COMMISSIONING & MAINTENANCE MANUAL

MM 9009 EN A

LPG TRONIQUE

A	29/09/2023	Creation	ITB	NC
Indice	Date	Nature des modifications	Rédacteur	Approbateur

SUMMARY

1 GENERAL PRESENTATION

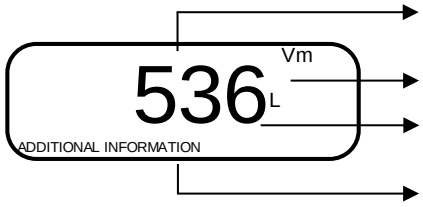
The LPG TRONIQUE is a metering unit designed to be mounted on a tanker truck. It is used to measure liquefied petroleum gases.

The LPG TRONIQUE consists of the following components:

- ⇨ A turbine meter for liquefied petroleum gas
- ⇨ MICROCOMPT+ indicator calculator
- ⇨ A gas separator
- ⇨ A pump
- ⇨ An automatic pressure-maintaining valve
- ⇨ A set of two-way delivery devices controlled by a valve allowing a choice between delivery by full hose or direct outlet
- ⇨ Optional temperature sensor
- ⇨ A printer

The LPG TRONIQUE is available in two versions: volume at temperature or volume at reference temperature (measurement and compensation of volume at a reference temperature). The on-board computer option completes the measurement package. There is also a model with remote control (GPL TRONIQUE CD). This document describes all the options. Some menus are common, others are specific to one or other version of the equipment and are labelled differently.

The LPG TRONIQUE has a display:



Quantity

Pictogram: Vm, Vb or none

Unit of the displayed quantity

On the prompter: Additional information

- During measurement: delivery mode, compartment, and product
- Out of measurement: name of menus

The LPG TRONIQUE has three pushbuttons:

	Increment a blinking figure or letter Come back to the previous step Stop the measurement
	Select a figure, a letter or a menu
	Validate the data

Use the RFID keys:

	Blue key: Level-Driver This key is associated to a single MICROCOMPT+. It is used to switch into SUPERVISOR mode
	Green key: Level-Manager Many of these keys can be associated to a single MICROCOMPT+. Likewise, a single key can be associated to one or many MICROCOMPT+. RFID key is used to switch into SUPERVISOR mode. Specific menus are available that allow the manager to configure the MICROCOMPT+ for its communication with the external environment. The specific menus are indicated by green boxes within the attached file ANX 0001
	Red key: Level-Maintenance This key doesn't need to be associated to the MICROCOMPT+. It is used to switch into SUPERVISOR mode. Specific menus are available that allow the maintenance operator to change parameters. Those menus are indicated in red boxes

2 CONNECTED FUNCTIONS

The wireless connection enables the MICROCOMPT+ to communicate with an embedded computer or with a PC/tablet/portable device.

The connected functions of the MICROCOMPT+ are the following:

⇨ Incoming data flow processing

⇨ Management of the communication modules below

Communication modules are listed below:

⇨ Wi-Fi (IEEE 802.11 b/g/n (2.4GHz) **OR** Bluetooth Low Energy 4.1

- ⇨ GSM (2G, 3G, 4G) / GPS
- ⇨ RFID NFC allowing the reading of an RFID key to switch in SUPERVISOR mode
- ⇨ Ethernet Base 10/100

The GSM module associated to the GPS navigation system allows the device tracking. Two antennas are located outside the MICROCOMPT box.

Three tricolored LEDs on the MICROCOMPT+ front face are showing the wireless connection status as described in the table below:

IN OPERATION						
	Left-hand LED: Bluetooth or Wi-Fi		**Middle LED: GSM / GPS**		**Right-hand LED: NFC (RFID)**	
Steady light	Bluetooth Wi-Fi	Connection OK		Waiting for internet connection		
				Internet connection OK		
		Waiting for initialization		Waiting for initialization		
Flashing light	Bluetooth Wi-Fi	Slow flashing: Waiting for connection	every 2 seconds	GPS OK		Authentication of the RFID key OK
	Bluetooth Wi-Fi	Rapid flashing: Communication in progress		Transfer in progress		RFID key not accepted, but authentication is ok
			every 2 seconds	Coordinates not found		
		Initialization error		Initialization error		Authentication error of the RFID key

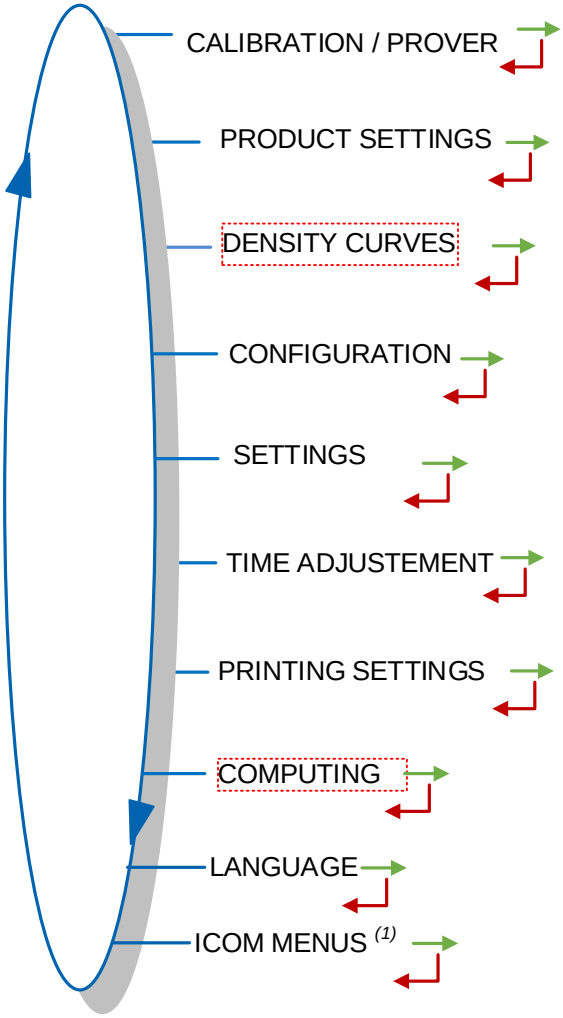
3 RECOMMENDATION FOR USE

Safety valves can be incorporated into TRONIQUE LPG metering systems. If they are fitted downstream of the turbine meter, they must open into the open air or be connected to the receiving tank.

