# User Guide Version 1.7



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# **1.0 Generality**

Mp Supervisor allows you to communicate with MP2Plus, MP4Plus, MP6Plus, WiMP2Plus instruments(from now on MPX) easily, using the USB port.

CH1 CH2 CH3 CH4			MP Plus Configuration				
Actual Setup	Enable	L Quit	Peak · Zero On Hold On Dig		Zero On Peak+ On		
Decimals ###.#### •	Add Total Calibration Parameters	Calibration Parameters Stampa Report		Peak + Zero Off Hold Off Acquisition Frequency 5 Peak- On Hold On			
	ceptablity Levels Enable	Preview Report	Peak Off MP Supervisor Data Logger	r Manager MP Plus Report Header	er 📄 🗖 Data Log Running		
	lue 10000.0000	Select Printer	Set Date and Time Indicator Connected : MP6Plus - Serial Number 6				
Graph FSY 1.0000 Co	lor Change Color	SetPoint	MP Supervisor Configuration	🔽 Detect Max Value	AFP		
ile Name			2 Quadrants Graph     4 Quadrants Graph	Detect Min Value	Deschannel		
Axis Time -	An and Star Internet MAY	🔽 Total Enabled	MP Supervisor Report Configuration	Graphs 💌			
imeUnit Os Omin Oho	Acquisition Interval MAX  Load C  Test Time 0.0 hour 1.0 min	Curve Graph FSY 1.0000	Data Folder C:\AEP Transducers\MP S	Supervisor\Data	Browse		
CH1:Pressure (bar)	FSX 60 s Start 1	Fest Graph Color Select	Export in Excel as csv file	Export in Excel as xis file	Help		
-0.2500		Test Station	Date: 21-07-2020 Test Starting Time: 08:41:43				
	· ·	Test Starting I	Date: 21-07-2020 Test Starting Time: 00:41:43				
lax Value -0.2500	CH1: 1.0000bar CH2: 0.5000bar						
lin Value -0.2500	CH3: 1.0000bar						
CH2:Pressure (bar)	TOT: 1.0000bar						
-0.2500							
fax Value -0.2500							
lin Value -0.2500							
CH3:Pressure (bar)							
-0.2500							
ax Value -0.2500	0						
in Value -0.2500		(					
CH4:Pressure (bar)							
0.6880							
1ax Value 0.6880							
lin Value 0.3750							
TOT:Pressure (bar)							
0.0600							
-0.0620	-FS						
ax Value -0.0620 Averag		12.0 18.0 24.0	30.0 36.0	42.0 48.0 54.	.0 6		

It is possible to connect just one instrument a time.

Mp Supervisor main features are:

- Makes graphs test acquiring data at the maximum speed(up to 4800 Hz for each channel). Curve can be saved and reviewed later.
- Allows to Export acquired data to Microsoft Excel (from real time cuve or DataLogger).
- Allows to Print Reports with custom logo as report header.
- Allows to download internal Datalogger and shows it as curve graph.
- Allows to download Datalogger create in the MPx instruments using an external pen drive and shows it as curve graph.
- Allows you to change easily the calibration parameters for all Channels.
- Allows to change most of the MPx parameters (Filter, Unit, decimal point etc, date and time etc).
- Allows to change MPx SetPoints.
- Allows Manual Acquisition Logs.

#### System requirement

PC: 1GHz 512 MB RAM or upper

Windows 7 Windows 8 Windows 10

Minimum resolution : 1028 x 1024

#### **License Agreement**

- 1. We grant the customer a non-exclusive and non transferable right to use MP Supervisor software on a single computer and at only one place.
- 2. The licence holder is not permitted:
  - a) to pass on or otherwise make the software or associated material accessible to third parties without prior written agreement
  - b) to modify the software without prior written consent
  - c) to create works derived from software or to duplicate the written material
  - d) to translate or modify it to create works derived from the written material
- 3. The right of use is dependent on the customer observance of these general conditions of supply

Acceptance of this license agreement is formally required during the installation of the software.

# 2.0 Main Page

In the main page you have most of the feature you need to use your MPx instrument.

The software automatically connect to the MPx using the USB port, download the MPx actual configuration and at the end display acquired values for each enabled channel.

Some buttons allow you to perform the main commands like ZERO ON/OFF , PEAK mode , HOLD mode.

