

# NP200W-LPG LPG Tank Monitor User's Manual

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This manual belongs to: \_\_\_\_\_

Company: \_\_\_\_\_



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Version	Page	Date	Reason
1.0		03/07/19	Initial release
2.0		18/06/20	Update

#### **Please Note:**

Sena World, Inc. encourages and appreciates customer feedback regarding this document errors or improvements. If you have any questions regarding this manual or this product, please call or write to the following:

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# **Table of Content**

## Contents

## **Table of Contents**

Introduction	. 5
Shipping Carton	.6
Install NP200W-LPG(WIFI) unit	. 7
Setup NP200W-LPG	. 8
NP200 Operations	12
LCON Operations	13
Notes:	23





## Introduction

SENA's NP200W-LPG is specifically designed for Propane tank operations. The NP200W-LPG uses LCON to the same "near real time" tank monitoring as the NP200W by utilizing the customer's local Wi-Fi network. In addition to an encryption capable Wi-Fi level transmitter, the NP200W-LPG includes a twin site dial for standard junior or senior gages. The LCON website is a secure web portal which gives customers multilevel global access to the NP-200 series tank monitors via the internet. The NP200 series of products can be used as a standalone monitoring and control system with built-in MODBUS protocol. Ideal for SCADA systems interface. The NP200W comes with an encryption capable Wi-Fi level transmitter.

NP200 inputs/outputs

- 4 Analog Input
- 4 Digital Input
- 4 Digital Output
- RS485 channel





## **Shipping Carton**

- 1) NP200W-LPG
- 2) 8AA Battery
- 3) Manual
- 4) Warranty card
- 5) Mounting Screws

#### NP200W-LPG







**Back Side** 

SN#: 03072019

Date:

Sold To:

Address:

Front Side













## Install NP200W-LPG(WIFI) unit

- 1. Survey site the NP200 is to be installed
- 2. Mark spot where unit is to be installed i.e. position of the 4 mounting holes
- 3. Using the appropriate screws, install the unit on the wall so that it is vertical
- 4. This mark should be about 2' or 600 mm from wall where unit is installed







## Setup NP200 Unit

- Open the lid of Unit and plug the batteries as shown in the figure 2.
- To wake up system, customer needs to hold magnet in front of Red dot on the unit for 3 sec as shown in figure 3.
- Unit indicator LED will flash every one second
- When all (Green, Red, Orange) LED start flashing then it will create its own hotspot.
- Access your Wi-Fi network as administrator (figure 4)
- Unit number of the device will be one of the Wi-Fi networks choices on the Wi-Fi list for example "2001010".





















Figure 4

- Click on this network and enter password as "rslcon".
- When successfully connected, type IP address "192.168.4.1" in your Device browser. Time Period of the Wi-Fi hotspot is 1 min. After that it will go into sleep mode.
- This will result in display of NP200 Menu as shown below: (figure 5)





← → C ③ Not secure   192.168.4.1					☆ © 🚯 :
	SENA A	PPLICATIC	NS PVT L	TD!	
		UNIT ID : 100	2244		
	ANALOG INPUT BATTERY LEVEL : 9.120 SOLAR LEVEL : 9.479 ADC 5V LEVEL : 5.009 ADC 18V LEVEL : 13.301	DIGITAL INPUT DIGITAL I/P 1 : 0 DIGITAL I/P 2 : 0 DIGITAL I/P 3 : 0 DIGITAL I/P 4 : 0	DIGITAL OUTPUT DIGITAL O/P 1 : 1 DIGITAL O/P 2 : 1 DIGITAL O/P 3 : 1 DIGITAL O/P 4 : 1	DIGITAL COUNTER COUNTER 1 : 1 COUNTER 2 : 0 COUNTER 3 : 0 COUNTER 4 : 0	
	**********	**************************************	******	*	
	Enter	SERVER PORT: 1905	0.162		
	E	Enter SSID: rslconoff			
	Enter	TIME OFFSET: -24	34		
		Submit			
Type here to search	ļ H 📄 🛅 🛛	I 🧿 🛯 😓	😕 🖬 📝	<b>X 2</b>	로 <sup>4</sup> ^ <u>6</u> 📾 <sup>1:00 PM</sup> 평

Figure 5

Page will show all the readings i.e. Analog Input, Digital Input, Digital Output, Counter. Menu will contain following fields:

- a. Server IP and Port: Customer does not have to enter these fields. It will be set default.
- b. SSID: Enter network name
- c. Password: Enter network Password
- d. Time Offset: Enter time offset for example for Dallas it is -24





# **NP200 Operations**

### Local Mode

- If Customer wants to access this unit locally then every time when he wants to check readings, he has to hold magnet on RED dot on box for 3 sec.
- Once it starts flashing 3 LED (Red, Green, Orange) then it create its own hotspot by its unit ID.
- Customer has to connect to this network using password "rslcon" and enter IP "192.168.4.1" on browser and check the readings.

