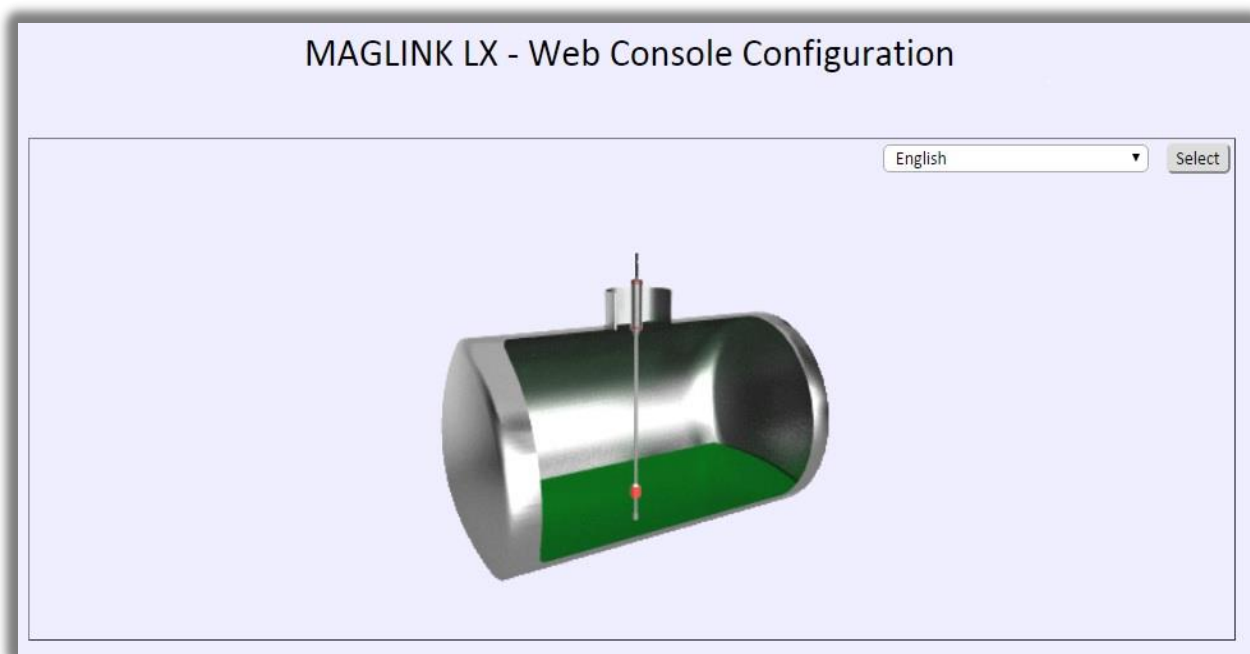


Configuration manual



Rev. 10 – March 2017

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1 PREFACE

Start Italiana S.r.l. has made every effort to keep this document complete, accurate and updated. With every revision of the console, the corresponding information is periodically added to the document. Start Italiana S.r.l. reserves the right to make unannounced improvements and/or changes in the product and/or associated programs. Start Italiana S.r.l. is not liable for damages of any kind, including those resulting in the document, including typographical errors.

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2 GENERAL WARNINGS

Before working on this equipment, please carefully read instruction in this manual.

Authorised and trained personnel must perform configuration changes and updates.

The manufacturer is not responsible for any operation performed which is not covered in this manual.

Any tampering with the equipment and software relieves the manufacturer of any responsibility in regards to competent bodies.

In case of failure or defect, refer to an authorized service provider or manufacturer directly.

The manufacturer accepts no responsibility for any injury and/or damage to persons and/or property and/or pets caused by failure to follow instructions relating to safety.

Qualified and trained staff must have an understanding of the safety requirements mentioned in this manual, the user manual and in the installation manual.



In case of doubt concerning the operation of the equipment, refer to an authorized service provider or manufacturer directly.

3 INTRODUCTION

This manual has been prepared in accordance with IEC 82079-1 standards "Preparation of instructions for use - Structuring, content and presentation - Part 1: General principles and detailed requirements" and according to the ATEX Directive 2014/34/EU concerning equipment and protective systems intended for use in potentially explosive atmospheres.


The manual provides necessary information on using a Maglink LX console.


The following table lists the symbols used in the document:


Symbol	Description
	ATTENTION: Important information and notes regarding operations and use considerations
	IMPORTANT: Danger to persons (including death), to property or to the environment

The following table lists reference data of the manufacturer:

Data	Description
Name	START ITALIANA S.r.l.
Address	Via Pola 6 20813 Bovisio Masciago (MB) Italy
Telephone	+39 0362 1581465
Fax	+39 0362 1581464
Website	www.startitaliana.com
e-Mail	support@startitaliana.it

	<p>ATTENTION: This manual must be used in conjunction with the following manuals:</p> <ul style="list-style-type: none"> • Installation manual • User Manual <p>In order to use the console as described below in this manual, you must have installed the consoles as per installation manual and use the console as per the user manual</p>
---	---

	ATTENTION: This manual must be used in conjunction with safety instructions
---	---

	IMPORTANT: Console installation should be performed by qualified personnel, as shown in the Installation Manual and according to safety instructions
---	--



The device may not be disposed of with household rubbish. This appliance is labelled in accordance with European Directive 2012/19/UE concerning used electrical and electronic appliances (waste electrical and electronic equipment – WEEE).

The guideline determines the framework for the return and recycling of used appliances as applicable throughout the EU. To return your used device, please use the return and collection systems available to you.



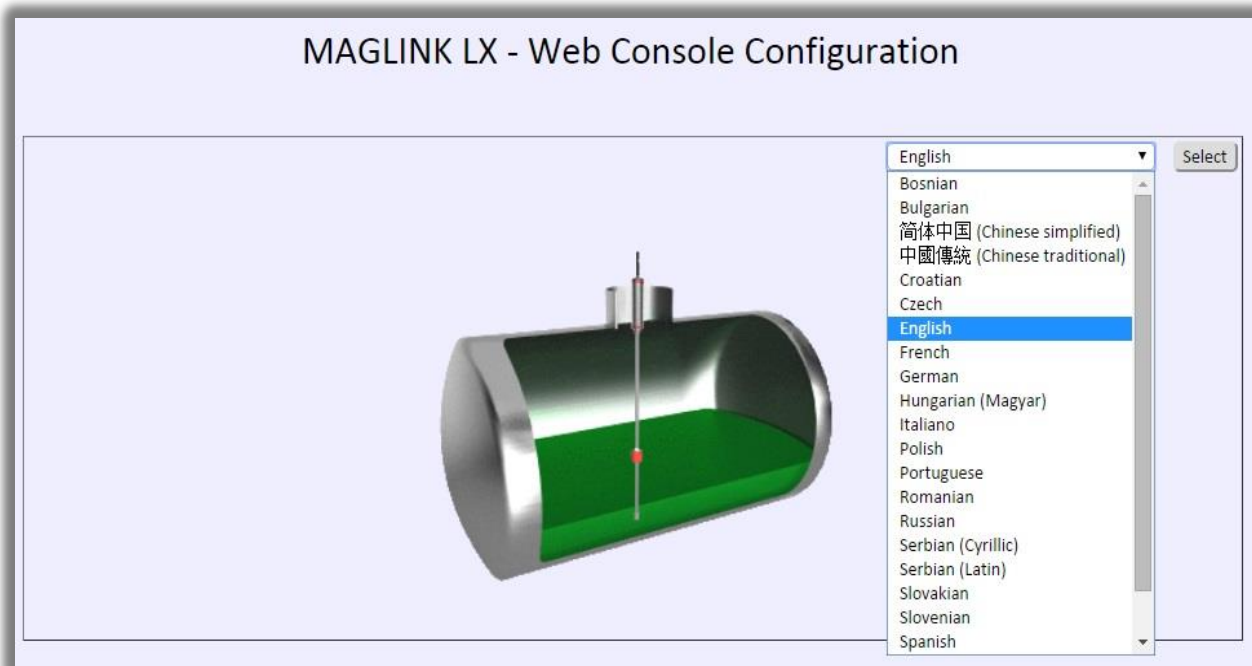
ATTENTION: The units of measurement contained in this manual refer to a specific choice by the user himself/herself. You can set the measurement units in a different way (see Section 6.1 of this manual)

