



CUSTOMER:

ORDER: **7644**

OBJECT:

USER MANUAL

HUMAN INTERFACE

REFERS TO: SOLUTION PREPARATION 1

0	25-06-2014	As built	SM	WDC	
Revision	Date	Description	Written	Approved	
Customer				<mark></mark> 76	544
Object	USER MANUAL:	Solution Preparation 1 (SP1)		Docun 7644-08	nent n° 3-01-935





INTRODUCTION

Dear Customer,

we thank you for choosing a REMOIN product.

Remoin wishes to inform you that the content of this document is for informational purposes only and may be subject to change without notice. REMOIN gives no warranty in relation to the contents of this document and gives no implied warranty of merchantability or suitability for particular purposes which are not specified in this manual.

This manual may not be, either in part or in whole reproduced, transmitted, transcribed or stored in any storage system in any form or by any means, mechanical, magnetic, optical, chemical or other without the written permission of REMOIN.

This manual should be retained until final dismantling of the system and, in case of change of ownership, must be delivered to the new owner, as an integral part of the system. In the event of a system failure and consequent inactivity, REMOIN is not involved in any way in compensation for any economic damage caused by the stop of the system, and has not the duty to extend the warranty period.

General instructions

Please carefully read the instructions contained in this manual , and respect the warnings, cautions and notes , in addition to the specific information contained in the documents of sale.

Please check that the installation , operation and maintenance are carried out as indicated in this guide. Any indication here described could result in damage and failure and / or jeopardize the safety of users and containers, if not carefully observed. Do not use the device in ways other than those covered by the specific contract and described in this manual. This manual has been designed in conjunction with the system described herein , for a specific use of the system solely in relation to functional specifications of the project in object commissioned by the owner of this system. The system shall be carried out by trained personnel capable of ensuring the proper functioning of the system in a safe condition. The user manual includes instructions and guidelines for :

□ Management ;

 \Box Proper use ;

In case of any doubt or further information, please contact REMOIN at the following addresses: Administrative Office:

Via Tito Speri, 9 Cisterna di Latina (LT) - Italy Tel.: +39-06.968.21.75 , Fax.: +39-06.969.60.36

Workshop :

Via Maiorana , 11 Artena (RM) - Italy

Tel.:+39-06.951.66.18 , *Fax:* +39-06.951.63.94 *e- mail:* <u>info@remoin.it</u> website : <u>www.remoin.com</u>





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1. HUMAN MACHINE INTERFACE

1.1. INFO PAGE

When you turn on the electrical panel of the machine, the following image will be displayed on the operator panel (henceforth OP):

			MAIN		24/06/2014	16:17:25
QE-272						
		info@ ww	remoin.it w.remoin.c	om	CERHET ESTREE WITCH OF SIGNAL	
Ph	armaceu	ticc	I Syste	m P	lants	
	Main Office: 04012 Via Tit	CISTERNA DI LA o Speri, 9	ITINA (Latina)			
	Workshop: 00031	48.06.9682175 - ARTENA (Roma	telefax 0048.06.9696036			
	Strada	a Vicinale Major	ana, 11			
	tel. 00-	48.06.9516618	telefax 0048.06.9516394			
	Version Software PLC:	1.0	Version Software HMI:	2	.0	
	English русский		Number QE:	E-22	2	
	ACK 🔁 PLANT SP1				USER MANAGE	ALARMS

All pages of control panel menu contain a navigation bar on the bottom; from the navigation bar it is possible to control all pages contained in the operator panel; in the table below it is shown a description of the buttons function.

BUTTON	FUNCTION
R (Remoin)	<i>This button opens the phases selection menu (see dedicated chapter).</i>
INFO	<i>This button gives access to information about plant and company.</i>
ВАСК	<i>This button brings you back to previous operator panel's page.</i>
PLANT SP1	This button gives access to options page concerning the





	solution preparation 1 (SP1) of the plant (see dedicated chapter).
LOGIN	<i>This button allows the operator to login with his/her personal password. The login button turns into a logout button when the operator has logged in and vice versa</i>
USERS MANAGEMENT	This button gives access to the users management page
LOGOUT	<i>This button allows the operator to logout. The logout button turns into a login button when the operator has logged out and vice versa</i>
ALARMS	<i>This button gives access to ALARMS page. The button (the background of the button will flash in red color if there is at least one alarm)</i>





1.2. PROBE's symbol

After pressing the symbol of a probe in the synoptic, the management page of the relative probe will displayed: here it is possible to set the scaling of the analog input signal, insert a simulation value and set the alarm set points of the probe.