The **Set Date and Time** button allows to set, just pressing it, the current date and time of your computer directly on the MPx.

MP Plus Co	onfiguration —			
Peak -	Zero On	Hold On Digital Filter	2 🔻	Zero On
				🗌 Peak+ On
Peak +	Zero Off	Hold Off Acquisition Fre	equency 20 👻	🗌 Peak-On
		, .		, 🗖 Hold On 🔰
Peak Off	MP Superv	risor Data Logger Manager	MP Plus Report Header	🔲 Data Log Running
Set Date a	and Time	lo MP Plus found		

Another window allows to set some important parameters for each channel like:

- The enable state.
- The decimal point position.
- The actual unit.
- The resolution.
- The curve color in the graph.
- The FSY value for the channel.
- If the channel is enabled for the Total/Average value (Add Total).
- Calibration Parameters : gives access to the Calibration Page for the channel.

For each channel it is possible to define a acceptability level with a dedicated color.

When enabled, on the graph, will appear a line so you can graphically observe if your test has or not superated a define level.

CH1 CH2 CH3 CH4		
Actual Setup Decimals	Add Total	ation Parameters
Resolution 1	Acceptablity Levels	
Graph Color Select Graph FSY 47038	Value 45000 Color	Change Color

The average value can be performed through the "Average Value" box.

```
✓ Average 
Value
```

To include a channel in the calculation select "Add Total" of the related channel. It will be automatically included in the calculation of the arithmetic mean.

EnableAdd Total

A channel will be included in the calculation of the average value even if the "Enable" box is not checked.

Average value and total value cannot be used at the same time.

### 3.0 Start Test

It is possible to create real-time tests. Please verify that you are in the graphs page as shown in the picture that follow.

MP Supervisor Configuration C 1 Quadrant Graph C 2 Quadrants Graph	<ul><li>Detect Max Value</li><li>Detect Min Value</li></ul>
C 4 Quadrants Graph MP Supervisor Report Configuration	Graphs
Data Folder C:\AEP Transducers\MP S	Supervisor\Data

To setup a test you are required to define only two test-parameters.

- **Test Time:** defines the time the test will last (in hour and minutes). The test can be stopped any way by pressing the **Stop** Button.
- Acquisition Interval: defines the time between two acquisition points.

Acquisition	Interval	1 s		•
Test Time	0.0	hour	1.0	min

The X axis can be select among time and one of the other enabled channels. This allows to create charts such as the load/displacement typical of many applications.

X Axis		Time	-
Time Unit	•	Time CH1 CH2 CH3 CH4 TOTAL	

Graphs can be displayed in 1 or 2 quadrants according if you want to see both negative and positive values of your channels or not.

MP Supervisor Configuration —
🔿 1 Quadrant Graph
💿 2 Quadrants Graph
🔿 4 Quadrants Graph

At the end of the test the Max and Min Values can be calculated and printed(if enabled).

By pressing the **Start Test** button, MP Supervisor start to record all the acquisition points creating raw data.

By **Stopping** the data recording, data will be stored in a text file in the folder **Data** present inside the installation folder with the filename assigned inside the field **Filename**.

The graphics window allows the setting of the parameters of real-time graphic. The X-axis can be time (with the unit assigned inside the field **X** Axis Unit) or one of the other enabled channels (with the unit assigned with respect to the chosen channel), while the Y axis is the output value of the instrument for each channel.

FS				Test Starting	Date: 06-03-2014	Test Starting Ti	me: 09:15:15			. 1
CH1: 110000.00kg									•	
CH2: 200000kg CH3: 450705kg										
CH4: 400010kg TOT: 2000000.00kg			/							
-			/							
-										
0-										
-										
F										
-										
- -FS										
	) 3.(	0 6.1	0 9.	0 12	2.0 15 Time		3.0 21	.0 24	4.0 27	7.0 30.

**FSX**: defines the full scale of the axis X.

**Graph FSY** : defines the full scale of the axis Y for each channel.

Graphs saved can be re-analyzed by using the "Load Curve" button. You can choose the folder where data are saved selecting the Data Folder using the **Browse** button.

Channel curves are displayed with different colors.

The scale will automatically adapt itself to the maximum values recorded in the tests.