### **Internet Mode**

- If customer wants to access this unit on web browser (internet) then he needs to connect the unit to its network.
- For this follow "Setup NP200 Unit".
- Once you enter Network details and click on submit, it will send report to LCon.
- It will send report two times a day i.e. 5 am and 3 pm as per default setting.
- If any alarm is generated then it will wake up automatically and send report.
- If customer needs to change the report time then he can change it from "sena-corp.com" website.





# **LCON Operations**

- 1) It is assumed here that customer Wi-Fi has internet access
- 2) Access your internet and go to sena-corp.com
- 3) In the upper right corner click on "Login"
- 4) Login into LCON with your credentials. (If you don't have login credentials please contact Sena Email:pateInp@sena-corp.com)
- 5) Click on "Submit" figure 6
- 6) LCON page will now display
- 7) Dashboard Page will now display. figure 7



Figure 6





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	Not Secure   se	ena-corp.com/Summaryview.asp	DX?St=All	&zn=All&pa=Al	l&SC=All&	ut=All&mi	1=Alloq	ps=All	srcia=				ਸ 🏸 :
	ÉNA												
				Da	sh B	oard					We	Come to Sen	a Sagar Shinde
Report Columns	Export Options	Go					All	Tank M	onitors		<b>\$</b>	Select	\$
All States ᅌ	All Zones	All Products		٥	All Sub Cor	npanies		٥	All U	ser Defined Tags	All Product Supplier		Revise Search
Company	TankID	Description	Product	Report T	ime	Inventory	Units	Alarm	Status	Battery Status	UnitNo	CameraSnaps	Model No
SENA Corporation	3000001-1	Dallas customer TM000001	Water	3/3/2020 11:2	26:04 AM	-9	In			20.17	TM3000001	NA	Time Machine
SENA Corporation	3000002-1	Dallas office TM000002	Water	3/18/2020 4:3	37:49 PM	-9	In			20.17	TM3000002	NA	Time Machine
SENA Corporation	3000003-1	Dallas customer TM300003	Water	3/2/2020 8:2	4:07 AM	-9	In			20.17	TM3000003	NA	Time Machine
SENA Corporation	3000004-1	Dallas customer TM300004	Water	3/26/2020 2::	17:03 PM	-9	In			20.17	TM3000004	NA	Time Machine
SENA Corporation	3000006-1	Pune office TM3000006		3/21/2020 6:2	29:39 PM	0	In			20.17	TM3000006	NA	Time Machine
SENA Corporation 3	3080001325-1	Property Cam-1(Towards House)	Water	3/31/2020 1:0	04:57 AM	0	Volts			11.57	2002275	View Pics	T200XYC
SENA Corporation 3	3080001383-1	New NP200-LPG #1	Water	3/31/2020 5:0	01:04 AM	42.31	inch			11.22	1008080	NA	T200
SENA Corporation 3	3080002145-1	NP200-WiFi-1	Water	1/22/2020 5:0	00:56 AM	-9	In			11.38	1004040	NA	T200
SENA Corporation 3	3080002148-1	NP200-WiFi-2	Water	1/22/2020 5:0	00:44 AM	-9	In			11.75	1005050	NA	T200
SENA Corporation 3	3080002149-1	NP200-LPG #1	Water	3/31/2020 3:0	02:10 PM	0.00				11.76	1006060	NA	T200
SENA Corporation 3	3101200009-1	Property Cam-2(Towards Road)	Water	3/11/2020 3:3	37:07 PM	-9	In			11.75	2001957	View Pics	T200XYC
SENA Corporation	500000001-1	Demo School Bus Unit	Water	1/17/2012 1:0	00:55 AM	NA				0	b8_27_eb_d8_8f_ea	NA	SchoolBus
Select Language  Pov	elect Language												

Figure 7





- 8) Identify the Unit and click on text in Description tab
- 9) Now Tank Information Page will open. (figure 8)