The Web Console Config is a web application installed on Supra Linux Apache Web Server operating system distributed with each MagLink LX. The web application is designed to configure and set parameters in the console. In addition, you can also display a variety of information:

- The status of all connected tanks
- Historical data collected
- Current and previous alarms
- The data on the shift report
- Reconciliations
- Delivery and losses

To access the application you must know the IP address of the console (default: **10.90.10.90**) and type it into a browser (for example, Mozilla Firefox, Google Chrome, Internet Explorer, etc.).

The following figure shows the home page of the Web Console Configuration, as a first step, you need to select the display language:



The possible display languages are as follows:

Bosnian	Czech	Hungarian (Magyar)	Romanian	Slovenian
Bulgarian	English	Italian	Russian	Spanish
Chinese Simplified, Chinese Traditional	French	Polish	Serbian (Cyrillic and Latin)	Turkish
Croatian	German	Portuguese	Slovakian	Ukrainian

After selecting the language, press the "Select" button and the application displays the login page.

4 LOGIN PROCEDURE

The following image shows the "Login Page":

You can login as a "Guest" user or as an "Admin" user, (the user has permission to access configuration pages to obtain common parameters and system parameters relating to the system setup). The following table shows the data displayed depending on the type of log on access:

Accessible data	Guest	Admin
Level of the connected probes	X	X
Historical Data Table	X	X
Alarm status	X	X
Delivery/Losses	X	X
Login	X	X
Logout	X	X
Association of alarm to relays (per tank)		X
Managing internal and external sensors		X
Automatic print features		X
Definition and insertion of strapping table (per tank)		X
Configuring email address book		X
Configuration of all dispensers		X
TCP/IP address configuration		X
Utility operations (Backup/restore, Clean historical data: Historical readings, alarms, reconciliation, shift reports, Touch screen calibration of the console; Restarting the console, Restarting the operating system of the console)		X
Reconciliation (if enabled)		X
Shift report with scheduling		X
Configuration internal/external sensors		X
Sensors current status	X	X
Autocalibration Analysis		X
Print stock at predefined time of the day		X

By accessing the application as "Admin" user, you can perform configuration changes and navigate between pages. The following table shows the default passwords corresponding to the different types of login access:

Login access	Password
Guest	GUEST-LX
Admin	MAGLINK-LX

You can only change the password by logging in as "Admin."



ATTENTION: The administrator must change the password as soon as possible to prevent unauthorized access



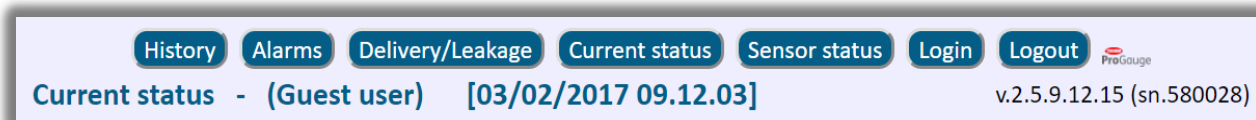
ATTENTION: Please be aware that the password is case sensitive

All configuration data can be changed only after you have logged in as "Admin." The user must select the type of login access: "Guest" or "Admin" enter password and press the "Access" button.

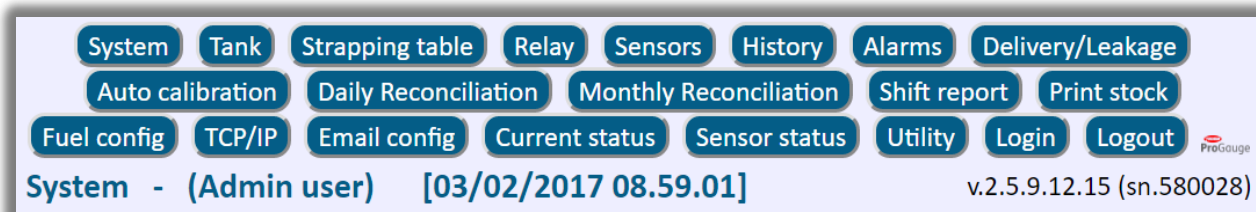
5 BASIC FUNCTIONS

Once logged in you must enter the application, all pages have the same format. Menu items and user accessibility is displayed in the main menu at the top of the page as shown in the following examples:

Log on as "Guest": Main menu



Log on as "Admin": Main menu



The following items are always present:

- Menu buttons on every pages
- Logo (Returns you to the home page)
- Name of the current page
- Type of access ("Guest" or "Admin")
- Current date or time
- Versions, console and serial number

From any page, you can go to home page to change language for web application simply by clicking on the logo displayed after the last main menu button. The name of the page you are on is displayed on the top left.

All configuration data can be modified after user has logged in as "Admin" user. To access, the user must select the access type, "Guest" or "Admin," enter the password and press "Login" button.

Parameter changes are committed to the console only after pressing the "Apply configuration" button present in all pages.

6 CHANGE PASSWORD

The first thing to do is change the password for both "Guest" and "Admin" users. Only the "Admin" user can make password changes.

Apply the following procedure:

Step	Description
1	Login as "Admin"
2	Press "Login" on the main menu
3	It opens the "Login" page with the ability to change your password: <div data-bbox="577 586 1110 864" data-label="Form"> </div>
4	Press the "Change password" button
5	Type the current password and the new password then press the "Confirm" button: <div data-bbox="593 1046 1098 1330" data-label="Form"> </div>
6	The application displays the result of the operation, displaying one of the following messages: <div data-bbox="322 1458 1362 1778" data-label="Form"> </div>
7	Repeat the operation in case of an incorrect input or contact your administrator if you forget your password. In the event that you are no longer able to recover the current password, follow the procedure for resetting passwords.