It is also possible to perform an export of data collected in a Microsoft Excel file with the button **Export to Excel**. This feature is only available when Microsoft Excel is installed on your computer.

**NOTE : To Export data in Microsoft Excel you must have this program installed on your PC.** If you save to export data in Excel using the csv file format it is not necessary to have Excel installed on your PC.

Using the buttons **Print report** or **Preview Report** it is possible to print a test report.

Using the button Select printer you can choose the printer where to address your printout.

Using the **Report Configuration** button it is possible to define the Logo, the report header (up to 3 lines of free text) the operator , notes, and the graph title.

If you have created a datalogger(see "7.0 Data Logger Manager" for Data Logger usage) cycle on MPx instrument using a pen drive you can read the acquired value using MP Supervisor.

It is not necessary to connect MPx instrument to the PC because it is possible to work off-line, just insert your pen drive to your PC, press **Load Curve** and select the drive assigned to your pen and in the file type window select **MP Plus DataLogger File** \*.bin or \*.csv according to the file type selected in your MPx instrument.

Confirm the file and the curve of the acquired data will be shown. Now you can print a report or export your data in Microsoft Excel.

Anyway, if you have created the datalogger file in csv format it can be immediately read by Microsoft Excel without using MP Supervisor.

#### 4.0 Report Header

Here is an example of the **Report Header configuration Page.** 

Graph	Description		Operator
Note		In this field you can insert note to explain the test	Help For Note These note will be printed on the report. Please, to insert a new Line in the Note Field press at the same time, : CTRL+ENTER Max 5 rows
- Repo	1° Row Header 2° Row Header 3° Row Header	LEP transducers via Bottego 33/A Cognento Modena (Italy)	
4		- tratsincers	

It is possible:

- Insert a Graph description.
- The operator name.
- Up to 5 rows for insert note to describe the test.
- Up to 3 text rows dedicated to the custom header address data.
- The logo image can be select.

To add a new brand logo just copy in the "Loghi" folder (inside the installation folder of the program) the relative image file . The file must be in a bitmap format (max dimension 1500x500 point). To select it please choose the image in this page.

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The following is a report example.





Note:

In this field you can insert note to explain the test

Operator :