4 CONFIGURATION, SETTINGS, CALIBRATION

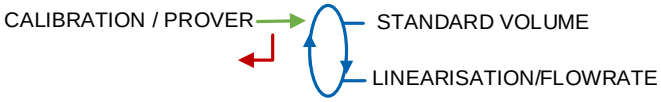
CONFIGURATION: METROLOGICAL mode	SETTINGS, CALIBRATION: SUPERVISOR mode
§ CONFIGURE THE LPG TRONIQUE: METROLOGICAL MODE	§ SET THE LPG TRONIQUE: SUPERVISOR MODE
You must configure the LPG TRONIQUE during commissioning and sometimes during metrological controls.	You must set the LPG TRONIQUE before any operation. You must control the accuracy of the DUAL TRONIQUE cyclically
NOTE: Only approved persons are permitted to remove the seal	**NOTE**: Only approved persons are permitted to change parameters or to make calibration.
- Unseal the cup - Remove the seal - Put the RFID key at the right side of the display 	- Put the RFID key at the right side of the display  **NOTE**: Some menus in SUPERVISOR mode are only available with the RFID red key
	

5 SETTING UP THE LPG TRONIQUE : SUPERVISOR MODE



ICOM MENUS *(1)* : The submenus differ according to the authorised access level: (Operator level, Manager level, Maintenance level).

5.1 Menu CALIBRATION/PROVER



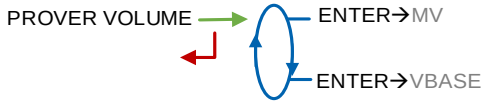
5.1.1 Sub-menu PROVER VOLUME

This menu is used to check the accuracy of the measurement set after unloading into a gauge, by calculating the gauge error, the corrected coefficient and the average flow rate.

First, fill the prover (USER mode) with a preset volume.

Switch to SUPERVISOR mode, select CALIBRATION/PROVER>PROVER VOLUME and confirm.

If conversion is active, you can choose to compare non-compensated or temperature-compensated volumes. If conversion is not active, this step does not exist:



- Enter the reference volume (volume at temperature) and confirm. The display will show:
- Signed error in percent (%)
- The error-corrected coefficient
- The average flow rate at which unloading took place

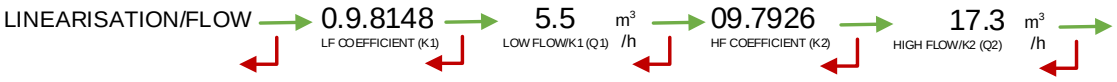
5.1.2 Sub-menu LINEARISATION/FLOW

Linearisation is offered at the end of a measurement with a standard for all configurations with correction of the flow measurement at two points. In this case, the MICROCOMPT+ stores the flow rates and the calibrated coefficients of the measurements to define the two correction points for low flow and high flow.

These points can be viewed and then automatically filled in once the MICROCOMPT+ has been unplumbed (METROLOGICAL mode, EMA>COEFFICIENT MEASURER menu).

To linearise the curve, you need :

- Take a calibrated measurement at the operating flow rate (value greater than or equal to three times the minimum flow rate and less than the maximum flow rate of the measurement set) and enter the volume read on the gauge in the CALIBRATION/ETALON>CALIBRATED VOLUME menu as described above.
- Fill the gauge with a low flow rate (value between one and one and a half times the minimum flow rate of the measurement set) and also enter the volume read on the calibration measurement in the CALIBRATION/ETALON> CALIBRATION VOLUME menu.
- Select CALIBRATION/ETALON>LINEARISATION/DEBIT and confirm. You can then view the values of the coefficients and flow rates for the two tests performed



The following messages may appear if the procedure failed :

- TOO MUCH GAP <K1/K2>: Correction between the two points greater than 0.5%.
- FLOWS TOO CLOSED: The high flow point is not between 3 x min. flow and max. flow
- LOW FLOW OUT OF RANGE : The low flow point is not between the min flow and 2 x min flow
- A SINGLE GAUGE : The low flow or high flow point is not recorded

- NO VALID GAUGE: Neither the low flow point nor the high flow point is configured

If the procedure is successful, the following sequence is displayed:
VALID COEFFICIENTS → REMOVE THE SEAL → REPLACE THE FILLING

The new coefficient and flow rate values are taken into account.

5.2 Menu PRODUCTS SETTINGS

It differs according to the metrological configuration of the TRONIQUE LPG.