SÉNA									
Tank Information									
Onit History Onit Modification	Unit restury Onit Modulication Onit Cotation information Onit Renote Continuands Dates y Rotification Messages & Rotes Date Date Original Onit Page								
Unit No: 3080001383, Descriptio	n : New NP200-LPG #1								
Select Channel 3080001383-1	Channel 2 Not Activated								
Tank #	3080001383-1	USAGE DATA PERIOD							
Tank Description	New NP200-LPG #1	Apply Ignore Fill value							
Sub Company	SENA Corporation	From :	To: Ok						
Product Type	Water	Total Usage							
Capacity	50 Inch	Avg Daily Usage							
High Notification	0	Max Daily Usage							
Low Notification	0	Average Inventory							
Critical Low Notification	0	, verage menory							
High Alarm	OFF	DELIVERY ESTIMATES							
Low Alarm	OFF	Last Fill Date							
Critical Low Alarm	OFF	Last Fill Amount							
Current Level	32.3987 Inch	Number of Fills							
Percentage	64.8 %	Avg. Fill Amount							
Unit Time	6/18/2020 5:00:35 AM	Max. Fill Amount							
Average Daily Use	0 Inch								
Days to Low	0	TANK IMAGE							
Days to Low Low	0	Choose file No file chosen	Upload						
Days to Empty	0								
Battery Status	229.00000								
Tank Configuration		Stock Codes							

### Figure 8

10) For check Report history click on hyper link "Unit History". You will navigate to Unit History Page. Figure 9.





٠	Report H	listory	× +									
~	→ C	(i) Not S	ecure   sena-corp	.com/TankHist	ory.aspx?id=3080001383-1					☆		
		SÉ	NA		Report H	istory			Select			~
Unit H	istory	Unit Modificatio	on Unit Location Ir	nformation U	nit Notification Unit Remote Commands	Battery History	Battery Notification	Messages & Notes	Back To Dash Board	Unit F	Page	_
Note: C	CV = Cal	culated Value	, Report I	Inv History	rentory Unit of measure is:inch.			Graphical View				
		CV	Inventory	% Full	ReportTime			Enlarge				
	1	2956.00	32.48	65.0	6/18/2020 3:01:32 PM	60 -						
	0	2949.00	32.40	64.8	6/18/2020 5:00:35 AM							
	0	2952.00	32.43	64.9	6/17/2020 3:00:51 PM	46 -				-		
	1	2943.00	32.33	64.7	6/17/2020 5:03:25 AM							
	1	2951.00	32.42	64.8	6/16/2020 3:01:32 PM	32 -						
		2962.00	32.54	65.1	6/16/2020 5:00:35 AM							
	1	2949.00	32.40	64.8	6/15/2020 3:00:49 PM							
	0	2948.00	32.39	64.8	6/15/2020 5:03:22 AM	18 -						
	1	2934.00	32.23	64.5	6/14/2020 3:01:38 PM							
	1	2905.00	31.92	63.8	6/14/2020 5:00:34 AM	4 -						
	0	2948.00	32.39	64.8	6/13/2020 3:00:49 PM							
	1	2977.00	32.71	65.4	6/13/2020 5:03:22 AM	-10						
D	1	2936.00	32.26	64.5	6/12/2020 3:01:32 PM	2020,	/06/12 00 -			20	020/06	119 0
<u> </u>			-				- 00:00					- 0(

Figure 9

- 11) For Report Notification (Email alerts) click on hyper link "Unit Notification". You will navigate to Unit notification Page. Figure 10. (only Admin will have the access of this page)
  - For getting alerts on high and low readings. Please Fill the values in the fields (High-High, High, Low- Low, Low) that you think that reading will be alert reading. After That check the check mark. You can select the type of alerts like Hi-Hi, Hi, Lo-Lo, Lo, unit report, etc..





NotifySet	ttingsGUnit ×	+							
- > C	A Not Secure ser	na-corp.com/NotifySettingsGUnit.asp>	?id=3080001383-1						r 🧖
Notification Unit History elect Channe P200-LPG #	SEttings Unit Modification Unit (3080001383-1 ), D	Location Information Unit Notification escription : New	Copy Notifi Unit Remote Commands	cations Battery History	Battery Notific	ation Messages	& Notes	Select Back To Dash Board	Unit Page
Set Points		Notifications							
Description	50 inch	Email Addresses	Hi Hi Lo Lo Hi Hi Lo Lo	Notify Unit Once Repor	Push A	bbreviated Repo	Interna rt ID	al Product Supplier	Timer
Capacity	50 Inch	pateInp@sena-corp.com							Daily
High High	0 inch								Daily
Control									Daily
									Daily
									Daily
Hign	0 inch								Daily
Control									Daily
Low	0 inch								Daily
									Daily
Control									Daily
									Daily
Low Low	0inch								Daily
Control									Daily
									Daily
									Daily
									Daily
		1							

Figure 10

12) For changing Unit setting Remotely click on hyper link "Unit Remote Commands". You will navigate to Unit Remote Commands Page. Figure 11. (only Admin will have the access of this page)

You Can change the below fields remotely.