REMOIN starter		TT 808 - Tempe	rature Tank V-1	332	24/06/2014	15:32:10
QE-272						
	Actual V	'alue:	0,	,0 °C	TEST Mode	
		Scaling A	nalog Input			
	Value min:	0,0 °C	Value	ə MAX:	175,0 °C	
		Alarm	Setpoints			
	Item - De	scription			Set	
	TTL 808 - Alarm Low	Temperature Tank V-1	332:		40,0 °C	
	TTH 808 - Alarm High	n Temperature Tank V-	1332:		80,0 °C	
	TTHH 808 - Alarm High High Temperature Tank V-1332:			140,0 °C		
	🔜 📢 BACK 📑 PLAN	IT SP1		LOGOUT	CONTRACT USER MANAGE	ALARMS





1.3. AUTOMATIC DEVICES's Symbol (valves or pumps)

After pressing the symbol of a device (valves or pumps) in the synoptic , a menu will be displayed where you can run the device itself in automatic or manual mode: i.e. open / close valve manually, switch on / off a pump.







1.4. PLANT SP1 button

After pressing PLANT SP1 button in the navigation bar, it is possible to access to plant P&ID on the operator panel; in this box can be visualize SP1 facilities (tanks, valves, pipes, pumps, instruments, etc)







1.5. R (REMOIN) MAIN MENU button (PHASES SELECTION)

After pressing Remoin's button in the navigation bar, it is possible to access the plant main menu on the operator panel.

Here you can access the general menu setting of each process' phase as shown below:



The phases which are listed below are those which is possible to set in the system:

- Washing (see description below)
- Sterilization (see description below)
- Flushing
- Loading
- Preparation
- Gas Saturation
- Transferring
- Drainage.

An example of settings menu is given below.





1.6. WASHING PHASE:

After pressing the WASHING PHASE button, the corresponding setup window is opened:



In this menu it is possible to choose the equipment to be washed and to set desired parameters (washing timer and minimum level of empty tank).

After pressing the START button, the phase starts-up and the corresponding phase button is colored in green color.

All other phases buttons are inhibited and have a light gray color, with the exception of the STOP button through which you can always stop the phase which is being executed.

CLOSE SETUP and START/STOP phase buttons.

CLOSE SETUP (X) button:

It is always possible, once you have selected one of the phases in the main phases menu, to close (abort) the associated window simply by pressing the





CLOSE SETUP button which appears at the right top of the selected phase window (i.e. X button symbol).



START /STOP button:

Vice versa, once you have selected one of the phases (in the phases main menu) and once you carried out the related settings accordingly, the selected phase will start by pressing the START button and corresponding phase button will be colored in fluorescent green.

All other phases buttons are inhibited and have a light gray color, with the exception of the STOP button through which you can always stop the phase which is being executed.

Note: The CLOSE SETUP(X button) and START/STOP phase buttons are selectable on each selected phase's menu window.

NOTE: All other phases' set-up menus are similar to the one just described with the exception of the STERILIZATION PHASE which is described below.





1.7. STERILIZATION PHASE

After pressing the STERILIZATION PHASE button, the corresponding setup window is opened:



Once the sterilization parameters (area of plant to be sterilized, sterilization temperatures and timers) have been set and START button is pressed, the sterilization phase starts-up.

During the sterilization phase execution, it is possible to monitor the temperature of probes involved in the sterilization of that area of plant by pressing the CHECK TEMPERATURE button.

If the background color is red the sterilization temperature has not been reached yet. Instead if the background color is green the sterilization temperature is reached.





