_00000300_DAQ3_150331102643.gph	3/31/2015 10:26 AM	GPH File	165
輚 Homegroup	001_00000300_DAQ4_150331102643.gph	3/31/2015 10:26 AM	GPH File	165 😑
	001_00000315_DAQ1_150331104230.gph	3/31/2015 10:42 AM	GPH File	165
👰 Computer	001_00000315_DAQ2_150331104230.gph	3/31/2015 10:42 AM	GPH File	165
	001_00000315_DAQ3_150331104230.gph	3/31/2015 10:42 AM	GPH File	165
年 Network	001_00000315_DAQ4_150331104230.gph	3/31/2015 10:42 AM	GPH File	165
	002_00008278_DAQ1_150331104615.gph	3/31/2015 10:46 AM	GPH File	161
	002_00008278_DAQ2_150331104615.gph	3/31/2015 10:46 AM	GPH File	161
	002_00008278_DAQ3_150331104615.gph	3/31/2015 10:46 AM	GPH File	161
	002_00008278_DAQ4_150331104615.gph	3/31/2015 10:46 AM	GPH File	161 👻
	•	111		+
File	name: 001_00000300_DAQ1_150331102643.gph	-	Graph File(*.gph)	
		(<u>O</u> pen ▼	Cancel

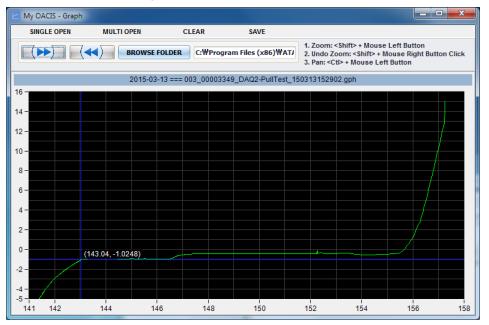
- 001: Program Number
- 00000300: Cycle Number
- DAQ1: DAQ Tag Name
- 150331102643: Date and Time, 2015-03-31 10:26:43



- D. You can set the property of graphs before plotting on the screen.
 - Each graph can get its own scale if you select "ITS OWN" in SET PLOT PROPERTY.
 - When you open the first graph on the screen, we recommend "COMMON" selection for a proper view.

SET PEOT PROPERTY	
PLOT COLOR	Lime
AXIS MODE	© COMMON ○ ITS OWN
CURSOR	CURSOR VISIBLE
	SHORT LINE ○ LONG LINE
	_
ОК	

E. You can see the selected graph as below.







F. You can open multiple graphs for comparison.



- **G.** You can adjust the graphs on the screen to fit your taste.
 - Zoom Window: <Shift> + Mouse Left Button.
 - Zoom Scroll: <Shift> + Scroll Key
 - Undo Zoom: <Shift> + Mouse Right Button
 - Pan: <Ctrl> + Mouse Left Button
- H. You can erase all the graphs shown on the screen by pressing "CLEAR" button.
- I. You can save it with several formats.

💹 OACIScom - Graph	7.80.8		P . M. C.	
SINGLE OPEN	MULTI OPEN	CLEAR	SAVE	
			*.gif	1. Zoom: <shift> + Mouse Left Button</shift>
BROWSE FOLDER			*.txt	2. Undo Zoom: <shift> + Mouse Right Button Click 3. Pan: <ctl> + Mouse Left Button</ctl></shift>
			*.xis	

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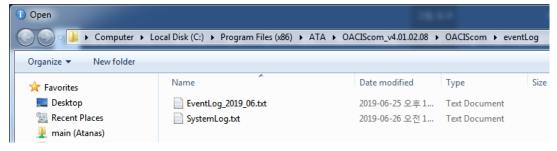


XIII. VIEW – Event Log

A. [VIEW] – [Event Log]

1 N	Iy OACIS ·	· [Nut Runner 1 Axis_	V01.0]	- [101_Press shaf	t]												
PR	OGRAM	CONFIGURATIO	N	VIEW TO	OL	T C	HING DAG		E	ABOU	т						
	New	Edit	Loca	Data Graph		ng		Data	K.	Graph	0	Error	Code	•	¢	Com	ımand
STE	Р	FUNCTION	TAG	Event Log		RE	SULT			G	RAPH				D	0/0	
001	Reset A	All DO	Reset	Error Code	e.	IMIZE S	CREEN		SETTING		EXP	ORT G	RAP	ł		PRIN	IT
002	Set Sta	tus Binary	Reset		_					DE	PORT	CUDV	/E				
003	Reset A	All Global Variables	Reset	All Global Variable						RE	PURI	CURV	E				
004	Set Glo	bal Variable	Set Pro	ePress Position	10 -												

• EventLog Folder: There are two txt files in it. One is EventLog and the other is SystemLog.



B. Event Log View

• EventLog File: Users can go over the error messages when it happened

REFRE SH OPEN	
[2019/6/24 15:51:16] : Success to Set OACIS TIME as Local PC	1
[2019/6/24 15:51:17] : Connected	
[2019/6/24 19:02:59] : 4.01.02.08 / V01.0 / 190117162123 / 001 / 190624190148 / 1654 / 1240 : Error: 511 // Step at	t 042 👘
[2019/6/24 19:05:02] : 4.01.02.08 / V01.0 / 190117162123 / 001 / 190624190148 / 1654 / 1240 : Error: 402 // Step at	t 043
[2019/6/24 19:14:35] : 4.01.02.08 / V01.0 / 190117162123 / 001 / 190624190148 / 1654 / 1240 : Error: 511 // Step at	t 008
[2019/6/24 19:17:28] : 4.01.02.08 / V01.0 / 190117162123 / 001 / 190624191701 / 1654 / 1240 : Error: 511 // Step at	t 042
[2019/6/24 19:21:24] : 4.01.02.08 / V01.0 / 190117162123 / 001 / 190624192038 / 1654 / 1240 : Error: 511 // Step at	t 043
[2019/6/24 19:30:49] : 4.01.02.08 / V01.0 / 190117162123 / 001 / 190624192942 / 1654 / 1240 : Error: 511 // Step at	t 056

• **SystemLog File:** It records the date, time, program number and name when users modified and saved their program.