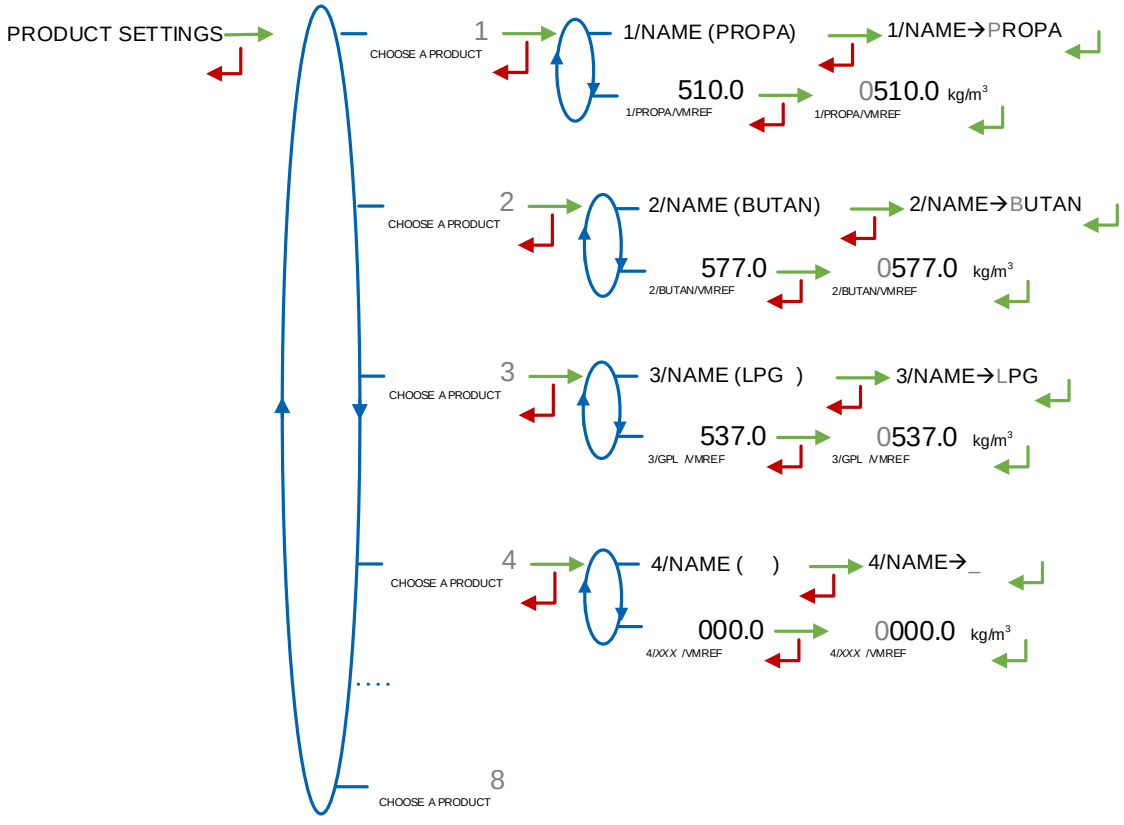
5.2.1 With converting

METROLOGICAL SETTINGS :

- SETTINGS>CONVERTING ->YES – MAIN DISPLAY→VBASE, **OR**
- SETTINGS>CONVERTING ->YES– MAIN DISPLAY→MV

A maximum of 8 products can be configured. For each product, enter or confirm the name and then the density (only modifiable in red key).

With converting :



5.2.2 With no converting

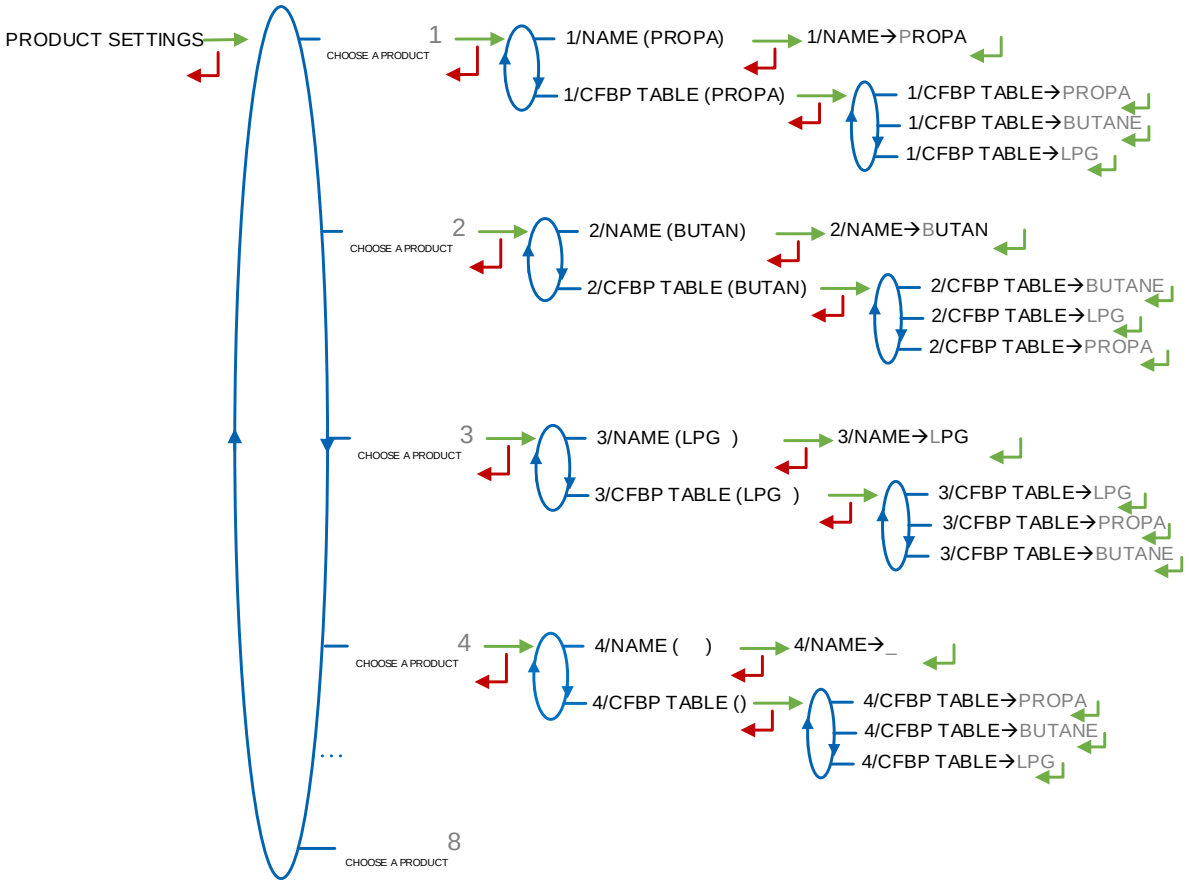
Configuration METROLOGIQUE :

SETTINGS>CONVERTING→NO **AND**

CONFIGURATION>SUM MV→CFBP.

maximum of 8 products can be configured. For each product, enter or confirm the name and then the density (only modifiable in red key).