7 THE "GUEST" AND "ADMIN" PAGES

7.1 History

The following image shows the "History Page":

History - (Admin user) [11/02/2016 12.54.49]

Year/Month: 2016-02 Day: 11 Tank: All tanks Display tank history

Time	Tank	Product height (mm)	Water (mm)	Temp. °C	Volume (liters)	Water volume (liters)	Density	Volume comp. (liters)	Status
09.51.37	01	310.50	20.82	19.2	22356	1499	0.0000	22279	Status OK
09.52.37	01	310.50	20.83	19.2	22356	1500	0.0000	22279	Status OK
09.53.37	01	310.50	20.83	19.2	22356	1500	0.0000	22279	Status OK
09.54.37	01	310.50	20.82	19.2	22356	1499	0.0000	22279	Status OK
09.55.37	01	310.50	20.82	19.2	22356	1499	0.0000	22279	Status OK
09.56.37	01	310.51	20.82	19.2	22357	1499	0.0000	22280	Status OK
09.57.37	01	310.50	20.83	19.3	22356	1500	0.0000	22277	Status OK
09.58.37	01	310.50	20.82	19.3	22356	1499	0.0000	22277	Status OK
09.59.37	01	310.50	20.83	19.3	22356	1500	0.0000	22277	Status OK
10.00.37	01	310.50	20.82	19.3	22356	1499	0.0000	22277	Status OK
10.01.37	01	310.51	20.82	19.3	22357	1499	0.0000	22278	Status OK
10.02.37	01	310.51	20.82	19.3	22357	1499	0.0000	22278	Status OK
10.03.37	01	310.51	20.82	19.3	22357	1499	0.0000	22278	Status OK
10.04.37	01	310.50	20.82	19.3	22356	1499	0.0000	22277	Status OK
10.05.37	01	310.50	20.82	19.4	22356	1499	0.0000	22276	Status OK
10.06.37	01	310.50	20.82	19.4	22356	1499	0.0000	22276	Status OK
10.07.37	01	310.50	20.82	19.4	22356	1499	0.0000	22276	Status OK
10.08.37	01	310.50	20.82	19.5	22356	1499	0.0000	22274	Status OK

The page contains the saved data at regular intervals in a log file for future analysis. You can select from the following filters:

- Year/Month
- Day
- Tank

Pressing the button "Display tank history" displays the data with the considered filters.



The button allows you to download data in Excel CSV format; the downloaded file contains all the information of the selected day.

7.2 Alarms

The following image shows the "Alarms Page":

Alarms - (Admin user) [11/02/2016 12.56.22]

Tank: All tanks Start date: End date: Display alarms

Date/time	Tank	Alarm	Status
08/02/2016 08.50.16	11	Status OK	ACK. ALARM
08/02/2016 08.50.16	11	Status OK	ACK. ALARM
08/02/2016 08.49.58	01	NOT INITIALIZED	CLEAR
08/02/2016 08.49.48	01	NOT INITIALIZED	ALARM ON
08/02/2016 08.49.33	11	Status OK	CLEAR
08/02/2016 08.49.33	11	Status OK	CLEAR
01/02/2016 08.49.18	11	Status OK	ACK. ALARM
01/02/2016 08.49.18	11	Status OK	ACK. ALARM
01/02/2016 08.49.18	01	NO LINK	ACK. ALARM
01/02/2016 08.49.12	01	NO LINK	ALARM ON
01/02/2016 08.49.08	11	Status OK	ACK. ALARM
01/02/2016 08.49.08	11	Status OK	ACK. ALARM
01/02/2016 08.48.51	11	Status OK	CLEAR
01/02/2016 08.48.51	11	Status OK	CLEAR
28/01/2016 17.06.39	11	Status OK	ACK. ALARM
28/01/2016 17.06.39	11	Status OK	ACK. ALARM
28/01/2016 17.06.06	11	Status OK	CLEAR
28/01/2016 17.06.06	11	Status OK	CLEAR

The page shows alarm history. You can select from the following filters:

- Tank

- Start date
- End Date

Pressing the button "Display Alarms" displays the data with the configured filters. The alarms are colour coded according to the current state:

- **Green:** For solved alarms
- **Yellow:** For acknowledged alarms
- **Red:** For alarms in progress

7.3 Delivery/Leakage

The following image shows the "Delivery/Leakage Page":

Delivery/Leakage - (Admin user) [14/02/2017 09.52.36] v.2.5.9.13.15 (sn.580028)

Tank: 01 - tank 1 Start time: End time: Display delivery/leakage Leakage Delivery


		Start delivery/leakage				End delivery/leakage				Vol. diff.
Start time	End time	Volume (liters)	Volume comp. (liters)	Water (mm)	Temp.°C	Volume (liters)	Volume comp. (liters)	Water (mm)	Temp.°C	Volume (liters)
21/01/2017 08.42	21/01/2017 08.49	16353.4	16310.6	4650.0	18.2	16843.0	16798.9	4212.0	18.2	489.60
16/12/2016 16.31	16/12/2016 16.38	16328.2	16250.9	10945.0	20.8	16735.7	16656.5	11257.0	20.8	407.50
10/11/2016 12.14	10/11/2016 12.27	19319.8	19231.4	5829.0	20.6	19877.0	19778.1	14494.0	21.1	557.20
09/11/2016 19.59	09/11/2016 20.05	21891.6	21766.7	5599.0	22.0	22063.0	21937.0	5596.0	22.0	171.40
08/11/2016 13.45	08/11/2016 13.51	20313.4	20237.0	5574.0	19.6	21883.7	21799.7	5579.0	19.7	1570.30
06/11/2016 13.01	06/11/2016 13.07	19478.2	19441.5	5293.0	17.3	20301.8	20263.6	5578.0	17.3	823.60
28/10/2016 12.03	28/10/2016 12.09	20520.7	20420.3	3697.0	21.0	20710.8	20607.7	3696.0	21.1	190.10
28/10/2016 11.32	28/10/2016 11.38	20029.7	19938.1	3702.0	20.6	20519.3	20422.2	3696.0	20.8	489.60
15/10/2016 11.56	15/10/2016 12.03	18299.5	18233.7	2864.0	19.4	20391.1	20317.8	3493.0	19.4	2091.60
13/09/2016 15.44	13/09/2016 15.51	22483.4	22282.5	2634.0	26.0	22615.9	22413.7	2637.0	26.0	132.50
06/09/2016 14.07	06/09/2016 14.14	40727.2	40314.0	5429.0	27.5	41443.1	41022.6	5311.0	27.5	715.90
06/09/2016 13.36	06/09/2016 13.42	40342.6	39943.0	5433.0	27.2	40726.4	40319.8	5430.0	27.3	383.80
05/09/2016 14.37	05/09/2016 14.43	39695.9	39347.4	5404.0	25.8	43624.3	43234.3	5403.0	26.0	3928.40
03/09/2016 10.41	03/09/2016 10.47	37583.8	37208.6	4294.0	27.3	39859.3	39477.3	4631.0	26.8	2275.50

The page shows the Delivery data (White background coloured lines) and related losses (Red background coloured lines) as shown in the legend in the upper right corner above the table:



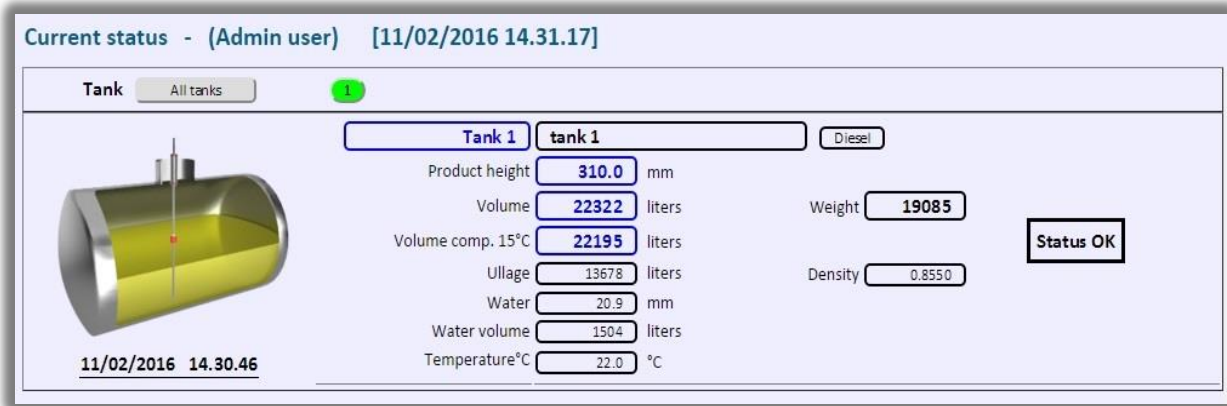
The page shows "Delivery/Losses" history. You can select from the following filters:

- Tank
- Start Time
- End Time

Pressing the button "Display delivery/leakage" displays the data with the considered filters. The  button allows you to download data to Excel (CSV) the created file contains all the information of the selected filter.

7.4 Current Status

The following image shows the "Current Status" page:



The page allows you to view all the data sent by the probes connected to the console. The following filters are possible:

- All tanks: Data of all tanks is displayed one after the other
- 1, ..., 32: The selected tank data is displayed

The page is reloaded automatically every minute and shows the latest information. You can refresh the page by pressing the F5 key, or by pressing the "Current Status" button from the main menu.



ATTENTION: The displayed data refers to the latest data saved in the history file.

7.5 Sensor status

This is the "sensor status" page. User can check current internal/external sensor status.

Sensor status - (Admin user) [11/02/2016 12.36.11]

Type	Sensor	Status	Status date
3 - External card Start Italiana S.r.l.	32 - SENSOR 32	ALARM SENSOR	08/02/2016 08.49.26
2 - Tri-state	10 - SENSOR 10	OK	08/02/2016 08.49.26
2 - Tri-state	05 - SENSOR 5	ALARM SENSOR	08/02/2016 08.49.26
1 - Internal	04 - SENSOR 4	OK	08/02/2016 09.35.33
1 - Internal	01 - SENSOR 1	OK	08/02/2016 09.35.33

8 THE "ADMIN" PAGE

8.1 System

The following image shows the "System Page" parameters:

System - (Admin user) [14/02/2017 10.00.10] v.2.5.9.13.15 (sn.580028)

Total tanks: 01 - tank 1
Total dispensers: 1
Total sensor: 0
Protocol type: GILBARCO (9600,0,7,1)
Double Gilbarco protocol: Baud rate: 2400, Parity: Even
TCP port: 8080, Gilbarco protocol over TCP
Volume comp. temperature: 15 °C
Auto print: ☐ Shift report, ☐ Alarms, ☐ Delivery, ☐ Leakage, ☐ Daily Reconciliation (00.00) Time

Station name: PROGAUGE 2.5
Probe resolution: 0.5 mm
Language: English
Measurement unit: mm / liters
Data bit: 7, Stop bit: 0
Date format: dd-MM-yyyy

fairbanks ID: 00, Interval: 15 min, Transfer mode: ☒ Passive, ☐ Active
Server: , Folder: , Port: 25
User: , Password:

Manuals, User, Installation, Configuration

Dipswitch settings							
Dipswitch1: OFF	Dipswitch2: ON	Dipswitch3: OFF	Dipswitch4: OFF	Dipswitch5: OFF	Dipswitch6: OFF	Dipswitch7: OFF	Dipswitch8: OFF
OFF: Single Gilbarco	OFF: Internal inputs NOT available	OFF: No action	OFF: Normal relay	NOT USED	OFF: No action	OFF: No Daily Reconciliation	NOT USED
ON: Double Gilbarco (2400,0,7,1)	ON: Internal inputs available	ON: Input 2 for antitheft (Dipswitch2 must be OFF)	ON: Inverted relay		ON: Password reset (Restore factory settings)	ON: Daily Reconciliation	

Apply configuration


The page displays system information and parameters applied to all connected probes. The following table lists the parameters that can be set:

Parameter	Description
Total tanks	Number of connected probes (From 1 to 32)
Total dispensers	Number of connected dispensers (From 1 to 32)
Total sensor	6 internal – max 32 from maglink I/O – max 64 from Tristate sensors
Protocol Type	Select from among the following: <ul style="list-style-type: none"> DIALOG DOMS FUEL POS GILBARCO ORPAK PIGNONE RETALIX Probe emulation Terpel TOREX
Double Gilbarco protocol	Possibility to define port communication parameters: baud rate, parity, data bit, stop bit
TCP Port	Gilbarco protocol via TCP
Volume comp. temperature	Selectable values for the calculation of the compensated volume: <ul style="list-style-type: none"> 15 °C 20 °C
Station name	Station name
Probe resolution	Allow setting the value to 0.5 <div> ATTENTION: Do not change unless instructed by Start Italiana S.r.l. </div>
Language	Select the language of the console display
Measurement unit	Select from among the following: <ul style="list-style-type: none"> mm/litre inches/gallon mm/gallon
Date format	Select from the following date formats: <ul style="list-style-type: none"> yyyy-MM-dd dd-MM-yyyy MM-dd-yyyy
Auto Print	Select when to perform the following automatic stamp:

	<ul style="list-style-type: none"> Shift report, at the beginning and end Alarms, at every status change Delivery, at the beginning and end 	<ul style="list-style-type: none"> Leakage, upon detection of a loss Reconciliation, set the "Time" for daily reconciliation
Manual	You can download the PDF of the three manuals regarding the console: <ul style="list-style-type: none"> User Installation Configuration 	
Fairbanks	FTP configuration parameters used to upload data to Fairbanks servers. To enable Fairbanks service, ID must be greater than 00 and all parameters must match Fairbanks ftp settings.	