i OACIScom - Event Log	×
REFRE SH OPEN	
[2019/6/24 15:53:28] : 002_OP30_Daimler183A_v00.03_190624155325 : Overwritten	
[2019/6/24 15:58:38] : 002_OP30_Daimler183A_v00.03_190624155836 : Overwritten	
[2019/6/24 16:49:02] : 002_OP30_Daimler183A_v00.04_190624164859 : Overwritten	
[2019/6/24 18:25:12] : 002_OP30_Daimler183A_v00.05_190624182509 : Overwritten	
[2019/6/24 18:25:56] : 002_OP30_Daimler183A_v00.05_190624182553 : Overwritten	
[2019/6/24 18:44:50] : 001_OP30_Daimler183C_v00.06_190624184446 : Overwritten	
[2019/6/24 18:48:02] : 001_OP30_Daimler183C_v00.06_190624184800 : Overwritten	
[2019/6/24 18:58:23] : 001_0P30_Daimler183C_v00.06_190624185821 : Overwritten	_
	×.

- **REFRESH:** It will refresh updated log file on the screen.
- **OPEN:** You can open the other log file.



XIV.VIEW – Error Code

A. [VIEW] – [Error Code]

👔 My	My OACIS - [Nut Runner 1 Axis_V01.0] - [101_Press shaft]										
PROC	GRAM CONFIGURATIO	N	VIEW TOOL	TEACHING DAQ CURVE	ABOUT						
	New 💽 Edit 🛛 💥	Loca	Data Graph	Data	Graph	() ErrorCode	Command				
STEP	FUNCTION	TAG	Event Log	RESULT	GR	APH	DI/O				
001	Reset All DO	Reset	Error Code	IMIZE SCREEN SI	ETTING	EXPORT GRAPH	PRINT				
002	Set Status Binary	Reset			DED	ORT CURVE					
003	Reset All Global Variables	Reset	All Global Variable:		REP	OKICOKVE					
004	Set Global Variable	Set Pre	ePress Position 10 -								

• It shows error code.

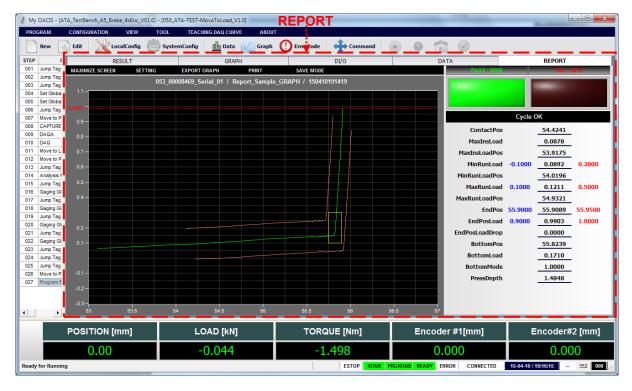
D ERROR CODE	x
##	= /
## Axes Error =================================	
## Axis#1 ====================================	
600: Axis #1 Servo Drive Alarm / See the manual	
601: Axis #1 Position Control Limit / See the manual	
602: Axis #1 Positive Limit / Verify Positive Limit Sensor	
603: Axis #1 Negative Limit / Verify Negative Limit Sensor	
604: Axis #1 Homing Load Limit / See the manual	
605: Axis #1 Position Min Limit / Verify Negative Position Limit in System Configuration	
606: Axis #1 Position Max Limit / Verify Positive Position Limit in System Configuration	
607: Axis #1 Load Min Limit	
608: Axis #1 Load Max Limit	
609: Axis #1 Position Min Limit in Move Cycle / Verify "Min Position Limit" in the Step	
610: Axis #1 Position Max Limit in Move Cycle / Verify "Max Position Limit" in the Step	
611: Axis #1 Load Min Limit in Move Cycle / Verify "Min Load Limit" in the Step	
612: Axis #1 Load Max Limit in Move Cycle / Verify "Max Load Limit" in the Step	
613: Axis #1 Move to Position with Load Limit Time Limit	
614: Axis #1 Jog Load Min Limit	
615: Axis #1 Jog Load Max Limit	
## Axis#2 ====================================	
700: Axis #2 Servo Drive Alarm / See the manual	
701: Axis #2 Position Control Limit / See the manual	
702: Axis #2 Positive Limit / Verify Positive Limit Sensor	
703: Axis #2 Negative Limit / Verify Negative Limit Sensor	
704: Axis #2 Homing Load Limit / See the manual	
705: Axis #2 Position Min Limit / Verify Negative Position Limit in System Configuration	
706: Axis #2 Position Max Limit / Verify Positive Position Limit in System Configuration	
707: Axis #2 Load Min Limit	
708: Axis #2 Load Max Limit	
709: Axis #2 Position Min Limit in Move Cycle / Verify "Min Position Limit" in the Step	
710: Axis #2 Position Max Limit in Move Cycle / Verify "Max Position Limit" in the Step	
711: Axis #2 Load Min Limit in Move Cycle / Verify "Min Load Limit" in the Step	
712: Axis #2 Load Max Limit in Move Cycle / Verify "Max Load Limit" in the Step	
713: Axis #2 Move to Position with Load Limit Time Limit	
714: Axis #2 Jog Load Min Limit	
715: Axis #2 Jog Load Max Limit	
## Axis#3 ====================================	
800: Axis #3 Servo Drive Alarm / See the manual	



XV. REPORT

A. Description

: A skill of OACIScom about REPORT makes progress by OACIS user's demand. User can see at a look elaborate graphs included teaching curves and others as test results and also can check PASS/FAIL with LED on/off. Of course, after an OACIS program cycle finishes, user can confirm result values of a test. REPORT view is based on user's convenience as below.



B. Maximize Screen

: User can hide program column on the left and the lowest signal label to maximize the report screen. To return previous screen, user have only to press "RETURN SCREEN"

C. Export Graph

: User can save current graph in the gif image file format.

D. Print

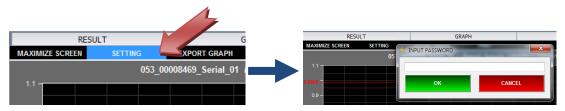
: User can print current graph.