Without converting



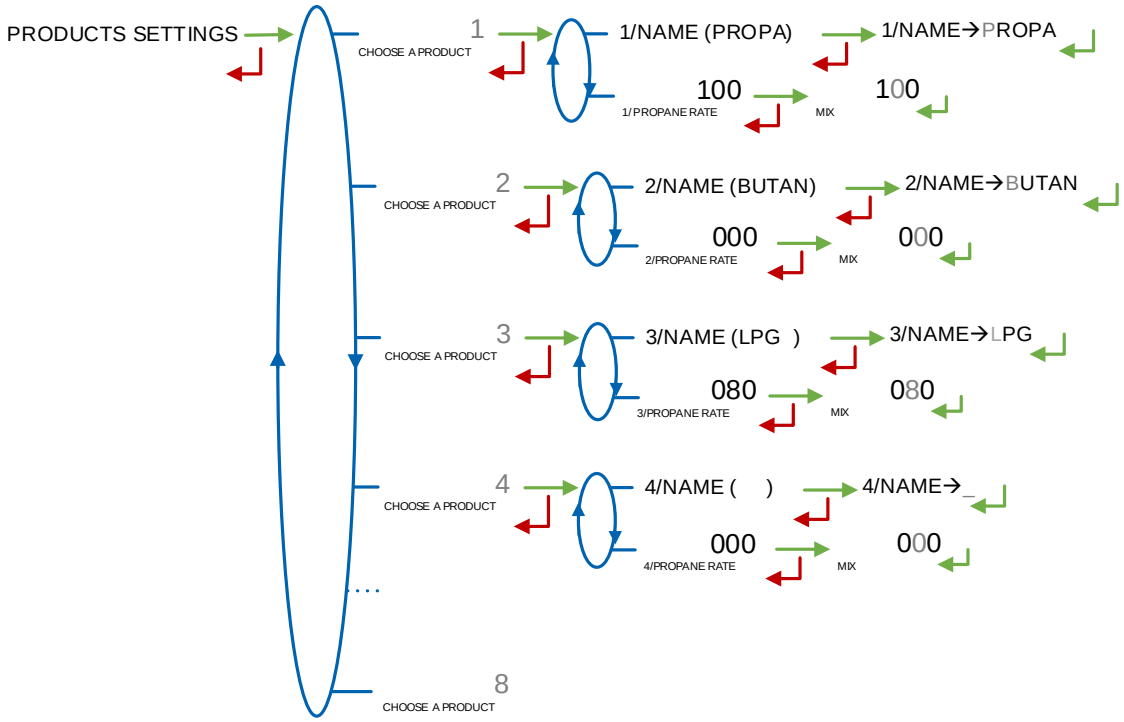
METROLOGICAL SETTINGS :

SETTINGS>CONVERTING→NO **AND**

SETTINGS>SUM MV→CURVE D.

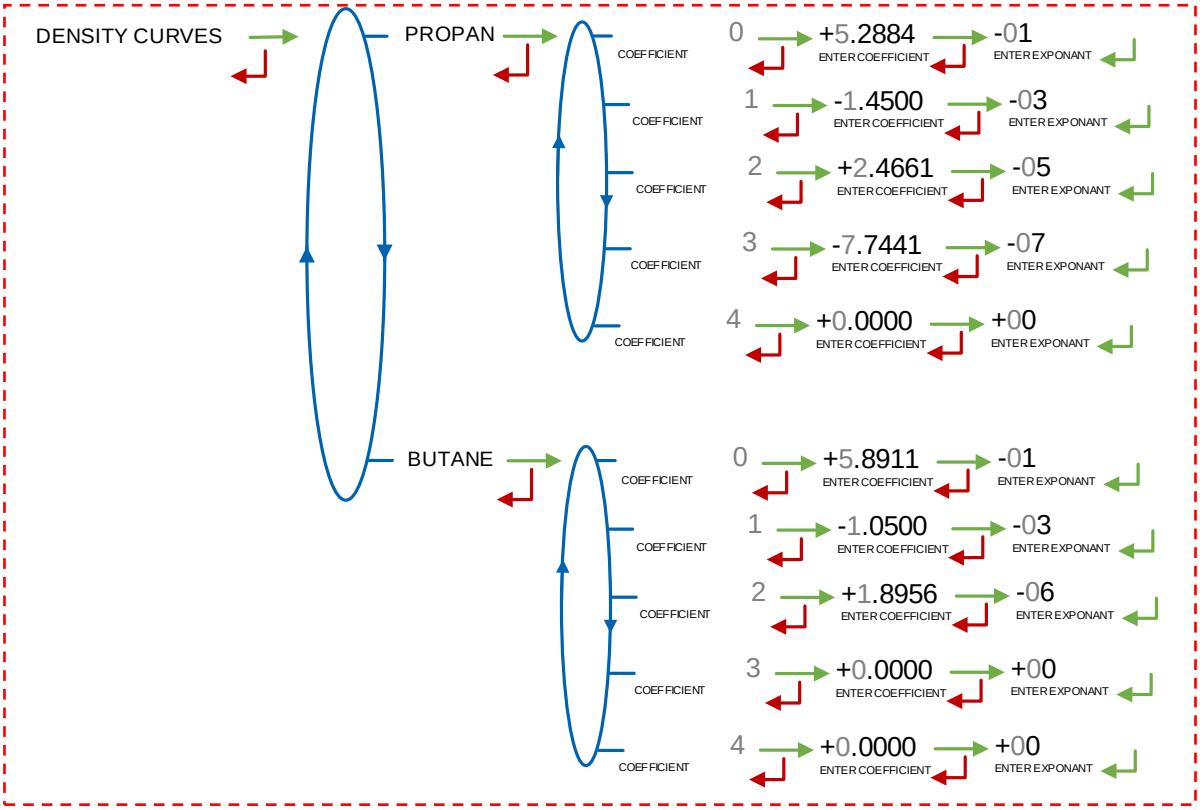
A maximum of 8 products can be configured. For each product, enter or confirm the name and then the propane content (only modifiable in red key).