1.8. PID menu

In this page it is possible to set PID parameters and monitor its trend:

		Pid TIC	808 - Modula	tion valve	TCV 801	24/06/2014	16:48:31
QE-272			,				
	Gain:	0,00000	Set	point:	0,0 °C		
	TI:	0,00000 s		-			
	TD:	0,00000 s	Signal Min:	0 %	Signal Max:	0 %	
				17	75 175	100	
	Descrizione ▼ Actual Value ▼ Setpoint	Valore Min. 0,0 0,0 0,0 0,0	Max. Media 0,0 0,0 0,0 0,0	⊡ Act	0 0 ual value Setpoint	0 Actual signal	
	I Actual Signal	0 0	0 0			0 %	
			Te	st			
		TEST AI			TEST AO		
R 1 R		PLANT SP1			LOGIN 🔠	JSER MANAGE	ALARMS





1.9. ALARMS button



After pressing the ALARMS button, in the navigation bar, it is possible to access the ALARMS page.

REMOIN starter		ALARMS	24/06/2014	16:31:05
QE-272				
	Description	Alar V Duration Priority Condition		
	Alarm Compressed Air	05/06/2 2,22:2 1 OFF		
Acknowledge	Clean	DataLogge	er	
	BACK 🔁 PLANT SP1		MANAGE	

On this page, users can view the alarms of the system and, if properly authenticated (user level 1), will be able to perform different functions as described in the following table:

BUTTON	FUNCTION
Acknowledge	It acknowledges alarms currently displayed in the alarms window
Clean	It deletes all alarms from the alarms window which have been previously recognized
Data Logger	<i>It record the values of the probes allowing to monitor the performance of them. The recording is enabled only during the sterilization phase.</i>





1.10. SETPOINTS LIST

ITEM	DESCRIPTIONS	VALUES	NOTES
Set Level Empty Tank	Setpoint Level empty tank	01	-
<i>Set Temperature</i> <i>Sterilization</i>	Setpoint temperature of sterilization	121,1 °C	Sterilization
LT 801_S1	<i>Setpoint Level to Reached in Loading Water</i>	600 I	Loading
FIC 801_S1	Setpoint RPM Mixer	0÷200 rpm	Mixing
TT 808_S1	Setpoint Temperature of Cooling	7 °C	Cooling

1.11. ALARMS SETPOINTS LIST

ITEM	DESCRIPTIONS	VALUES	NOTES
<i>Set Low Temperature</i> <i>Sterilization</i>	Setpoint Alarm Low Temperature in Sterilization	119.0 °C	Sterilization
LTH 801	Setpoint Alarm High Level Tank	700 I	-
LTLL 801	Setpoint Alarm Low Low Level Tank	50 I	Mixing
PITH 801	Setpoint Alarm High Pressure Tank	3.50 bar	
TTH 801	<i>Setpoint Alarm High Temperature Discharge Filter F-802</i>	130.0 °C	
TTH 802	Setpoint Alarm High Temperature Discharge Tank	130.0 °C	
ТТН 803	Setpoint Alarm High Temperature Discharge Filter F-801	130.0 °C	
TTH 806	Setpoint Alarm High Temperature Discharge Transfer Line	130.0 °C	
TTH 807	Setpoint Alarm High Temperature Dischage Movable	130.0 °C	
ТТНН 808	Setpoint Alarm High High Temperature Tank	130.0 °C	
TTH 808	Setpoint Alarm High Temperature Tank	50.0 °C	Cooling
TTL 808	<i>Setpoint Alarm Low Temperature Tank</i>	4.0 °C	Cooling





1.12. TIMERS LIST

ITEM/DESCRIPTIONS	VALUES	NOTES
Timer of Sterilization	1 min	Sterilization
Timeout of Sterilization	1 min	Sterilization
Timer of Flushing	2 min	Flushing
Timer of Mixing	1 min	Mixing
Timer of Gas Saturation	5 min	Gas Saturation
Timer of Drainage	2 min	Drainage