E. Save Mode

: User can selectively auto-save graphs and data displayed in report window as image files(.gif or .pdf).

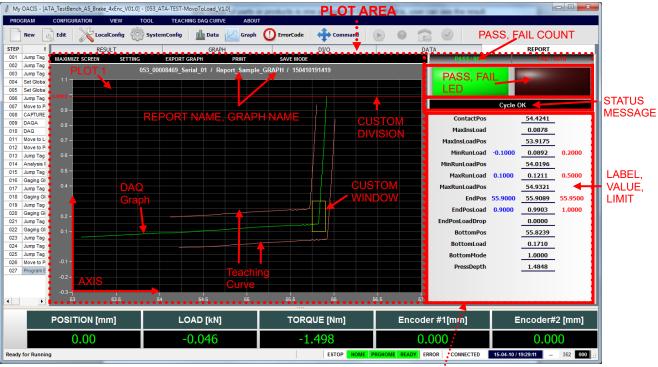
F. Setting

: For Report format setting, you must click "SETTING", and it will require you to input password. If you didn't change the password, default is "1".



• **REPORT FORMAT SETTING**: User can change DATA PANEL docking position, font size, font color and line color of default PLOT AREA as one want. It means user can see more analytical result at a look. After all setting of OACIS, the end user generally can watch a test with REPORT view.





Note: User can customize the report setting per one program of 120 programs. Usually, one model of parts or products is one program of OACIS. That is, user can see the result DAQ curves by program as report setting.

DATA PANEL

REPORT FORMAT SETTING				_							
UPDATE	CT PROGRAM NUMBER	DEFAULT •	USE DEFAULT SETTING	JSE PROGRAM SETTING	VE AS 000						
CEPORT NAME : Report_Sample GRAPH NAME : GRAPH											
PLOT1 PLOT2 PLOT3	PLOT4 PLOT5 P	LOT6 PLOT7 PLOT8	PLOT9 PLOT10 AXIS	CUSTOM DIVISION CUSTOM WINDOW	MISC STATUS MESSAGE						
PLOT#1 (ENABLED)											
PLOT SOURCE	DAQA-Bottom			•							
AXIS X	AxisX1	•									
AXIS Y	AxisY1	-									
CURSOR VISIBLE	CURSOR NON-	/ISIBLE									
PLOT COLOR	Lime	•									
REGRESSION LINE RANGE	0.0000 🚔 ~	0.0000 ≑									

- UPDATE: After user finishes report setting, user finally saves the report setting properties to local PC.
- SELECT PROGRAM NUMBER: User can save the report setting per one program. If User sets number #1 program as program setting, not default setting, user selects program number and changes "USE DEFAULT SETTING" to "USE PROGRAM SETTING".

UPDATE SELECT PROGRAM NUMBER	DEFAULT	Ŧ	USE DEFAULT SETTING	O USE PROGRAM SETTING	SAVE AS	000	×
REPORT NAME : Report_Sample			GRAPH NAME	: GRAPH			

SAVE AS: Current Setting easily can be copied to the other program number.





• **REPORT NAME & GRAPH NAME:** User can assign report name and graph name expressed in the upper end of PLOT AREA.

Note: Above items are supposed to be set for saving after report settings below are completely done.

• **PLOT1 ~ PLOT10:** User can see DAQ curves, Teaching Curves and Regression Lines. By setting from PLOT1 to PLOT10, user can compare with in total 10 lines per one program.

REPORT FORMAT SETTING								_
UPDATE SELE	CT PROGRAM NUMB	ER DEFAULT	▼	AULT SETTING	USE PROGRAM SETT	ING	EAS	000 🚔
REPORT NAME : Report_San	npie			GRAPH NAME	GRAPH			
PLOT1 PLOT2 PLOT3	PLOT4 PLOT5	PLOT6 PLOT7	PLOT8 PLOTS	PLOT10 AXIS	CUSTOM DIVISION	CUSTOM WINDOW	MISC	STATUS MESSAGE
PLOT#1 (ENABLED)								
PLOT SOURCE	DAQA-Bottom				•	•		
AXIS X	AxisX1	•						
AXIS Y	AxisY1	•						
CURSOR VISIBLE	CURSOR NO	N-VISIBLE						
PLOT COLOR	Lime	•						
REGRESSION LINE RANGE	0.0000 🚔 ~	0.0000 🚔						

- > **PLOT #**1 (ENABLED, DISABLED): Button On -> ENABLED, Button Off -> DISABLED
- > **PLOT SOURCE:** One of Teaching Curve, DAQ Curve and Regression Line.
- > **AXIS X:** Assigned axis X by AXIS tab menu of REPORT FORMAT SETTING.
- > **AXIS Y:** Assigned axis Y by AXIS tab menu of REPORT FORMAT SETTING.
- **CURSOR VISIBLE:** Move between a raw data point and next raw data point.
- > **PLOT COLOR:** Curve's Color
- REGRESSION LINE RANGE: If PLOT SOURCE is selected Regression Line, user can plot regression lines in range area.



AXIS: According to different measures each axis, user can assign the number of axis X, Y.