- UTC Date and UTC Time: Date should be in format YYMMDD and time should be in format HHMMSS
- **Offset**: You can change the offset values. For example, you want to set the offset -24 so you should have the enter 24 and if you want set +24 value should 124.
- Individual Register Scanning: For Scanning Only one type of registers you can press the buttons ScanAI, ScanDI, ScanDO, ScanRH
- **Reports Alarms**: Here is you have 12 options to set report time alarms. You have to set alarms in format HHMM. Also, if you want hourly report enter 9900 in one filed you will get hourly reports.





- Change Output's: You can change the output values by pressing available buttons. Means if current value is ON then you can press OFF button. If current values are OFF, then you press ON button.
- ADC Alarms: You set the High and Low alarm values. This value should be in integer format. You can set values for 8 channels. You can also delete the high and low alarm pressing Delete buttons.
- **Row Units:** You can set the Low and high row units (HRU, LRU) for 4 channels. This value should be in integer format.
- Engineering Units: You can set the Low and high Engineering units (HEU, LEU) for 4 channels. This value should be in floating format.

S Unit Remote Commands	× +						
$\leftrightarrow$ $\rightarrow$ C (i) Not Secure	sena-corp.com/UnitRemoteCommand	ls.aspx?id=308000	1383-1				२ 🕁 🧖 :
SÉNA							
Unit History Unit Modification	Unit Location Information Unit Notification	Vit Remote Comma Unit Remote Comm	ands Battery I	History Battery Noti	fication Messag	es & Notes Back To Da	Select
	UTC Date(yymmdd) UTC Tin	ne(hhmmss)	Update			Offset	Update
ScanAl	ScanDI			ScanDO		Scan	RH
	Papart Alarme				OutBute		
NoNo Report Time(hhmm)	Update Report Time (hhmm)		No	(	Current Status	U	pdate Status
1 Unset	Update	Delete	OutPut 1		OFF		OFF ON
2 Unset	Update	Delete	OutPut 2		OFF		OFF ON
3 Unset	Undate	Delete	OutPut 3		OFF		OFF ON
4 Linset		Delete	OutPut 4		OFF		OFF ON
F Unset		Delete					
5 Chiset	Opdate	Delete					
6 Unset	Update	Delete			ADC Alarme		
7 Unset	Update	Delete	C No Current A	larms	Update A	arms	Delete Alarms
8 Unset	Update	Delete	Low	High	Low	High	Low High
9 Unset	Update	Delete	1 Unset	Unset	Update	Update	Delete Delete
10 Unset	Update	Delete	2 Unset	Unset	Update	Update	Delete
11 Unset	Update	Delete	3 Unset	Unset	Update	Update	Delete Delete
12 Unset	Update	Delete	4 Unset	Unset	Update	Update	Delete Delete
			5 1077	4060	Update	Undate	Delete Delete
			6 Unset	Unset	Update	Undate	Delete
			7 Unset	Unset	Undate	Lindate	Delete Delete
			8 Uneet	Unset	Lindate	Lindate	Delete
			0 Onaet	01361	opdate	Opulate	Delete
LRU	LEI	J		HRU		н	EU
2.10				1110			
380 Update	e 0.00	Update	3900	U	pdate	0.40	Update
205 Updat	e 0.00	Update	4096		pdate	2.77	Update
205 Update	e 0.00	Update	4096		pdate	2.77	Update
205 Update	e 0.00	Update	4096		pdate	2.77	Update
			I				

Figure 11





13) You can change the unit setting for calculation using Unit modification Page. This calculation is only for Lcon side. Visit this page by select hyper link "Unit Modification". Figure 12.