Time: 9:02 Date: marteda, aprile 21, 2015

#### **5.0 Manual Acquisitions Mode**

H1 CH2 CH3 CH4				- MP Plus	Configuration			
Actual Setup		11		Peak -	Zero On Hold On Di	cital Filter		Zero On
Decimals	le Calibration Pa		Quit			gitarriiter		Peak+ On
Add	Total Calibration Pa	arameters	Print Log	Peak +	Zero Off Hold Off Ac	equisition Frequence		Peak-On
Actual Unit bar - Accepta	ablity Levels		T link bog	Peak 0	f MP Supervisor Data Logge	r Manager MPI		Hold On Data Log Runni
Resolution 1	•						/	Jata Log hunni
	10000.0000			Set Dat	e and Time Indicator Connec	ted : MP6Plus - Se	erial Number 6086 Ver: 2.6	
Graph Color Select Value	10000.0000			- MP Supe	ervisor Configuration			
Graph FSY 1.0000 Color	Chan	ge Color	SetPoint		adrant Graph	🔽 Detect	Max Value	OCO
			SetFolni	@ 2 Qu	adrants Graph	V Detect	Min Value	Transformer
g Name			Total	C 4 Qu	adrants Graph			
			🗌 🗌 Total Enabled	MP Sur	ervisor Report Configuration	Manual A		
og Actual Values 🔹		Load Log	Graph FSY 1.0000		or noor nopole conligated on	Thandarea	equienterie	
				Data Fol	der C:\AEP Transducers\MP	Supervisor\Data		Browse
CH1:Pressure (bar)		New Log	Graph Color S	elect	port in Excel as csv file	Event	in Excel as xls file	11-le
				E>	port in Excel as csv file	Export	IN EXCELAS XIS FILE	Help
-0.2500	N. CH1:Pressure (bar)	CH2:Pressure (bar	CH3:Pressure (bar)	CH4:Pressure (bar	) AVR.:Pressure (bar)	Date	Time Note	
	1 -0.2500	-0.2500	-0.2500	0.6880	-0.0155	21/07/2020	08:49:33	
ax Value -0.2500	2 -0.2500 3 -0.2500	-0.2500 -0.2500	-0.2500 -0.2500	0.6880 0.6880	-0.0155 -0.0155	21/07/2020 21/07/2020	08:49:36 08:49:37	
n Value -0.2500	4 -0.2500	-0.2500	-0.2500	0.6880	-0.0155	21/07/2020	08:49:37	
CH2:Pressure (bar)	5 -0.2500	-0.2500	-0.2500	0.6880	-0.0155	21/07/2020	08:49:37	
	6 -0.2500 7 -0.2500	-0.2500 -0.2500	-0.2500 -0.2500	0.6880 0.6880	-0.0155 -0.0155	21/07/2020	08:49:37 08:49:37	
-0.2500	8 -0.2500	-0.2500	-0.2500	0.6880	-0.0882	21/07/2020 21/07/2020	08:49:37	
-0.2300	9 -0.2500	-0.2500	-0.2500	0.3850	+0.0912	21/07/2020	08:49:48	
ax Value -0.2500	10 -0.2500	-0.2500	-0.2500	0.3770	-0.0932	21/07/2020	08:49:48	
n Value -0.2500	11 -0.2500 12 -0.2500	-0.2500 -0.2500	-0.2500 -0.2500	0.3770 0.3750	-0.0932 -0.0937	21/07/2020 21/07/2020	08:49:48 08:49:48	
	13 -0.2500	-0.2500	-0.2500	0.3750	-0.0937	21/07/2020	08:49:49	
CH3:Pressure (bar)	14 -0.2500	-0.2500	-0.2500	0.3750	-0.0937	21/07/2020	08:49:49	
0 0500	15 -0.2500 16 -0.2500	-0.2500 -0.2500	-0.2500 -0.2500	0.3750 0.3750	-0.0937 -0.0937	21/07/2020 21/07/2020	08:49:49 08:49:49	
-0.2500	17 -0.2500	-0.2500	-0.2500	0.3750	-0.0937	21/07/2020	08:49:49	
x Value -0.2500	18 -0.2500	-0.2500	-0.2500	0.3750	-0.0937	21/07/2020	08:49:50	
	19 -0.2500 20 -0.2500	-0.2500 -0.2500	-0.2500 -0.2500	0.3750 0.3750	-0.0937 -0.0937	21/07/2020 21/07/2020	08:49:50 08:49:50	
n Value -0.2500	20 -0.2500 21 -0.2500	-0.2500	-0.2500	0.3750	-0.0937	21/07/2020	08:49:50	
CH4:Pressure (bar)	22 -0.2500	-0.2500	-0.2500	0.3750	-0.0937	21/07/2020	08:49:51	
	23 -0.2500 24 -0.2500	-0.2500 -0.2500	-0.2500 -0.2500	0.3750 0.3750	-0.0937 -0.0937	21/07/2020 21/07/2020	08:49:51	
0.3750	25 -0.2500	-0.2500	-0.2500	0.3750	-0.0937	21/07/2020	08:49:51 08:49:51	
0.07.00	26 -0.2500	-0.2500	-0.2500	0.3750	-0.0937	21/07/2020	08:49:51	
ax Value 0.6880	27 -0.2500	-0.2500	-0.2500	0.3750	-0.0937	21/07/2020	08:49:52	
n Value 0.3750	28 -0.2500 29 -0.2500	-0.2500 -0.2500	-0.2500 -0.2500	0.3750 0.3750	-0.0937 -0.0937	21/07/2020 21/07/2020	08:49:52 08:49:52	
	30 -0.2500	-0.2500	-0.2500	0.3750	-0.0937	21/07/2020	08:49:52	
AVR.:Pressure (bar)	31 -0.2500	-0.2500	-0.2500	0.3750	-0.0937	21/07/2020	08:49:53	
0.0027	32 -0.2500 33 -0.2500	-0.2500 -0.2500	+0.2500 +0.2500	0.3750 0.3750	-0.0937 -0.0937	21/07/2020 21/07/2020	08:49:53 08:49:53	
-0.0937	34 -0.2500	-0.2500	-0.2500	0.3750	-0.0937 -0.0937	21/07/2020	08:49:53	
x Value +0.0620	<							>

To enter in manual acquisition mode switch the relative switch as shown above.