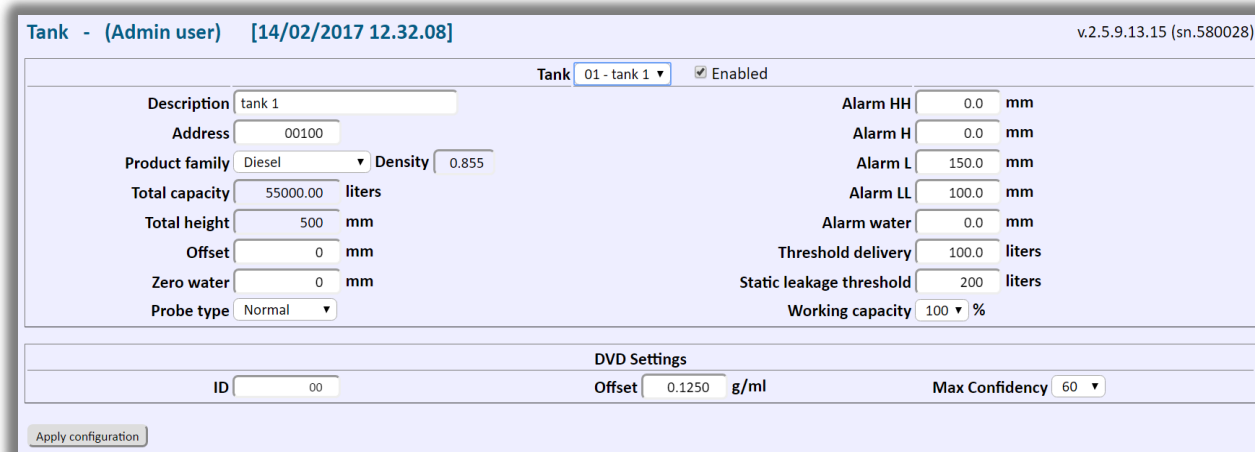
The lower part of the page displays the configuration of the dipswitches.

The following table shows the configuration of the dipswitches:

Dipswitch	Description
1	OFF = Single Gilbarco, ON = Double Gilbarco
2	OFF = Internal inputs not available, ON = internal inputs available
3	OFF = No action, ON = input 2 for antitheft (dipswitch 2 must be off)
5, 8	Not used
4	OFF = Relay in normal mode, ON = Relay in reverse mode
6	Resetting password (Turn off console, switch bit 6 to ON, turn on console, wait for the display cursor in the top left, turn off console, switch bit 6 to Off, turn back on console)  ATTENTION: The password reset results in loss of all configuration data, historical data, alarms info, delivery and reconciliations
7	OFF = Reconciliation deactivated, ON = Reconciliation activated

8.2 Tank

The following image shows the "Tank Page":



The page allows you to set the data of each tank; Select from the drop down "Tank," for the tank you wish to work on and then set the parameters listed in the following table:

Parameter	Description
Enabled	When the flag is active, the application queries the corresponding probe during the read cycle, otherwise the probe is not queried
Description	Description of the tank
Address	Address of the probe (no reading from probe in case of incorrect address)
Product family	Select the type of product contained in the tank from the list
Density	Product density, fixed value defined by the product type selection
Total capacity*	Maximum volume of the product (read-only value)
Total height*	Maximum level of the product (read-only value)

Offset	Value used to calibrate the position of the product float Possible values: ± 30.000 mm
Zero water	Value used to calibrate the water float Resolution: 1 mm. Maximum value: +30.000 mm
Probe type	Select from the following (This decision impacts the diagnostics display page on the console, refer to the user manual): <ul style="list-style-type: none"> Laser probe Logger Normal RF
Very high alarm, High alarm, Low alarm, Very low alarm, Water alarm	Set alarm values relating to different thresholds
Delivery threshold, Static leakage threshold	Set the minimum values to trigger a loss or leakage
Working Capacity	Set the working capacity for the Ullage calculation
DVD settings	ID, offset and Maximum Confidence probe (Data provided by Start Italiana S.r.l.)

**This parameter cannot be set, it's taken from the last line of the strapping table (See Strapping Table section); In case of no Strapping Table, it is possible to create a simple one, with only two lines:*

mm	0	litres	0
mm	Maximum height of tank	litres	Maximum volume capacity

8.3 Strapping Table

The following image shows the "Strapping Table Page":

The Strapping table is used to calculate the volume of the tank, given that each tank has its own shape and its own height. After tank selection from the "tank" drop down, you can enter the information table in three different ways:

1. **Create table manually:** This method allows you to generate a complete linear table where the user must enter the switch from one level to the next. The table is created taking into account the total height of the tank. Press the button "Create new strapping Table" the table is generated and displayed on the right side of the page. Only level values are compiled the user must enter the values of the corresponding volume. Once generated the user can add new ones, change existing ones and/or deleting some with discretion:
 - **Add:** Set the value in mm and litres and press "Add new row"
 - **Edit:** Set the desired level (mm) and/or the volume (litres) for rows to edit
 - **Delete:** Check the box next to the "Delete" button if you want to delete the entire Strapping table or put a check on lines to be deleted after finishing ticking all the lines press the "Delete" button
2. **Import Table:** When you have a Strapping table in Excel (CSV format), you can import it by using the "Browse" and "Upload" button. The table appears on the right side of the page
3. **Duplicate table:** It is possible to duplicate the Strapping Table of a tank for other tanks, one tank at a time. The source tank is selected from the "tank" drop-down list. The target tank is selected from the drop down "Destination"

Tank." Pressing the "Duplicate" button will duplicate the Strapping table from source tank to destination tank. Duplicating a table is saved automatically for the destination tank

Additional buttons on the table:

- **Validate Strapping Table:** During data entry you can check the consistency of the data entered by pressing this button in case of error or omission the corresponding lines are shown in bold red
- **Save Strapping Table:** At the end of any changes press the button to save the data.
- **Cancel changes to Strapping Table:** By selecting cancel changes, you can undo all the changes made and start again.

After entering the information table and/or having made any changes to the existing ones press the "Apply strapping tables changes" button to take effect, otherwise all changes will take effect the next time you restart the application or the console itself.




ATTENTION: Press the "Save strapping table" button to apply the changes; Otherwise, the changes are lost.



ATTENTION: The strapping table can have a maximum of 500 points



The button  allows you to download the "Strapping Table" in an Excel file in CSV format.

8.4 Relays

The following image shows the "Relay Page":

Configuring alarm relays, select the tank from the "tank" drop-down list and wait for data to load, then set the desired alarms choosing from internal e/o external relays.

Relays can be configured for the following:

- Not used
- No link
- High
- Low
- Out of range
- Probe
- Very high
- Very low
- Communication
- Water



ATTENTION: When using the DVD, do not use Relay 4 because it's used to power the DVD

8.5 Sensors

In this section user can configure internal and external sensors. User must select a sensor type and for each sensor define the alarm status. In addition, user can select a relay to combine with each sensor when alarm is active.