• Update Tank Information ×	+								
$\leftrightarrow$ $\rightarrow$ C (i) Not Secure   s	ena-corp.com/TankAdministra	ition.aspx?id=3080001383&tnum	nber=1		☆ 🧖 :				
SÉNA									
RMU # - 3080001383	<b>J / EGIT</b> Note: SubCompany, TagNa	ime, ZoneName, StateName fields have been move	d to RMU TankAdministration page	le	Coloct				
1000 # .000001000		3	elect Channel 308000	303-1	Select				
Unit History Unit Modification U	Init Location Information Unit N	Notification Unit Remote Command	ds Battery History E	Battery Notification Messages & Notes	Back To Dash Board Unit Page				
Tank 1   Active  InAc	tive		Tank 2 O Ac	tive 🖲 InActive					
Tank Information			Tank Information						
Tank #	3080001383-1								
Sub Company	SENA Corporation		Tank # Sub Company	3080001383-2					
Zone	AAA		Zone						
Tank Description	New NP200-LPG #1	]	Tank Description						
Customer Internal ID	50	]	Customer Internal II	D					
Product Supplier	Select		Product Supplier	Select	~				
	00000		Has Temperature						
Has temperature		<b>O a a a a a a a a a a</b>	Use Calculation	True False	d Calculation				
Use Calculation	True False	Corrected Calculation	Lise Strapping Table						
Use Strapping Table	O O True False		Use Strapping Table	True False					
Strapping Table	Select	$\sim$	Strapping Table	Select	× 64				
Knee	2		Knee						
Unit Of Measure	inch		Unit Of Measure	Palast					
Sensor #	0-5V, 0-100%	$\checkmark$	Tank Height	Select	*				
Tank Height	45		Tarik Lieight						
			_						
			Active Calculation	Select					

Figure 12





14) For check Battery history click on hyper link "Battery History". You will navigate to battery History Page. Figure 13.



Figure 13

- 15) For Battery Report Notification (Email alerts) click on hyper link "Battery Notification". You will navigate to battery notification Page. Figure 14. (only Admin will have the access of this page).
  - For getting alerts on high and low battery readings. Please Fill the values in the fields (High- High, High, Low- Low, Low) that you think that reading will be alert reading. After That check the check mark. You can select the type of alerts like High-High, High, Low-Low, Low, unit report, etc..





🔷 sen	a-corp.com/NotifyUnitBatte	×	+								
$\leftrightarrow$ $\rightarrow$	C (i) Not Secure	sena	-corp.com/NotifyU	nitBatterySetting	s.aspx?id=3080001383-1				7	år 🧔	:
	SÉN	IA									
Notific	Notification Unit Battery Settings										
RMU # 3	3080001383-1										
Unit Hi	story Unit Modification	Unit L	ocation Information	Unit Notification	Unit Remote Commands	Battery History	Battery Notification	Messages & Notes	Back To Dash Board	Unit Pag	je
Set Poi	nts		Notifications								
			Email	Addresses	High H	High	High	Low	Low Low		
III-A	<b>u-t</b>					)					
High I	lign U					)					
						)					
High	0					)					
						)					
Low	0					)					
						)					
Low L	0 0					)					
											Save

Figure 14





## 16) For seeing register values select "Unit page" hyper link. Figure 15

Unit Screen Page	× +							
$\rightarrow$ C (i) Not	Secure sena-corp.com/ur	itscreenpage.aspx?id	=3080001383-1				Q	☆ 🧖
🖲 SÉ.	NA		Unit Scree	n Page			Select	
nit History Unit Modific	ation Unit Location Information	on Unit Notification	Unit Remote Commands	Battery History	Battery Notification	Messages & Notes	Back To Dash Board	Unit Page
Unit Update R Da	: ID: 6561680 TC: 12598 ate: 200619	G Update G	PS Lat: 0 PS Fix: 0 Time: 50400		GPS Lon: 0 Camera SnapShot: 2 UTC Date: 2 New UTC: 3	55 00619 165440	Unit Temp: 64 DO Pulse: U UTC Time: 10 New UTC: 37	5408 nset 00400 158064
OutPuts 0 0 0 0	<b>Debounce</b> 2 0 0 0	<b>Inputs</b> 1 1 1	ADC Raw 1 1 1 1		ADC Calculate	ed	Report Alar 7 ADCO: 8084644 ADC1: 19348 ADC2: 73442	<b>ms</b> 139
		1888 1951 0 2			0 0 0		ADC3: 73446	
Analogs 1 1 1 1 1888 1951 0 2	Alarms Unset-Unset Unset-Unset Unset-Unset Unset-Unset Unset-Unset Unset-Unset Unset-Unset			LRU 380 205 205	LEU 0.00 0.00 0.00 0.00	HRU         HEU           3900         0.40           4096         2.77           4096         2.77           4096         2.77	Units 0 0 0	Name 0 0 Unset
Misc	BATLR SO 1933 19	LLR S 84	EN5LR 4079	SEN18LR 2684	ST	ORETIME 0	BARPRE 0	ESS

Figure 15





Notes:	