REPORT FORMAT SETTING										
UPDATE SELECT PROG	RAM NUMBER	DEFAULT	•) USE DEF/	AULT SETTI	IG 🤇	USE PROGRAM SET	TING	VE AS	000
PORT NAME : Report_Sample					GRADH	NAME ·	GRAPH			
			DI OTO	01.070						
OT1 PLOT2 PLOT3 PLOT4	PLOT5 PLOT6	PLOT7	PLOT8	PLOT9	PLOT10	AXIS	CUSTOM DIVISION	CUSTOM WINDOW	MISC	STATUS MESSAGE
	AXIS SCALE N	IODE		SC	ALE					
AXIS X #1 (VISIBLE)	Fixed	•	53.00	00 🚖	~ 57.00	00 🚖				
	64	64, 64		•]					
	MINOR GRID VIS	SIBLE	64	64, 64		-]			
AXIS X #2 (NON-VISIBLE)	Auto Scale Loose	• · · ·	0.00	00 ×	~ 0.000	0				
AXIS X #3 (NON-VISIBLE)	Auto Scale Loose	• · · ·	0.00	00 ×	~ 0.000	0				
AXIS X #4 (NON-VISIBLE)	Auto Scale Loose	• · · ·	0.00	00 ×	~ 0.000	0				
AXIS X #5 (NON-VISIBLE)	Auto Scale Loose	÷ – – •	0.00	00 <u>*</u>	∼ 0.000	0				
AXIS Y #1 (VISIBLE)	Fixed	•	-0.30	00 🚖 ·	~ 1.100	0 🌲]			
	MAJOR GRID VI	SIBLE	64,	64, 64		•				
	MINOR GRID VIS	SIBLE	64	64, 64		•				
AXIS Y #2 (NON-VISIBLE)	Auto Scale Loose	÷ – – – –	0.00	00 <u>*</u>	~ 0.000	0 <u>*</u>				
AXIS Y #3 (NON-VISIBLE)	Auto Scale Loose	· · ·	0.00	00 ×	~ 0.000	0 ×				
AXIS Y #4 (NON-VISIBLE)	Auto Scale Loose	÷ – – –	0.00	00 ×	~ 0.000	0]			
AXIS Y #5 (NON-VISIBLE)	Auto Scale Loose	÷ – –	0.00	00 <u>*</u>	~ 0.000	0				

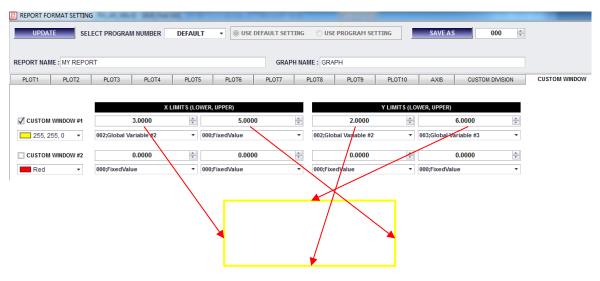
- > AXIS X #1 (VISIBLE, NON-VISIBLE) : Button On -> VISIBLE, Button Off -> NON-VISIBLE
- AXIS SCALE MODE (Auto Scale Loose, Fixed): "Auto Scale Loose" is regardless of ranges beside scale value. X, Y axis ranges are followed by ranges of each PLOT SOURCE. On the other hand, "Fixed" is followed by numerical values of SCALE item.
- SCALE: If AXIS SCALE MODE is "Fixed", this value is fixed as ranges of AXIS.
- MAJOR GRID VISIBLE (CHECK): In the PLOT AREA, major scale line of signed value. Visible -> Checked, Invisible -> Unchecked. The line color can be changed.
- MINOR GRID VISIBLE (CHECK): In the PLOT AREA, minor scale line between signed values. Visible-> Checked, Invisible -> Unchecked. The line color can be changed.
- CUSTOM DIVISION: In PLOT AREA, user can divide sections of plot with interlaced X and Y axis line.

REPORT FORMAT SETTING										
UPDATE SELECT PROGRAM NUMBER DEFAULT V @ USE DEFAULT SETTING USE PROGRAM SETTING SAVE AS 000 +										
REPORT NAME : Report_Sample GRAPH NAME : GRAPH										
PLOT1 PLOT2 PLOT3 PLOT4 PLOT5 PLOT6 PLOT7 PLOT8 PLOT9 PLOT10 AXIS CUSTOM DIVISION CUSTOM WINDO	OW MISC STATUS MESSAGE									
X AXIS CUSTOM DIVISION										
□ X AXIS CUSTOM DIVISION #1 55.2500 🔄 🗔 255, 25 ▼ □ USE GLOBAL VARIABLE	•									
□ X AXIS CUSTOM DIVISION #2 55.8000 🔄 🗔 255, 25 ▼ 🔲 USE GLOBAL VARIABLE	•									
Y AXIS CUSTOM DIVISION										
V AXIS CUSTOM DIVISION #1 0.1000 🔄 💶 255, 0, 0 🔻 VISE GLOBAL VARIABLE 009;EndPosLoad	•									
🗌 Y AXIS CUSTOM DIVISION #2 0.3000 🔄 🗖 🔹 🐨	•									
🗌 Y AXIS CUSTOM DIVISION #3 0.0000 🔄 🗖 🔹 🐨 🔹 USE GLOBAL VARIABLE	•									
X AVIS CUSTOM DIVISION #4: Check Box Checked > Visible position										

- X AXIS CUSTOM DIVISION #1: Check Box Checked -> Visible, position value of division line, list box -> Select line color.
- ➢ The rest like DIVISION #2 ~ #9 is same.



• **CUSTOM WINDOW:** In PLOT AREA, users can draw window lines as square section to emphasize specific analysis. Custom windows are determined by X and Y limits values that can be assigned by numbers or GVs. If you want to type specific numbers in the X or Y limits, you should choose "FixedValue" option in the selection box of GVs.



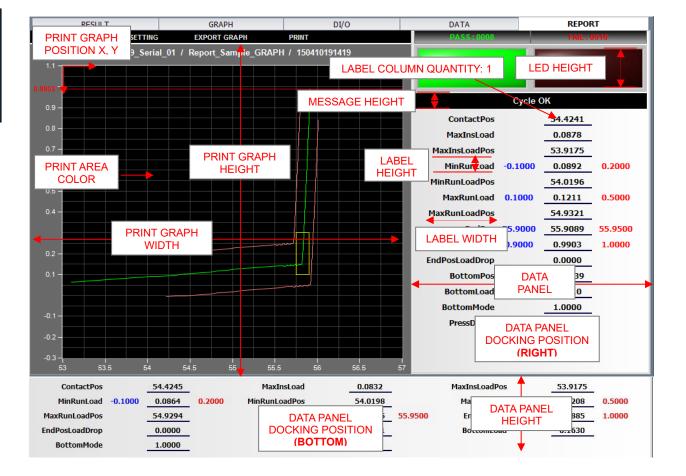
• MISC: User can change size, position of graph and label size, font and color of DATA PANEL.