Without conversion

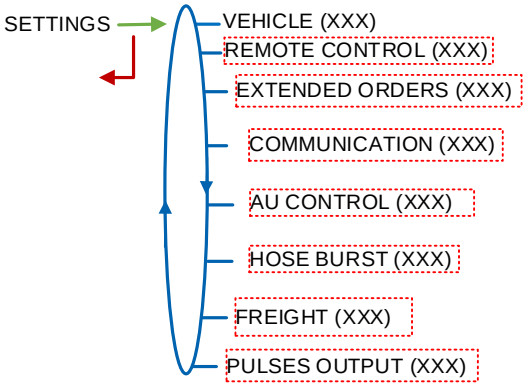


5.3 Menu DENSITY CURVES

This menu is available when conversion is not activated. The function is activated in METROLOGICAL mode (SETTINGS>SUM VM ->CURVES D). The coefficients of the polynomial used to calculate the density must be entered in this menu.



5.4 Menu CONFIGURATION

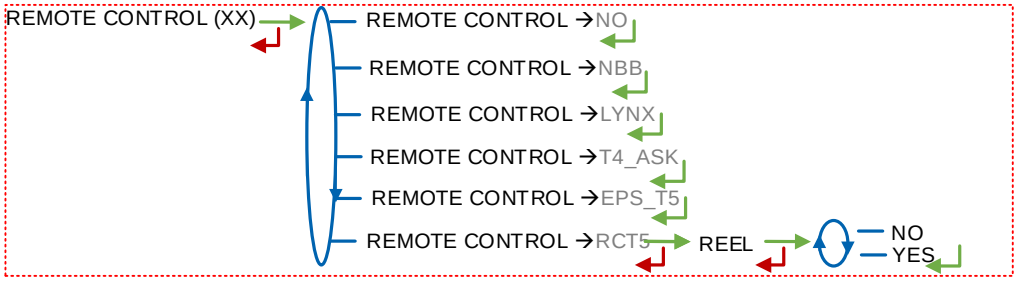


5.4.1 Menu VEHICLE

Enter the identification number of the vehicle on which TRONIQUE LPG is installed. This number is used when printing delivery notes, etc.

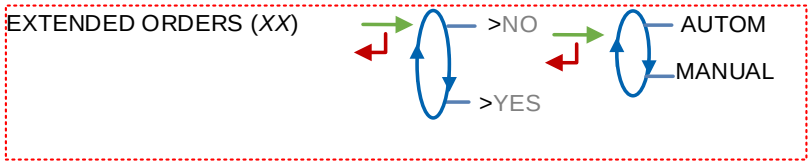
5.4.2 Sub-menu REMOTE CONTROL

This menu is used to select the model of remote control used.



5.4.3 Sub-menu EXTENDED ORDERS

This menu allows operation with or without remote control.

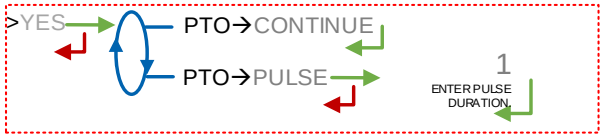


IF NO

AUTOM : Measurement starts without pressing the green button

MANUAL : Press the green button to start delivery

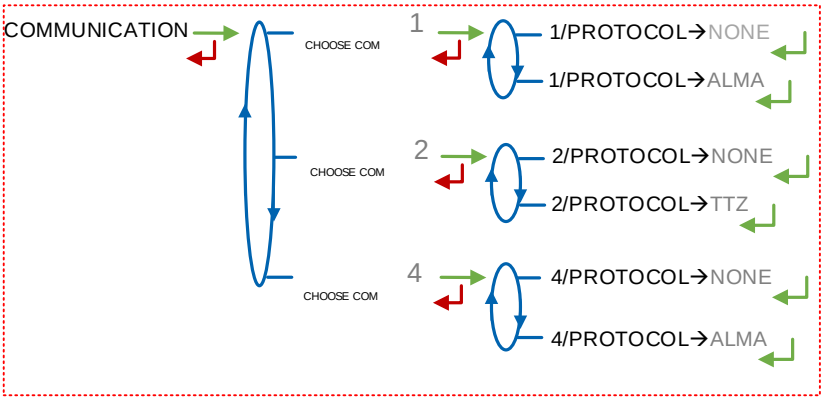
IF YES



PTO : continuous control PTO→CONTINUE or pulse control PTO→IMPULSION.

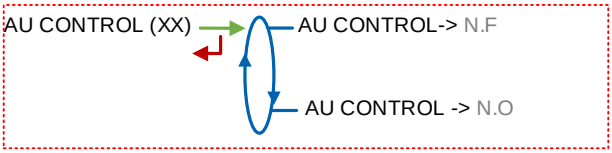
5.4.4 Sub-menu COMMUNICATION

Choose the network communication port : COM1 (RS232), COM 2 (RS485), COM 4 (RS232) and then select the communication protocol for each.



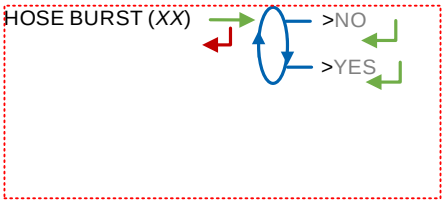
5.4.5 Sub-menu AU CONTROL (XX)

This sub-menu is used to define the emergency stop logic.



5.4.6 Sub-menu HOSE BURST (XXX)

This menu is used to configure the emergency stop procedure in the event of a hose burst.