1.13. ALARMS DESCRIPTION

ALARM	ACTION	BLOCK		
<u>TTLS 801 Alarm Low Temperature</u> Discarge Filter F802 in Sterilization	It is controlled via the temperature sensors involved in sterilization; if one of the sensors falls below the set temperature for a time equal to or greater than 2 minutes, the sterilization time will be reset. An acoustic / visual alarm is reported on the operator panel until the operator manually resets.			
<u>LT 801- UR Alarm Under Range</u> probe LT801	In the case that one of the transducers generates a signal of 4mA, an acoustic/visual alarm is generated on the operator panel. This alarm indicates a malfunction of the probe itself or of the analog input channel of the PLC to which it is connected			
<u>LT 801- OR Alarm Over Range</u> <u>Probe LT801</u>	In the case that one of the transducers generates a signal of 20mA, an acoustic/visual alarm is generated on the operator panel. This alarm indicates a malfunction of the probe itself or of the analog input channel of the PLC to which it is connected.			
<u>LTLL 801- Alarm Low Low Level</u> <u>Tank V-1332</u>	It is controlled by the instrument LT 801 installed on the tank V-1332. If the level value in the tank is lower than or equal to the set value, an acoustic / visual alarm is issued on the operator panel until the operator resets it manually and verifies the cause of the alarm.	/		
<u>LTH 801- Alarm High Level Tank V- 1332</u>	It is controlled by the instrument LT 801 installed on the tank V-1332. If the level value in the tank is higher than or equal to the set value, an acoustic / visual alarm is issued on the operator panel until the operator resets it manually and verifies the cause of the alarm.	/		
<u>PIT 801 UR Alarm Under Range</u> Probe PIT801	In the case that one of the trasducers generates a signal of 4mA, an acoustic/visual alarm is generated on the operator panel. This alarm indicates a malfunction of the probe itself or of the analog input channel of the PLC to which it is connected			
<u> PIT 801 OR - Alarm Over Range</u> <u>Probe PIT801</u>	In the case that one of the trasducers generates a signal of 20mA, an acoustic/visual alarm is generated on the operator panel. This alarm indicates a malfunction of the probe itself or of the analog input channel of the PLC to which it is connected.			
<u>PITH 801- Alarm High Pressure</u> <u>Tank V-1332</u>	It is controlled by the instrument PIT 801 installed on the tank V-1332. If the pressure in the tank is higher than or equal to the set value, an acoustic / visual alarm is issued on the operator panel until the operator resets it manually and verifies the cause of the alarm.	/		
<u>TT 808 UR - Alarm Under Range</u> <u>Probe TT808</u>	In the case that one of the trasducers generates a signal of 20mA, an acoustic/visual alarm is generated on the operator panel. This alarm indicates a malfunction of the probe itself or of the analog input channel of the PLC to which it is connected	/		
<u>TT 808 OR Alarm Over Range</u> Probe TT808	In the case that one of the trasducers generates a signal of 20mA, an acoustic/visual alarm is generated on the operator panel. This alarm indicates a malfunction of the probe itself or of the analog input channel of the PLC to which it is connected			
<u>TTL 808 - Alarm Low Temperature</u> <u>Tank V-1332</u>	It is controlled by the instrument TT 808 installed on the tank V-1332. If the value of the temperature in the tank is lower than or equal to the set value during the heating tankan acoustic / visual alarm is issued on the operator panel until the operator resets it manually and verifies the cause of the alarm.	/		
<u>TTH 808 - Alarm High Temperature</u> <u>Tank V-1332</u>	It is controlled by the instrument TT 808 installed on the tank V-1332. If the value of the temperature in the tank is higher than or equal to the set value during the cooling phase of the tank, it issued an audible / visual alarm on the operator panel until the operator resets manually verifying the causes of the alarm.	/		