REPORT FORMAT SETTING							-	
UPDATE SELECT PRO	OGRAM NUMBER DE	FAULT -) USE DEF	AULT SETTING	O USE PROGRAM SET		VE AS	000 🖈
REPORT NAME : Report_Sample				GRAPH NAM	IE : GRAPH			
PLOT1 PLOT2 PLOT3 PLOT4	4 PLOT5 PLOT6	PLOT7 PLOT8	PLOT9	PLOT10 AX	IS CUSTOM DIVISION	CUSTOM WINDOW	MISC	STATUS MESSAGE
PLOT AREA COLOR	Black	•	ſ					
PRINT GRAPH HEIGHT	400					E LABEL FONT / Size: 9 / Style: Bo	ld	
PRINT GRAPH WIDTH	600	-	l					
PRINT GRAPH POSITION Y PRINT GRAPH POSITION X	20				CHANGE MESSAGE FONT			
					Name: Arial / S	ize: 10 / Style: Bo	ld	
DATA PANEL DOCKING POSITION	O BOTTOM O RIG		L L					
DATA PANEL HEIGHT (or WIDTH)	370	× ×						
MESSAGE HEIGHT	25			Name: Arial / Size: 9 / Style: Bold				
LABEL WIDTH	125							
LABEL HEIGHT	25	×			CHANGE GRA	PH CAPTION FON	т	
VALUE WIDTH	75	×.				ize: 10 / Style: Bo		
VALUE ROUNDING	4							
LABEL COLUMN QUANTY					1 cycle ends, i starts, report			
REPORT RESET ON CYCLE	🔘 COMPLETE 🍾 ST.	ART						





• **STATUS MESSAGE:** In DATA PANEL, you can select and edit the status message as results of test. You can make use of status message Max. #15 for OACIS-1X and 2X and Max. #31 for OACIS-1XC and OACIS-2XC.





REPOR	T FORMAT SETT	ING											Σ
U	PDATE	SELECT PR	ROGRAM	NUMBE	R D	EFAULT	•	@ USI	E DEF	AULT SETTING 🛛 US	E PROGRAM SETTING	SAVE A	S
EPORT	NAME : MY REF	PORT								GRAPH NAME : GRA	\PH		
.0T1	PLOT2 PLOT3	PLOT4	PLOT5	PLOT6	PLOT7	PLOT8	PLOT9	PLOT	10	AXIS CUSTOM DIVISION	CUSTOM WINDOW	MISC STATUS ME	SSAG
	STATUS MESS	AGE				Р	ASS STA	TUS		STATUS MESSAGE		PASS S	TATU
#00	STATUS 0	STATUS 0						1	#16	Turning Torque Max PtV	Reject	Γ	
#01	PASS						9		#17	Turning Torque OverallF	tV Reject	Γ	
#02	Bottomming M	lode Rejec	:t					1	#18	Turning Torque MAX Re	ſ		
#03	Jump Function	n Reject							#19	Turning Torque MIN Rej	Γ		
#04	Math1 Reject								#20	Turning Torque AVE Rej	Г		
#05	Math2 Reject								#21	STATUS 21	[
#06	Math3 Reject								#22	STATUS 22	Γ		
#07	Math4 Reject							1	#23	STATUS 23		[
#08	MathAReject								#24	STATUS 24	ſ		
#09	Slope Reject							1	#25	STATUS 25		r	
#10	Round Reject								#26	STATUS 26		ſ	
#11	Find GV Rejec	,t						1	#27	STATUS 27		r	
#12	Teaching Curv	/e Reject							#28	STATUS 28			
#13	Move to Press	Final Load	d Reject					1	#29	STATUS 29			
	Dynamic Move								#30	STATUS 30			-
	Move to Pos Li									STATUS 31			-

G. View File(.pdf)

			x
C C V V V V V V V V V V V V V V V V V V	t ▶ 2014 ▶ 2014-08 ▶ 2014-08-29	-08-29	Q
File Edit View To	ols Help		
Organize 🔻 😕 A	dobe Reader XI로 열기 ▼ Print Burn New folder	!≡ ▼ 🚺	0
Nesktop 🖌	Name	Date modified	Туре 🖍
Recent Places	50_00006353_None_00_MY REPORT_GRAPH_140829132026.pdf	2014-08-29 오후 1:	Adob
🗼 Downloads 🗌	D52_00006357_None_00_MY REPORT_GRAPH_140829133235.pdf	2014-08-29 오후 1:	Adob
E F	2 052_00006358_None_00_MY REPORT_GRAPH_140829133427.pdf	2014-08-29 오후 1:	Adob
	2054_00006362_None_00_MY REPORT_GRAPH_140829143036.pdf	2014-08-29 오후 2:	Adob
	T1054 00006363 None 00 MV REDORT GRADH 140820143301 odf	201/LOR_20 0 = 2.	Adob *
PDF 050_00006	353_None_00_MY REPORT_GR Date modified: 2014-08-29 오후 1:20		
Adobe Acro	bat Document Size: 53.8 KB		

- 050: Program Number
- 00006353: Cycle Number
- None: Serial Number
- MY REPROT: Report Name
- **GRAPH:** Graph Name
- **140829132026:** Date and Time, 2014-08-29 13:20:26

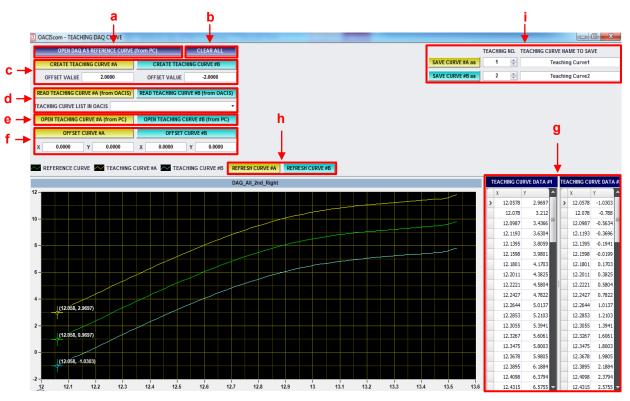


XVI.TEACHING DAQ CURVE

A. OACIS user can gage with teaching curves that have upper and lower limits. TEACHING DAQ CURVE makes upper and lower limit curves with reference curve (*.gph) and then this curves be used for "Gaging DAQ by Teaching" included in GAGE function.