You can specify the sensors connected to the console. Select the sensor from the "sensor type" drop-down list and fill in the fields related to sensors. The types of sensors available are as follows:

- **Internal:** Internal probe (6 sensors)
- **Triple-state:** Triple-state probe (64 sensors)
- **Maglink I/O:** External card supplied by Start Italiana S.r.l. (up to 32 sensors)

The following image shows the "Sensors" page (Internal sensor type):

The following image shows the "Sensors" page (Maglink I/O sensor type):

Sensors - (Admin user) [14/02/2017 12.49.59] v.2.5.9.13.15 (sn.580028)

Sensor type: MagLink I/O Save Sensor Configuration

1:	Alarm status	Closed	Relay	NONE
3:	Alarm status	Closed	Relay	NONE
5:	Alarm status	Closed	Relay	NONE
7:	Alarm status	Closed	Relay	NONE
9:	Alarm status	Closed	Relay	NONE
11:	Alarm status	Closed	Relay	NONE
13:	Alarm status	Closed	Relay	NONE
15:	Alarm status	Closed	Relay	NONE
17:	Alarm status	Closed	Relay	NONE
19:	Alarm status	Closed	Relay	NONE
21:	Alarm status	Closed	Relay	NONE
23:	Alarm status	Closed	Relay	NONE
25:	Alarm status	Closed	Relay	NONE
27:	Alarm status	Closed	Relay	NONE
29:	Alarm status	Closed	Relay	NONE
31:	Alarm status	Closed	Relay	NONE
2:	Alarm status	Closed	Relay	NONE
4:	Alarm status	Closed	Relay	NONE
6:	Alarm status	Closed	Relay	NONE
8:	Alarm status	Closed	Relay	NONE
10:	Alarm status	Closed	Relay	NONE
12:	Alarm status	Closed	Relay	NONE
14:	Alarm status	Closed	Relay	NONE
16:	Alarm status	Closed	Relay	NONE
18:	Alarm status	Closed	Relay	NONE
20:	Alarm status	Closed	Relay	NONE
22:	Alarm status	Closed	Relay	NONE
24:	Alarm status	Closed	Relay	NONE
26:	Alarm status	Closed	Relay	NONE
28:	Alarm status	Closed	Relay	NONE
30:	Alarm status	Closed	Relay	NONE
32:	Alarm status	Closed	Relay	NONE

Apply configuration

The following image shows the "Sensors" page ("Triple-state sensor type"):

Sensors - (Admin user) [14/02/2017 12.51.41] v.2.5.9.13.15 (sn.580028)

Sensor type: Tri-state Save Sensor Configuration

1:	Alarm status	Closed	Relay	NONE
3:	Alarm status	Closed	Relay	NONE
5:	Alarm status	Closed	Relay	NONE
7:	Alarm status	Closed	Relay	NONE
9:	Alarm status	Closed	Relay	NONE
11:	Alarm status	Closed	Relay	NONE
13:	Alarm status	Closed	Relay	NONE
15:	Alarm status	Closed	Relay	NONE
17:	Alarm status	Closed	Relay	NONE
19:	Alarm status	Closed	Relay	NONE
21:	Alarm status	Closed	Relay	NONE
23:	Alarm status	Closed	Relay	NONE
25:	Alarm status	Closed	Relay	NONE
27:	Alarm status	Closed	Relay	NONE
29:	Alarm status	Closed	Relay	NONE
31:	Alarm status	Closed	Relay	NONE
33:	Alarm status	Closed	Relay	NONE
35:	Alarm status	Closed	Relay	NONE
37:	Alarm status	Closed	Relay	NONE
39:	Alarm status	Closed	Relay	NONE
41:	Alarm status	Closed	Relay	NONE
43:	Alarm status	Closed	Relay	NONE
45:	Alarm status	Closed	Relay	NONE
47:	Alarm status	Closed	Relay	NONE
49:	Alarm status	Closed	Relay	NONE
51:	Alarm status	Closed	Relay	NONE
53:	Alarm status	Closed	Relay	NONE
55:	Alarm status	Closed	Relay	NONE
57:	Alarm status	Closed	Relay	NONE
59:	Alarm status	Closed	Relay	NONE
61:	Alarm status	Closed	Relay	NONE
63:	Alarm status	Closed	Relay	NONE
2:	Alarm status	Closed	Relay	NONE
4:	Alarm status	Closed	Relay	NONE
6:	Alarm status	Closed	Relay	NONE
8:	Alarm status	Closed	Relay	NONE
10:	Alarm status	Closed	Relay	NONE
12:	Alarm status	Closed	Relay	NONE
14:	Alarm status	Closed	Relay	NONE
16:	Alarm status	Closed	Relay	NONE
18:	Alarm status	Closed	Relay	NONE
20:	Alarm status	Closed	Relay	NONE
22:	Alarm status	Closed	Relay	NONE
24:	Alarm status	Closed	Relay	NONE
26:	Alarm status	Closed	Relay	NONE
28:	Alarm status	Closed	Relay	NONE
30:	Alarm status	Closed	Relay	NONE
32:	Alarm status	Closed	Relay	NONE
34:	Alarm status	Closed	Relay	NONE
36:	Alarm status	Closed	Relay	NONE
38:	Alarm status	Closed	Relay	NONE
40:	Alarm status	Closed	Relay	NONE
42:	Alarm status	Closed	Relay	NONE
44:	Alarm status	Closed	Relay	NONE
46:	Alarm status	Closed	Relay	NONE
48:	Alarm status	Closed	Relay	NONE
50:	Alarm status	Closed	Relay	NONE
52:	Alarm status	Closed	Relay	NONE
54:	Alarm status	Closed	Relay	NONE
56:	Alarm status	Closed	Relay	NONE
58:	Alarm status	Closed	Relay	NONE
60:	Alarm status	Closed	Relay	NONE
62:	Alarm status	Closed	Relay	NONE
64:	Alarm status	Closed	Relay	NONE

Apply configuration

8.6 Daily Reconciliation

The following image shows the "Daily Reconciliation Page":

Reconciliation - (Admin user) [11/02/2016 12.57.59]

Year/Month: 2016-02 Day: 11 Tank: 01 - tank 1 Display reconciliation

Time	Tank	Start vol. (liters)	End vol. (liters)	Vol. diff. (liters)	Dispenser (liters)	Delta vol. (liters)
09	01	22356.0	22356.0	0.0	0.0	0.0
10	01	22356.0	22327.0	29.0	0.0	-29.0
11	01	22328.0	22322.0	6.0	0.0	-6.0

When connected to an FCC (Forecourt Controller) or POS enabled for reconciliation the console receives information on the amount of fuel dispensed. The user can compare the dispensed volume ("Dispenser" column) by the hour, with the difference in volume per hour detected by the probe ("Vol. Diff." column). Result is shown in the "Delta vol." column.



ATTENTION: Reconciliation is not handled during Delivery: The table will not include the corresponding line of the Delivery time



The button allows you to download the "Reconciliation" in an Excel file in CSV format.

8.7 Monthly Reconciliation

This section displays reconciliation summary, "Monthly Reconciliation Page":

Monthly Reconciliation - (Admin user) [01/03/2017 12.24.46]						
Year/Month		Tank		Display Monthly Reconciliation		
2016-10		01 - tank 1				
Day	Tank	Vol. diff. (liters)	Dispenser (liters)	Delivery (liters)	Delta vol. (liters)	% Delta vol.
2016-10-01 - 22.00	01	3038.0	1939.2	4925.1	52.06	1.71%
2016-10-02 - 22.00	01	-528.0	530.8	0.0	2.75	-0.52%
2016-10-03 - 22.00	01	-2366.0	2369.8	0.0	3.82	-0.16%
2016-10-04 - 22.00	01	926.0	2083.4	2958.3	51.08	5.52%
2016-10-05 - 22.00	01	-1856.0	1874.5	0.0	18.45	-0.99%
2016-10-06 - 22.00	01	3460.0	1505.4	4954.9	10.50	0.30%
2016-10-07 - 22.00	01	-1814.0	1814.7	0.0	0.67	-0.04%
2016-10-08 - 22.00	01	2188.0	1816.5	3978.9	25.64	1.17%
2016-10-09 - 22.00	01	-730.0	722.9	0.0	-7.13	0.98%
2016-10-10 - 22.00	01	-2159.0	2179.3	0.0	20.26	-0.94%
2016-10-11 - 08.00	01	-230.0	226.8	0.0	-3.18	-0.94%

A day-by-day summary at a specific time set from System page.