<u>TT 801 –UR Alarm Under Range</u> Probe TT801	In the case that one of the transducers generates a signal of 4mA, an acoustic/visual alarm is generated on the operator panel. This alarm indicates a malfunction of the probe itself or of the analog input channel of the PLC to which it is connected			
<u>TT 801 OR - Alarm Over Range</u> Probe TT801	In the case that one of the trasducers generates a signal of 20mA, an acoustic/visual alarm is generated on the operator panel. This alarm indicates a malfunction of the probe itself or of the analog input channel of the PLC to which it is connected.	/		
<u>TTHH 808 - Alarm High High</u> <u>Temperature Tank V-1332</u>	It is controlled by the instrument TT 808 installed on the tank V-1332. If the value of the temperature in the tank is higher than or equal to the set value, an acoustic / visual alarm is issued on the operator panel until the operator resets it manually and verifies the cause of the alarm.	/		
<u> TTH 801 - Alarm High Temperature</u> <u>Discharge Filter F-802</u>	It is controlled by the instrument TT 801 installed on the drainage of the filter F-802. If the value of the temperature on the drain filter is higher than or equal to the set value, an acoustic / visual alarm is issued on the operator panel until the operator resets it manually and verifies the cause of the alarm.	/		
<u> TT 802 –UR Alarm Under Range</u> <u>Probe TT802</u>	In the case that one of the transducers generates a signal of 4mA, an acoustic/visual alarm is generated on the operator panel. This alarm indicates a malfunction of the probe itself or of the analog input channel of the PLC to which it is connected	/		
<u>TT 802 –OR Alarm Over Range</u> Probe TT802	In the case that one of the transducers generates a signal of 20mA, an acoustic/visual alarm is generated on the operator panel. This alarm indicates a malfunction of the probe itself or of the analog input channel of the PLC to which it is connected.	/		
<u>TTH 802 - Alarm High Temperature</u> <u>Discharge Tank V-1332</u>	It is controlled by the instrument TT 802 installed on the drainage of the tank V-1332. If the value of the temperature on the drain of the tank is higher than or equal to the set value, an acoustic / visual alarm is issued on the operator panel until the operator resets it manually and verifies the cause of the alarm.	/		
<u>TTL802- Alarm Low Temperature</u> <u>Discharge Tank V-1332</u>	It is controlled by the instrument TE 802 installed on the discharge of tank V-1332. If the value of the temperature in the tank is lower than or equal to the set value, an acoustic / visual alarm is issued on the operator panel until the operator resets it manually and verifies the cause of the alarm.	/		
<u>TT 803 UR Alarm Under Range</u> <u>Probe TT803</u>	In the case that one of the transducers generates a signal of 4mA, an acoustic/visual alarm is generated on the operator panel. This alarm indicates a malfunction of the probe itself or of the analog input channel of the PLC to which it is connected.	/		
<u>TT 803 OR Alarm Over Range</u> <u>Probe TT803</u>	In the case that one of the transducers generates a signal of 20mA, an acoustic/visual alarm is generated on the operator panel. This alarm indicates a malfunction of the probe itself or of the analog input channel of the PLC to which it is connected.	/		
TH 803 - Alarm High Temperature It is controlled by the instrument TT 803 installed on the drainage of the filter F-801. If the temperature on the drain filter is higher than or equal to the set value, an acoustic / visual is issued on the operator panel until the operator resets it manually and verifies the cause alarm.		/		
<u>TT 806 UR Alarm Under Range</u> <u>Probe TT806</u>	In the case that one of the transducers generates a signal of 4mA, an acoustic/visual alarm is generated on the operator panel. This alarm indicates a malfunction of the probe itself or of the analog input channel of the PLC to which it is connected.			
<u>TT 806 OR Alarm Under Range</u> <u>Probe TT806</u>	In the case that one of the transducers generates a signal of 20mA, an acoustic/visual alarm is generated on the operator panel. This alarm indicates a malfunction of the probe itself or of the analog input channel of the PLC to which it is connected.			
<u> TTH 806 - Alarm High Temperature</u> <u>Discharge Transfer Line</u>	It is controlled by the instrument TT 806 installed on the drainage of the transfer line. If the value of the temperature is higher than or equal to the set value, an acoustic / visual alarm is issued on the operator panel until the operator resets it manually and verifies the cause of the alarm.	/		
<u>TTL 806- Alarm Low Temperature</u> <u>Discharge Transfer Line</u>	It is controlled by the instrument TE 806 installed on the discharge of transfer line. If the value of the temperature in the tank is lower than or equal to the set value, an acoustic / visual alarm is issued on the operator panel until the operator resets it manually and verifies the cause of the alarm.			
<u>TT 807 UR Alarm Under Range</u> <u>Probe TT807</u>	In the case that one of the transducers generates a signal of 4mA, an acoustic/visual alarm is generated on the operator panel. This alarm indicates a malfunction of the probe itself or of the analog input channel of the PLC to which it is connected.	/		
<u>TT 806 OR Alarm Under Range</u> <u>Probe TT807</u>	In the case that one of the transducers generates a signal of 20mA, an acoustic/visual alarm is generated on the operator panel. This alarm indicates a malfunction of the probe itself or of the analog input channel of the PLC to which it is connected.	/		
<u>TTH 807 - Alarm High Temperature</u> Discharge Movable Tank	It is controlled by the instrument TT 807 installed on the drainage of the mobile tank. If the value of the temperature is higher than or equal to the set value, an acoustic / visual alarm is issued on the operator panel until the operator resets it manually and verifies the cause of the alarm.	/		
<u>TTL 807- Alarm Low Temperature</u> <u>Discharge Transfer Line</u>	It is controlled by the instrument TE 807 installed on the discharge of transfer line. If the value of the temperature in the tank is lower than or equal to the set value, an acoustic / visual alarm is issued on the operator panel until the operator resets it manually and verifies the cause of the alarm.	/		
Alarm Compressed Air	arm Compressed Air system is shut down. The operator shall have to restart the system and verify the cause of alarm.			