Note: OACIS can save teaching graphs to 40 units as the maximum. In other words, it can teach DAQ curves of 20 units.



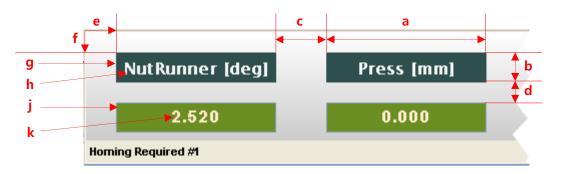
- a. Above all, users have to make a reference curve with graph files (*.gph) in local PC.
- b. Users can erase all of the graphs from the screen.
- c. Users can make upper and lower limit curves with offset values compared with a reference curve.
- If graphs that will be used in upper limit and lower limit is saved in OACIS, users assign teaching curve #A and teaching curve #B in list box, "TEACHING CURVE LIST IN OACIS", and then can use upper and lower limit curve.
- e. Users can assign teaching curve #A and teaching curve #B with graph files (*.gph) saved in local PC.
- f. Users can input the values that they want to offset in X and Y, and shift upper and lower limit curves as far as the X and Y values.
- g. Users can adjust point values to form curve. In other words, users can adjust curve #A and #B in coordinate grid. There are two edit tools of "Delete" and "Insert" in use. Users can find them by right-clicking on the data window.
- h. After adjusting curve #A and #B, users can see revised curves by pressing Refresh Curve #A and #B buttons. All the X values are arranged in ascending order from the top line. Thus, they are rearranged by pressing refresh buttons if totally sorted in descending order. When some X values in the opposite order are included, they are removed automatically.
- i. Finally, users can save teaching curve #A and #B in OACIS.

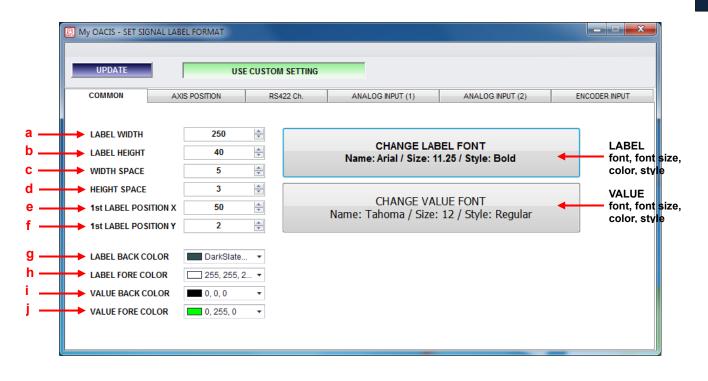
XVII. SET SIGNAL LABEL FORMAT

A. User can customize signal labels (Axis Position, RS 422 Ch., Analog Input (1), (2), Encoder input) in the bottom of OACIScom main window. "USE DEFAULT SETTING" view is changed to "USE CUSTOM SETTING" view.

	тос	L TEACHING DAQ CURVE		USE DEFAU	LT SETTING						
S		Command		POSITION AXIS #1 [deg]	RS422 INPUT Al#1 [kN]	ANALOG INPUT	El#1 [mm]	ODER INPUT			
2		Set Time		36.58 Homing Required #1	1.2437		0.0000				
		Connect to OACIS	T	noming kequirea #1		•					
		Disconnect to OACIS									
		OffLine		↓							
		Reset Results		USE CUSTOM SETTING							
		RealTime GV		NutRunner [deg]	Press [mm]	Force [kN]	Pressure [Bar]	LVDT #1 [mm]			
		Set Signal Label Format		2.520	0.000	1.243	0.000	0.000			
	~	Show Tool Strip		Homing Required #1							

B. With reference to next view, user can configure position, size, setting about font of LABEL and VALUE. And then User has to change "USE DEFAULT SETTING" to "USE CUSTOM SETTING". Finally if "UPDATE" button is pressed, it user's view is completed.





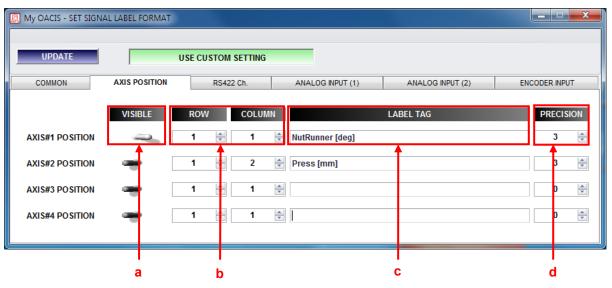


55

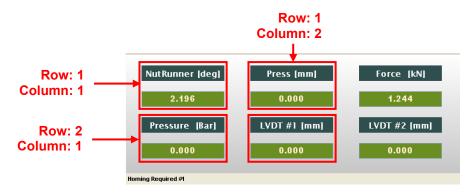


C. Signal labels are able to be placed at row, column matrices with number.

The lower example is only AXIS POSITION, but RS422Ch. ANALOG INPUT (1), ANALOG INPUT (2), ENCODER INPUT is all same.



- a. **VISIBLE:** A right switch (white) means visible and a left switch (black) means not visible.
- b. ROW, COLUMN: Signal labels are able to be placed at row, column matrices with number.



- c. LABEL TAG: means the name of label.
- d. **PRECISION:** If you set it "3", values of AXIS #1 POSITION tagged as NutRunner [deg] show the values with "000.000" format and if set it "5", it shows with "000.00000".
- **D.** When you set ENCODER INPUT signal labels, there are several precautions that require attention.
 - a. **TYPE: TTL**(Encoder Input #1, #2, #3, #4) and **LINE RECEIVER**(Encoder Input #5, #6, #7, #8). See the next picture.
 - b. CHANNEL: Channel #1(Encoder Input #1 or #5) and Channel #2(Encoder Input #2 or #6). You have 2 encoder channels to use for OACIS-2x and 1 channel for OACIS-1x. You can choose one from TTL or LINE RECEIVER type encoder input per channel.
 - c. **EXAMPLE:** If you want to use a TTL-type encoder at channel #1 and a LINE RECEIVER-type encoder at channel #2, you should select ENDCODER INPUT #1 and #6. If you want to use LINE RECEIVER-type encoders at both channel #1 and #2, you should select ENDCODER INPUT #5 and #6. On the other hand, if you use a TTL type encoder for OACIS-1x, you just choose ENCODER INPUT #1.