8.8 Auto calibration

This section provides information and management of autocalibration. The function can be enabled for single tank.

When autocalibration is enabled the system records changes in level, prepares new strap table every “interval days” that can be set according to customer needs, advise it to set not less than 5 days a minimum of data accuracy. At the end of every interval, system compares accuracy level against two different threshold values: “Accuracy first threshold” and “Accuracy last threshold” and shows the comparison result under the autocalibration chart.

On first row user can define:

- Accuracy first threshold
- Accuracy last threshold
- Autocalibration interval (in days)

Remember to save changes by clicking **Save** button.

On second row user can:

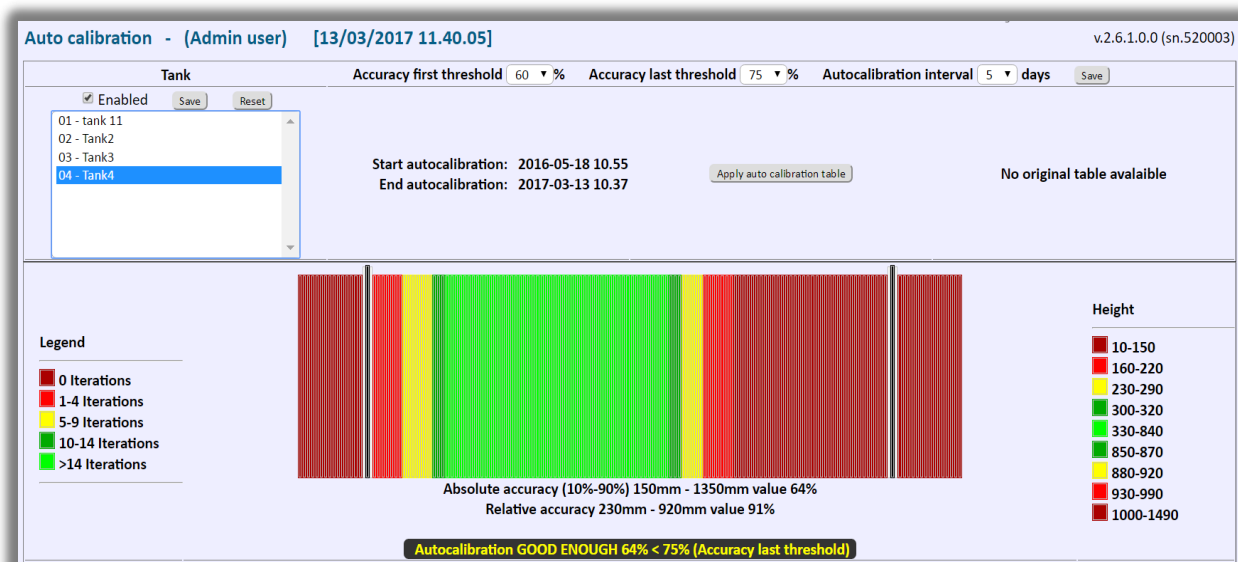
- Enable/disable (click **Save** button to confirm)
- Check autocalibration start and end date/time.
- Clear all Autocalibration data by clicking **Reset** button
- Apply autocalibration result chart by clicking **Apply auto calibration table** button. This button is available only if autocalibration data is available.

The bottom part of the page displays autocalibration chart. The legend reports the real usage of the tank. More iteration we have more accurate is the autocalibration chart generated.

Accuracy is calculated as an absolute value and as a relative value.

Absolute value consider the accuracy based on the entire tank height (cutting the first and the last 10% of the tank height). The two black vertical bars define the first and the last 10% of tank height.

In second hand, we provide also a relative value that is calculated only on the part of the tank where deliveries has taken place at least 5 times.



8.9 Shift report

The following image shows the "Shift report Page":

Shift report - (Admin user) [2016/02/11 14.49.01]

Shift schedule: 00.00 [Delete selected] Time: 00.00 [Add schedule]

Day: 2016/02/11 Tank: 01 - tank 1 [Download]

ID	Date	Start values		End values		Delivery (liters)	Vol. diff. (liters)	Vol. comp. diff. (liters)
		Vol. prod (liters)	Vol. comp. (liters)	Vol. prod (liters)	Vol. comp. (liters)			
001	2016/02/11 00.00	3935.0	3939.2	3935.3	3938.5	0.0	0.0	1.0
002	2016/02/11 03.00	3935.3	3938.5	3933.8	3940.9	0.0	2.0	-2.0

The table shows the start and end of each shift report, select the "Day" and "Tank" values.

You can establish an automatic scheduling of the shift report. From the "Time" drop-down list select one of the options then press the "Add schedule" button.

To delete a schedule select from the "Shift Schedule" drop-down list a schedule and press the "Delete selected" button.



The button allows you to download the "Shift report" in an Excel file in CSV format.

8.10 Dispenser Configuration

The following image shows the "Config. Page": Dispensers":

Fuel config - (Admin user) [11/02/2016 14.37.36]

Dispenser: 1 Nozzles: 4

Nozzle 1: 01 - tank 1 Nozzle 2: 01 - tank 1 Nozzle 3: 01 - tank 1

Nozzle 4: 01 - tank 1 Nozzle 5: --- Nozzle 6: ---

[Apply configuration]

When the console is connected to an FCC or POS enabled for reconciliation configure the dispensers and its nozzles associating them to the tanks from which they connected. For each dispenser you must define the number of nozzles and the tank it is connected to. Select from the "Dispenser" drop-down list the dispenser, to configure select the number of nozzles connected from the "nozzle" drop-down list, finally for each nozzle select the corresponding tank.

8.11 TCP/IP Connection

The following image shows the "TCP/IP Page":

You can access the TCP/IP parameters of the console:

- Address: IP address and communication port to communicate with the configuration application via a browser (Internet Explorer, Mozilla Firefox, Google Chrome, Opera, etc.)
- Netmask
- Gateway



ATTENTION: The parameters of the "TCP/IP" page must be modified carefully; The IP address cannot be assigned to another device or computer of the same network

8.12 Email Configuration

The following image shows the "Email Config. Page":

You can send notifications by e-mail. When the console changes state or it enters in Delivery mode, an e-mail is sent to the address list.

User has the possibility to define five different address lists for the following categories:

1. System alarms
2. Tank alarms
3. Shift notification
4. Delivery notification
5. Leakage notification

To select the desired address list just click on the "Alarm type" link to load corresponding list.