Alarm Lack Tension	When the power is restored after a power failure, the system stops and reports the power failure, previously occurred.			
<u>Alarm Failure Inverter I1</u>	An acoustic/visual alarm is emitted when a malfunction of the inverter I1, which controls the Mixer AG-801,occurs. The alarm must be acknowledged by the operator. Mixing of the product can't be achieved.			
Alarm Failure Mixer AG-801	An acoustic/visual alarm is emitted when a malfunction of the Mixer AG-801. The alarm must be acknowledged by the operator. Mixing of the product can't be achieved.	YES		

1.14. PASSWORD LEVELS

The levels of access to inspect or modify the system parameters are as follows:

0	DEFAULT (guest)	AULT (guest) The variables measured and the system status can be viewed but nothing can be done on the machine.					
1	OPERATOR (user)	You can perform all the operations that you can do with the "0" level and in addition, you can start and stop phases, set the set point of the various phases, acknowledge alarms.					
2	SUPERUSER(suser)	You can perform all the operations that you can do with the "0" level and in addition, you can change setpoints.					

1.15. INTERLOCKS

	WASHING	STERILIZATION	FLUSHING	LOADING	SNIXIM	COOLING	TRANFER	GAS SATURATION	DRAINAGE
WASHING		x	x		x	x	x	x	
STERILIZATION	X		x	x	x	x	x	x	
FLUSHING	x	x		x	x	x	x	x	
LOADING		x	x			x	x		x
MIXING	x	x	x	x			x		x
COOLING	x	x	x	x			x		x
TRANFER	x	x	x	x	x	x			x
GAS SATURATION	x	x	x	x					x
DRAINAGE		x			x	x	x	x	





2. REGULATING CODE

- Machinery Directive 2006/42/CE;
- Low Voltage Directive 73/23/EC;
- > Directive 2004/108/EEC Electromagnetic Compatibility;
- Legislative Decree 81/2008;
- > Legislative Decree 37/08 of 13/03/08.

Calculation rules apply: VSR rev.95 ed.99, ASME, AD2000

Where applicable: CE mark.

For what has been said above:

we declare:

- That REMOIN disclaims any responsibility for damage to property or persons arising from maneuvers installation and uses other than those mentioned in these instructions;
- That REMOIN is not responsible for whatever consequential damage from the non correct use of this manual;
- That REMOIN does not take any responsibility in case of Improper Use of any nature of the machine.

The manual reflects the state of the art at the time of marketing.

REMOIN reserves the right to make changes to the standards of construction of machinery described in this documentation, without any notice in response to new experiences and technical updates.