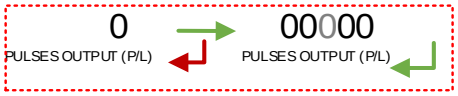
5.4.7 Sub-menu FREIGHT (XXX)

This menu is used to enable or disable cargo management. The cargo is defined with a product and a quantity, in user mode.

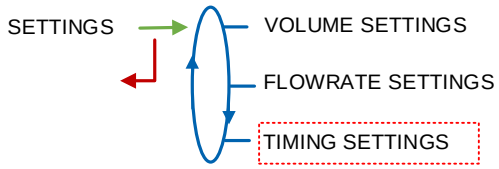
5.4.8 Sous-menu PULSES OUTPUT (P/L)

Copy the volume measured by the TRONIQUE LPG.

Enter the number of pulses to be generated by the MICROCOMPT+ for each unit counted in the totalizer. Enter a zero value to disable the function.



5.5 Menu SETTINGS

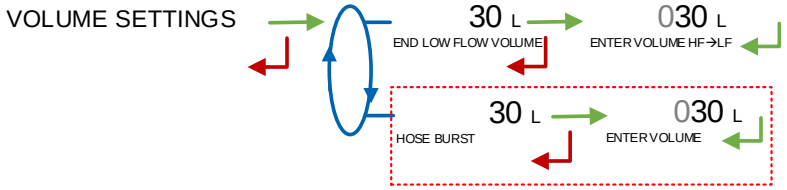


5.5.1 Sub-menu VOLUME SETTINGS

This menu is used to enter volume setpoints as described below:

END FLOW VOLUME: Enter the volume, in litres, flowing at low flow at the end of the measurement.

HOSE BURST: The setpoint only appears if the function was activated during configuration in SUPERVISOR mode (CONFIGURATION>HOSE BURST menu) when the metering set was commissioned. Volume above which TRONIQUE LPG monitors a significant variation in flow rate that may occur when the hose bursts.

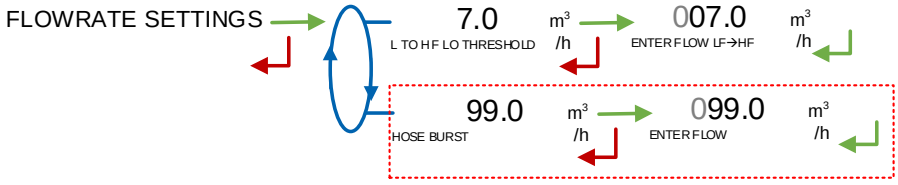


5.5.2 Sub-menu FLOWRATE SETTINGS

This menu is used to enter the flow rate setpoints as described below:

L TO H FLO THRESHOLD: Flow rate above which, when in low flow phase, the TRONIQUE LPG commands the switch to high flow.

HOSE BURST: The setpoint only appears if the function was activated during configuration in SUPERVISOR mode (CONFIGURATION>FLEXIBLE BREAKDOWN menu) when the measuring system was commissioned. Flow rate gradient above which TRONIC LPG stops charging.



5.5.3 Sub-menu TIMING SETTING

This menu is used to enter the time setpoints as described below:

DEADMAN SWITCH : If the deadman switch function is enabled, enter the time delay in seconds. This function requires the operator to notify his presence periodically by pressing the deadman switch button on the remote control.

LOW FLOW TIMING 0 : Time in seconds for the zero flow alarm to be triggered in the absence of product flow.

HIGH FLOW TIMING 0 (S) : Time in seconds for the zero flow alarm to be triggered after a flow of product (only during start-up).

DECLUTCHING TIMING (S) : Time in seconds between pressing start and disengagement.

DECLUTCH TIMING→PTO (S) *only if extended commands enabled*: Time in seconds between disengagement and engagement of power take-off.

PTO TIMING→VALVE (S) *only if extended commands enabled :* Time in seconds between power take-off engagement and valve opening.

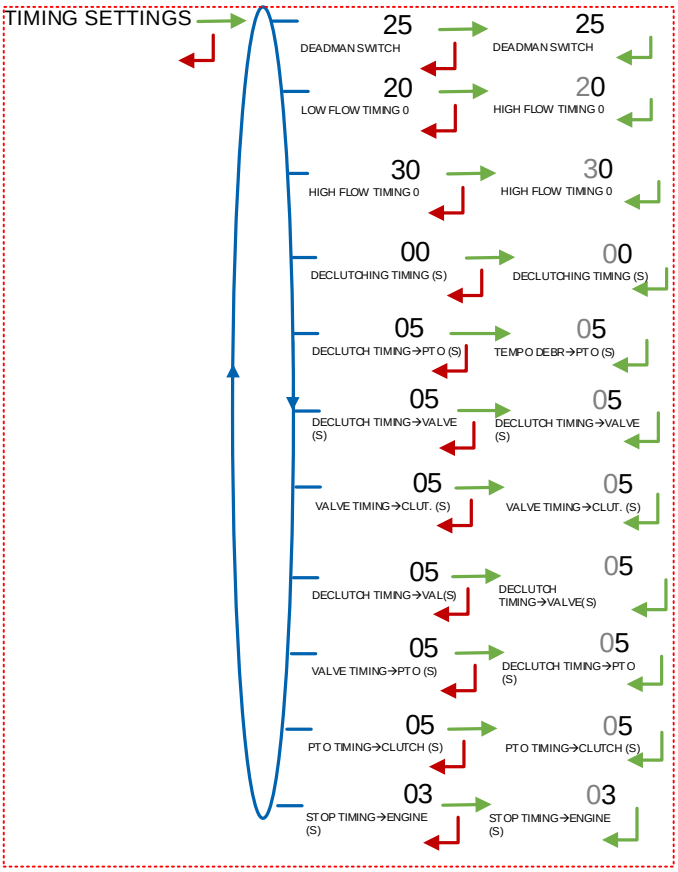
VALVE TIMING→CLUT. (S) *only if extended commands enabled :* Time in seconds between valve opening and clutch engagement.