This page allow to insert in a log file acquisition points by pressing the button **Press this button to take an acquisition point.** 

Edit Log File	Press this button to take an acquisition point	Insert note for each acquisition point

Points are stored in a file called log (inside the folder Logs).

For each point it is possible to insert a note when to set the relative switch **Insert note for each acquisition point.** This way every time you acquire a point a window will be open where you can add a note.

If you want to modify the log (for wrong acquisition point) please you the Edit Log File button.

The log file is just a test file so you can modify each field, remove a line etc.

You can decide to store :

- The Actual Values of each enabled channel.
- The Max values registered in the last test.
- The Min Values registered in the la test.

The first choose stores value directly. To store the other values you have to switch between the Graph Mode and the Acquisition Mode.

Log Name log test	
Log Actual Values  Log Actual Values	Load Log
Log Last Test Max Values Log Last Test Min Values	New Log

So you have :

- Switch to Graph Mode.
- Perform a test in graph mode so Max/Min values are calculated.
- Switch to Manual acquisition mode.
- Press the **Press this button to take an acquisition point** to store their values.

You can create new log or upload existing log (in order to continue them) using the button New Log.

#### 6.0 Set Point

MP Supervisor SetPoint	×					
SetPoint1       CH     CH1       Type     Greater than       Value     2000.00000       Hysteresis     10.00000						
SetPoint2       CH     CH1       Type     Greater than       Value     4000.00000       Hysteresis     10.00000						
SetPoint3       CH     CH1       Type     Greater than       Value     6000.00000       Hysteresis     10.00000						
SetPoint4       CH     CH1     Type     Greater than     Value     8000.00000     Hysteresis     10.00000						
SetPoint5       CH     CH1       Type     Greater than       Value     10000.00000       Hysteresis     10.00000						
Quit						

In the SetPoint Page you can change the MPx parameters relative to the SetPoint.

CH: select the channel associated to the SetPoint. Type: select how the setpoint should work :

- >
- <
- Abs >
- Abs <

Value: is the SetPoint value.

Hysteresis: is the Hysteresis value for the SetPoint (see the MPx manual for reference).

## 7.0 Data Logger Manager

MP Supervisor allows to download the internal datalogger cycle and allows to select easily all the parameters to Start/Stop a new cycle.

For the meaning of the parameters please refere to the MPx Manual.

To Start a cycle please select the **Time Duration** using the Day-Hours-Min-Sec fields and the acquisition interval in the **Storage Interval** window. You can also define a trigger for the start of the Datalogger using the **Start Threshold** window. (see the MPx Manual for the meaning of the parameters.

When all parameters are set, press **Start DataLogger** to start the cycle. If a datalogger cycle is active you can manual stop it by using the **Stop DataLogger** cycle.

To download a datalogger cycle press the **Start Download** button.

When done the acquisition points can be saved as a file. Insert a valid Windows filename in the **Filename** field and press **Save Last DownLoad**.

In the main page the acquisition points are immediately shown as a curve and can be printed and exported in Microsoft Excel.

MP Supervisor Data Logger Manager								
Storage Type Storage Interval	Internal VQuit							
	Days Hours Min Sec							
Time Duration	0 0 0							
Start Threshold	CH1 🗸 > 💌 0.00 N							
Start Data Logger	Stop Data Logger							
No Valid DataLog is stored in the MP data memory								
Start DownLoad Save Last Download								

Х

### **8.0 Calibration Parameter**

Channel 1 Calibration

Type Pressure	•	Capacity 1.0000	bar 💌			
Decimals ###.####	•	Calibration Full Scale	•			
Transducer Sign (•	Standard	C Inverted				
Full Scale Calibration Gain+ 1.00000 Gain- 1.00000	mV∕V mV∕V					
<ul> <li>Interpolation Polynomial</li> </ul>	P1	P2	P3	P4	P5	
Positive Values	0.0000	0.0000	0.0000	0.0000	0.0000	bar
	0.000000	0.000000	0.000000	0.000000	0.000000	mV/V
	P1	P2	P3	P4	P5	
Negative Values	0.0000	0.0000	0.0000	0.0000	0.0000	bar
	0.000000	0.000000	0.000000	0.000000	0.000000	mV/V
			Quit			

The Calibration page allows you to enter all the parameters you need for the channels calibration.

For the meaning of the parameters please refere to the MPx Manual.

This page is password protect. The password is 7