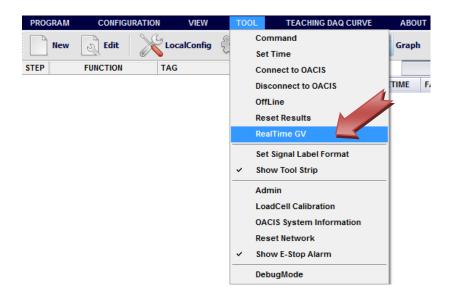


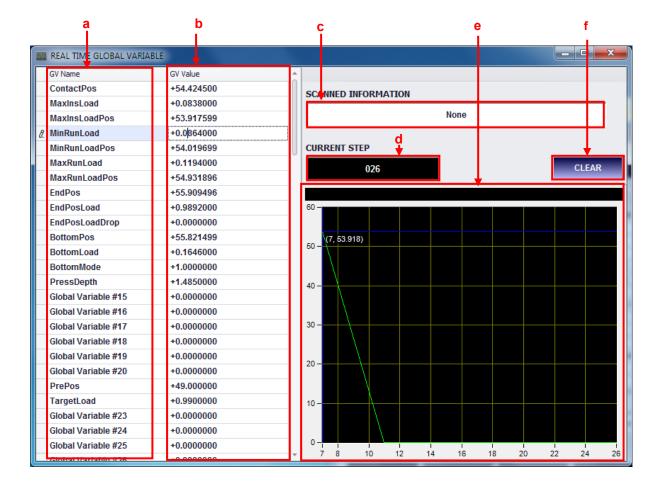
	OACIScom - SET SIGNA	L LABEL FORMAT		
	UPDATE		USE CUSTOM SETTING	
	COMMON	AXIS POSITION	RS422 Ch. ANALOG INPUT (1) ANALOG INPUT (2)	ENCODER INPUT
Channel	#1	VISIBLE	ROW COLUMN LABEL TAG	PRECISION
	ENCODER INPUT #1		1 🔄 3 🐳 my El #1 [mm]	3
Channe	ENCODER INPUT #2		1 👻 4 🐑 my El #2 [mm]	3
	ENCODER INPUT #3		► Encoder Inputs [TTL]	0
	ENCODER INPUT #4	-		0
	ENCODER INPUT #5	-	1 🖄 3 🐳 my El #5 [mm]	3 🔹
	ENCODER INPUT #6		1	3
	#2 ^{ENCODER INPUT #7}			0
	ENCODER INPUT #8	-		0



XVIII. REAL TIME GLOBAL VARIABLE

:You can monitor Global Variables and Scanned Information in the real time by using this window. It allows you to debug the operation you programmed with detailed Global Variable values of each step. At the same time, you can see the trend of the selected Global Variable throughout the program by using "GV Trend curve".





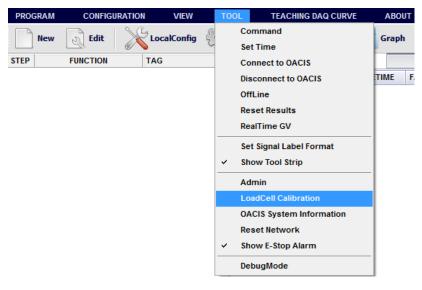
f

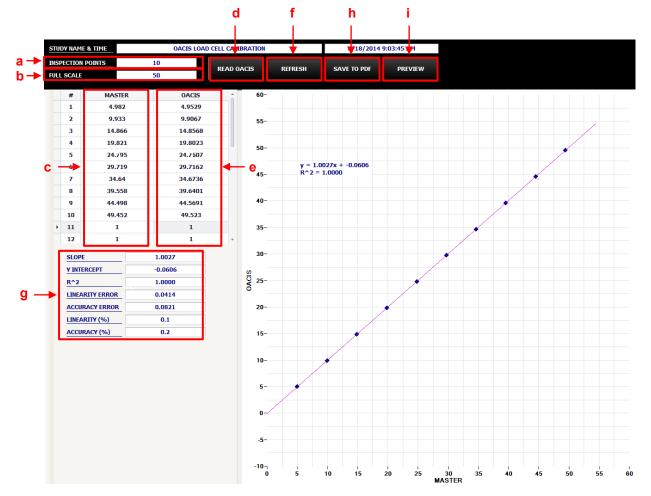
- a. **GV Name:** Names of Global Variable #1 ~ Global Variable #100 and System Variable #1 ~ System Variable #20.
- b. GV Value: Real time values of Global Variable #1 ~ Global Variable #100 and System Variable #1 ~ System Variable #20.
- c. **SCANNED INFORMATION:** Real time information updated by "Scan In" RS232 port. (see the manual, "how to configure", to learn how to set RS232 port as "Scan In")
- d. **CURRENT STEP:** Current running step number. (000: OACIS is not running).
- e. **GRAPH:** It shows the trend of selected Global Variable. You can select a specific Global Variable by clicking a cell of the left grid view. And you can see the detailed trend value by moving the cursor on the graph window. X value shows step number and y value shows global variable value at that step.
- f. **CLEAR:** User can clear the previous data of graph.



XIX.LOADCELL CALIBRATION

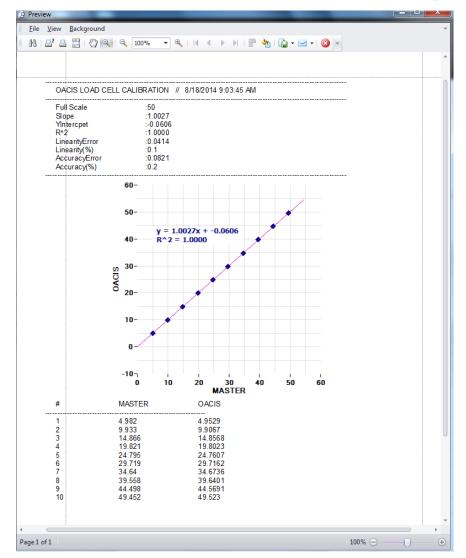
A. You may need to calibrate load cell or torque cell built in your servo press or nut runner. And you calibrate it with Master and an OACIS calibration program. This program will help that you can easily calculate calibration result and make calibration report with this program.