DECLUTCH TIMING→VAL (S) *only if extended commands enabled*: Time in seconds between disengagement and valve closure.

VALVE TIMING→PTO (S) *only if extended commands enabled :* Time in seconds between valve closure and power take-off withdrawal.

PTO TIMING→CLUTCH (S) *only if extended commands enabled*: Time in seconds from power take-off to clutch engagement.

STOP TIMING→ENGINE (S) *only if extended commands enabled :* Time in seconds between pressing stop and engine cut-out.



5.6 Menu TIME ADJUSTEMENT

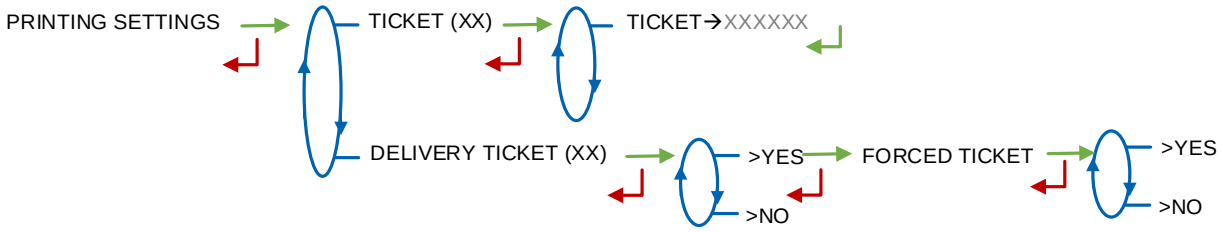
The date and time are set in METROLOGICAL mode. Here you can adjust the time (plus or minus 2 hours) up to once a day.

5.7 Menu PRINTING SETTINGS

TICKET : Selects the required ticket format for printing the delivery note.

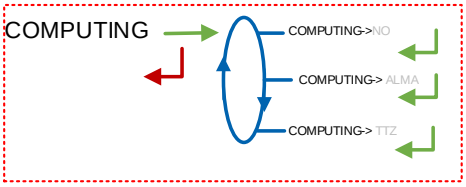
DELIVERY TICKET:

- >YES : L'impression du bon de livraison est proposée en fin de livraison
  - ⇨ Forced ticket : Whether or not require a delivery note
- >NO : The delivery note is not printed at the end of delivery. The delivery note can be printed later using the USER>PRINT>DELIVERY NOTE menu.



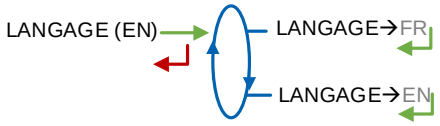
5.8 Menu COMPUTING

Choosing the communication protocol for on-board computing



5.9 Menu LANGAGE

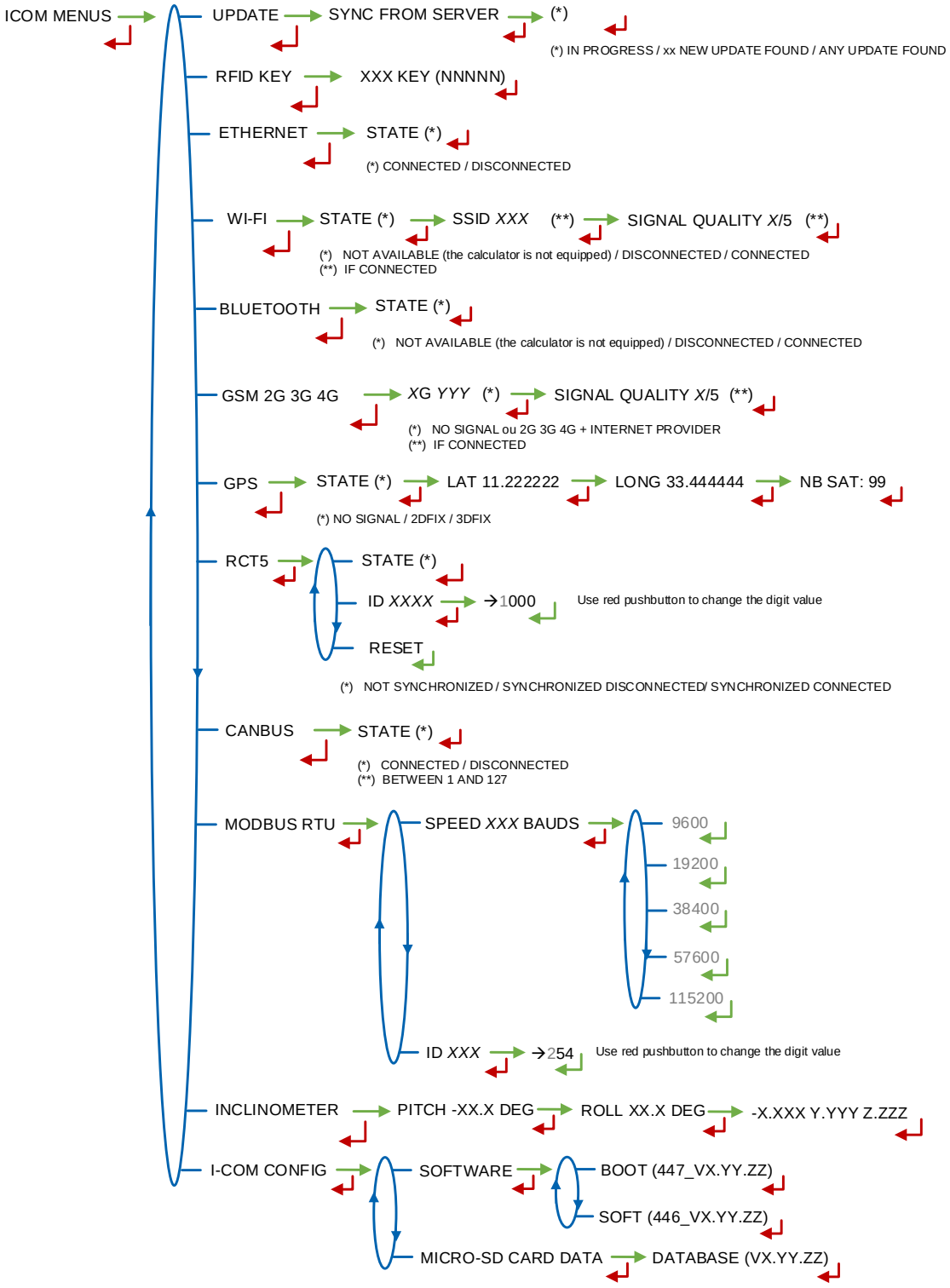
This menu allows you to choose the language in which messages are displayed. It is only available if a translation catalogue has been downloaded to the MICROCOMPT+.