ATTENTION: Carefully configure the SMTP settings in "SMTP Configuration," then press the "Save SMTP" button

In the "Address List" section, you can add a new e-mail by pressing the "Save new address" button or delete an existing e-mail by pressing the "Delete selected email address."

Please before completing email configuration, select a recipient press "Send a test email" button to check if SMTP settings and email are correct.

8.13 Print Stock Configuration

The following image shows the "print Stock configuration page":

In this page, it is possible to configure several hours a day for automatic print stock.

A printer has to be connected and Double Gilbarco protocol has to be deactivated.

8.14 Modem configuration settings (NOT RELEASED YET)

As option is possible to insert a GSM modem card. It is possible to receive automatic notification or texting an SMS to the modem it will reply with the stock.

Phone number configuration for SMS

It is possible to select up to three telephone numbers to which address the following alert messages:

console startup, delivery parameter, leakage parameter, change tank status (alarms H, HH, L, LL, Water) both for enabled and disabled alarms.

WARNING! Write the mobile phone number complete with area code without spaces.

Example: +393331234567 or 00393331234567

Connection of the GSM modem

Basic operations:

Disable the PIN code from the SIM card before insert it into the modem. Insert the SIM card into the dedicated slot of the modem

Power on the console and wait some time to allow to the modem to connect to the GSM network. When connected the GSM signal depth will appear on the display of the console.

The GSM modem will automatically send the alarm messages listed above when occur.



Sending SMS to the console

The text of the message sent to the console must include only 3 characters.
Important: Always write "T" in capital letter, Always write "0" before the number of the tank from 1 to 9 (for example 01 for tank 1)

T00: shows the status of all connected tanks.

Txx: xx refers to the number of the tank (for example T01) and shows the status of a specific tank.

The console will answer to this message showing the reported values.

Examples:

KIOSK TEST - WARNING.
SYSTEM RESTARTED

T03

KIOSK TEST
Benzina 3
NO Alarm
Prd: 2987.0 mm
Vol: [24870](#) l - 71.1%
H2O: 0 mm
T: +15.0

T00

KIOSK TEST
TANK - 01
NO Alarm
Prd: 1380.4 mm
Vol: 4578 l - 90.7%
H2O: 0 mm
T: +18.7

KIOSK TEST
Serbatoio 2
NO Alarm
Prd: 2514.9 mm
Vol: [20149](#) l - 57.6%
H2O: 0 mm
T: +15.0

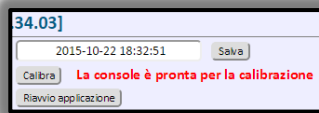
KIOSK TEST
Benzina 3
NO Alarm
Prd: 2514.9 mm

8.15 Utility

The following image shows the "Utility" page:



The following table lists the parameters on the page that can be set:

Parameter	Description
Save date/time of the console	Change the date/time, paying close attention to the proposed format; Date and time are used to store data in the console; When editing is finished, press "Save"
Touch Screen Calibration	<p>Press the button "Calibrate" in the event of loss of screen accuracy; The following message appears:</p>  <p>Follow the instructions on the console screen, by pressing the indicated position to complete the calibration process. When the procedure ends, the application starts automatically.</p>
Restarting the console program	Press the "Reboot application" button
System Reboot	Press the "Reboot System" button to reboot the operating system
Shutdown application	Press "Shutdown application" to close application
Reset to factory default	Press the "Reset" button. THIS OPERATION WILL RESET CONSOLE TO IT'S ORIGINAL STATE LOSING ALL BACKUPS IF PRESENT
Configuration Backup/Restore	<p>Backup function - once the console has been installed and configured, it is recommended to use this function to create a system backup, please note the system will keep the last backup overwriting any previous backups already made. If a USB stick is connected, the system will also create a backup on the stick.</p> <p>The restore function takes the data of the previous backup in the console; use the "Restore" button. If the user connects the console to a USB stick with a previous backup and then presses the "Restore" button, the procedure searches for the previous backup data in the connected USB stick and restores to backup if available. If no backup data is found in the USB stick, data for recovery is taken directly from the console.</p>
Clear data	<p>You can clear the following data:</p> <ul style="list-style-type: none"> Alarms History Reconciliation Shift report <p>Select data to be cleared and then press the "Clear" button.</p>
Debug info	<p>Here are some debug info such as:</p> <ul style="list-style-type: none"> Uptime memory allocation and usage active process
Download section Config files Logs Fairbanks sent files Fairbanks file to send	<p><configuration file link> <settings file link></p> <p>List of log files, press "Select log to download" button to create a link to download</p> <p>List of Fairbanks files already sent, press "Select file to download" button to create a link to download</p> <p>List of Fairbanks files NOT sent yet, press "Select file to download" button to create a link to download</p> <p>N.B. links created last for 1 day only, then you'll have to recreate it as needed, to avoid storage filling</p>


9 SUPPORT

If you need direct assistance from Start Italiana S.r.l. technicians, the best solution is to connect the console to the Internet. Configure the router assigning console private IP address to a public IP address of the company, thus opening port 22 for console access and port 80 for web access. In this case, the console can then be viewed directly by Start Italiana S.r.l. staff.

An alternative is to use third-party programs (for example, Team Viewer 7 that can be downloaded from our website under the heading Assistance/Support) to allow a connection between remote computer (the console must be connected to the computer to which Start Italiana S.r.l. will connect remotely).

In the case no Internet access is available the user can provide Start Italiana S.r.l. with console data to debug on.

The following table shows the necessary procedure steps for the provision of such data:

Step	Description
1	<div>Provide a USB device with at least 50 MB of free space available</div> <div> ATTENTION: The USB stick must be formatted according to FAT32</div>
2	Connect the USB stick to a PC
3	Create a folder on the USB device named "lx-support" (All in lower case)
4	Connect the USB stick to the console
5	Press the "INFO" button and access the relevant page
6	Wait until the "Export Log" appears on the screen and then press it (The files are copied from the console to the USB stick)
7	Perform a compression of the "lx-support" folder and send the ZIP file by e-mail to support@startitaliana.it

10 REVISIONS

The following table lists the revisions to the document:

Revision No.	Date	Description	Firmware Revision
01	March 2014	First version	1.0.0
02	February 2015	Reversing the com port	2.0.0
03	March 2015	Addition of an application description section	2.0.0
04	April 2015	Addition of a Certification Section and a Notification Section	2.1.x
05	April 2015	New test reports, certification and notification	2.1.x
06	July 2015	Manual updated procedure, information reconciliation, shift reports, stock printout, sending log information to the media, program description	2.2.x
07	November 2015	Addition of page for probe manager, addition of shift report scheduling, addition of automatic printing features, manual layout revision, updated legends of dip switch	2.3.x
08	January 2016	Translation	2.3.x
09	April 2016	Modem GSM enabled, Working capacity, Auto Print Stock	2.4.0
10	March 2017	Autocalibration (beta version), Fairbanks passive/active setting, tank offset value and water offset value from decimal to integer, monthly reconciliation report, version format change, email address list for alarm type, send test email,	2.6.x

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