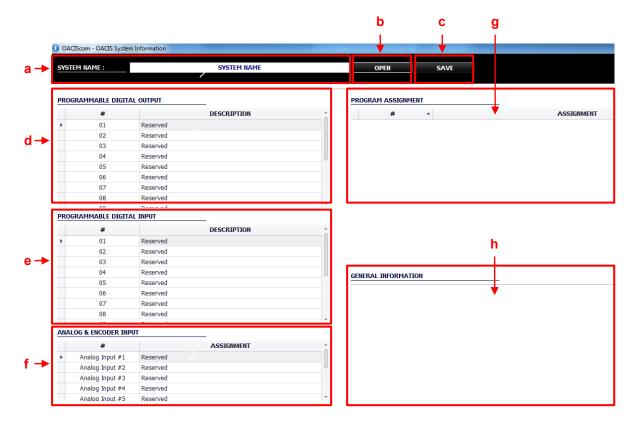
- a. **INSPECTION POINTS:** Number of points to check up. You can input from 1 up to 12.
- b. **FULL SCALE:** Max Load Value [kN] in the range of calibration.
- c. **MASTER:** Users should input the measured values from the Master Loadcell. The loads pressed at every point are determined by INSPECTION POINTS and FULL SCALE.
- d. READ OACIS: After the measurement for the Master Loadcell is over, you can call the load values of OACIS Loadcell from resultLas.txt in C://Program Files/ATA/OACIScom_v00.00 (latest version)/OACIScom(in use)/resultLast. If you want to use this txt file, all the load values of OACIS should be saved into Global Variables in the Calibration program.
- e. OACIS: It displays the load values of OACIS from the resultLast.txt.
- f. **REFRESH:** After you choose the resultLast.txt, you ought to press this button to upload the data in the OACIS window and calculate the specifications automatically.
- g. SPECIFICATIONS: A linear regression line is created by the data from Master and OACIS. From the line, OACIS offers some information for calibration, such as Slope, Y Intercept, Coefficient of Determination (R²), Linearity Error, Accuracy Error, Linearity (%) and Accuracy (%).
- h. SAVE TO PDF: You can save the result of calibration to PDF file.
- i. **PREVIEW:** You can see the result in a pop-up window and save it to PDF or image file.





XX. OACIS SYSTEM INFORMATION

A. You can open OACIS system information window by pressing Tool > OACIS System Information tab. And you can write and see system information like Programmable Digital Output & Input, Analog & Encoder Input, Program Assignment and General Information. The password is "1".



- a. SYSTEM NAME: You can write a name of OACIS System Information file.
- b. **OPEN:** You can open a saved file of OACIS System Information from C:\Program Files\ATA\OACIScom v00.00\OACIScom\configuration.
- c. SAVE: You can save this information as a text file, after editing system information.
- d. **PROGRAMMABLE DIGITAL OUTPUT:** Digital output signals to be used.
- e. **PROGRAMMABLE DIGITAL INPUT:** Digital input signals to be used.
- f. ANALOG & ENCODER INPUT: Analog and Encoder inputs to be installed.
- g. PROGRAM ASSIGNMENT: Running programs to be loaded in OACIS. Right Click and edit the list.
- h. **GENERAL INFORMATION:** You can write and see a variety of information such as Product Specifications, Status Binary, System Hard point, Revision Log and so on.

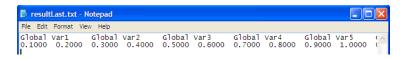


XXI.LAST RESULT FILE (resultLast.txt)

A. OACIScom exports last result with "resultLast.txt" file name @ "your default folder/resultLast". If there is the previous file, OACIScom overwrites it. So, you there is always the last cycle result file.



B. The "resultLast.txt" file contains all global variable names and values of the last cycle.



• There are two rows. Frist Row shows all global variable Names. Second Row shows all global variable values. Each row is separated by "CR + LF" and each name (or value) is separated by "tab".



REVISION

v3.96.03.01: Engineering Released v3.96.03.02: Document Format Updated v3.96.03.03: Document Format Updated. v3.96.03.04:

- "Open (Ready Only)" Added
- "Teaching DAQ Curve" Updated
- "MISC" in Command Added
- "Loadcell Calibration" in Tool Added
- "DATA" View Updated
- "Firmware Version" in About Added
- "OACIS System Information" Added
- "Custom Window" in Report Updated
- v3.96.03.05:
 - "View-Graph" Format Updated
- v3.98.08.05: Version Updated

v3.98.10.04:

- "Headers & Footers" Format Updated
- Version Updated
- v3.98.10.05:
 - Image Size & Resolution Updated
- v3.98.10.06:
 - Version Updated
- v3.98.12.01:
 - "IMPORT GV INFO" in Configuration of Edit Window Added.
 - "SERIAL" and "CN1" options in Data Viewer Added.
- v3.98.15.03:
 - "EDIT Program" in IX. QUICK START Added.

v3.98.16.01:

- Version Updated
- v3.98.16.03:
 - Note in XV.E Revised

v3.98.16.04:

- View File in XV.F Added
- Encoder Inputs in XVII.E Updated

v3.98.16.05:

- Jogging Disable Method in VII Added

v3.98.16.06:

- Program Manager in IX Added
- All Contents Downsized

V4.01.01.01:

- OACIS-2XC Developed
- DIO window in III.E Updated
- Edit window in IX Updated
- STATUS MESSAGE window in XV Updated



V4.01.02.01:

- Some Lines Added in II.B

V4.01.02.02:

- OACIS-2XC Released

V4.01.02.03:

- OACIS-1XC Released
- Page format Updated

V4.01.02.08:

- SystemLog file in XIII added

V4.01.02.10:

- version updated

V4.01.04.01:

- version updated

V4.01.04.03:

- Save mode in Report window updated