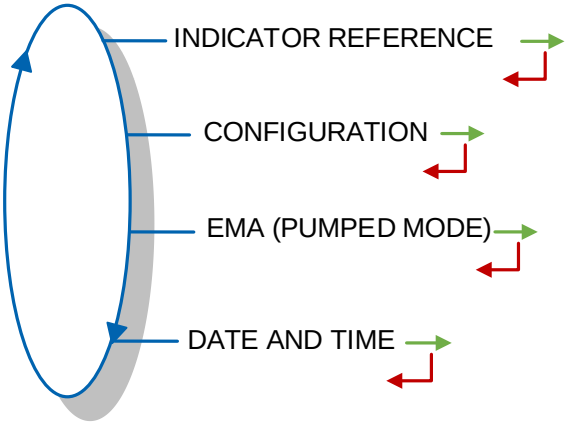
5.10 Menu ICOM MENUS

The submenus depend on the authorised access level. The parameters available by applying the Heater-Level RFID key are shown below.

APPENDIX 1 shows all the sub-menus available according to access level.

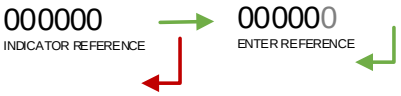

ICOM MENUS
UPDATE
SYNC FROM SERVER
(*)
(*) IN PROGRESS / xx NEW UPDATE FOUND / ANY UPDATE FOUND
RFID KEY
XXX KEY (NNNNN)
ETHERNET
STATE (*)
(*) CONNECTED / DISCONNECTED
WI-FI
STATE (*)
SSID XXX
(**)
SIGNAL QUALITY X/5
(**)
(*) NOT AVAILABLE (the calculator is not equipped) / DISCONNECTED / CONNECTED
(**) IF CONNECTED
BLUETOOTH
STATE (*)
(*) NOT AVAILABLE (the calculator is not equipped) / DISCONNECTED / CONNECTED
GSM 2G 3G 4G
XG YYY
(*)
SIGNAL QUALITY X/5
(**)
(*) NO SIGNAL ou 2G 3G 4G + INTERNET PROVIDER
(**) IF CONNECTED
GPS
STATE (*)
LAT 11.222222
LONG 33.444444
NB SAT: 99
(*) NO SIGNAL / 2DFIX / 3DFIX
RCT5
STATE (*)
ID XXXX
→1000
Use red pushbutton to change the digit value
RESET
(*) NOT SYNCHRONIZED / SYNCHRONIZED DISCONNECTED/ SYNCHRONIZED CONNECTED
CANBUS
STATE (*)
(*) CONNECTED / DISCONNECTED
(**) BETWEEN 1 AND 127
MODBUS RTU
SPEED XXX BAUDS
9600
19200
38400
57600
115200
ID XXX
→254
Use red pushbutton to change the digit value
INCLINOMETER
PITCH -XX.X DEG
ROLL XX.X DEG
-X.XXX Y.YYY Z.ZZZ
I-COM CONFIG
SOFTWARE
BOOT (447_VX.YY.ZZ)
SOFT (446_VX.YY.ZZ)
MICRO-SD CARD DATA
DATABASE (VX.YY.ZZ)

6 SETTING UP THE LPG TRONIQUE : METROLOGICAL MODE

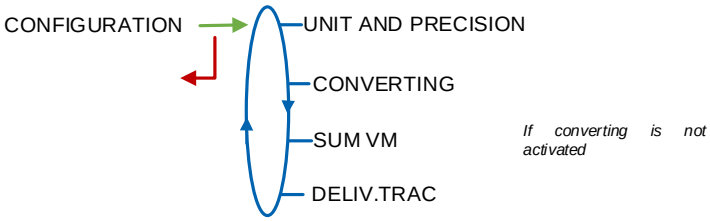


6.1 Menu INDICATOR REFERENCE

Enter the alphanumeric value which designates the MICROCOMPT+ serial number.

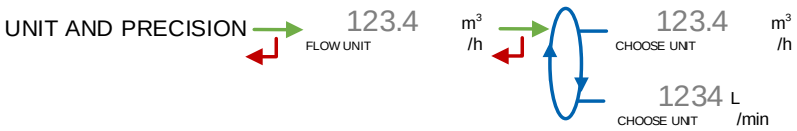


6.2 Menu CONFIGURATION



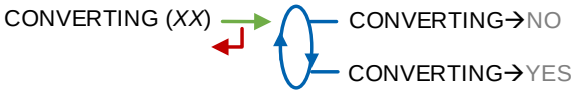
6.2.1 Sub-menu UNIT AND PRECISION

This menu is used to select the unit of flow displayed and printed.



6.2.2 Sub-menu CONVERTING

This menu is used to activate or deactivate volume conversion.



A change of state causes the metrological log to be erased, giving rise to a 'LOST MEMORY' fault.

When conversion is activated, the following menus must be filled in:

MAIN DISPLAY : Choose the main indication for displaying the quantity

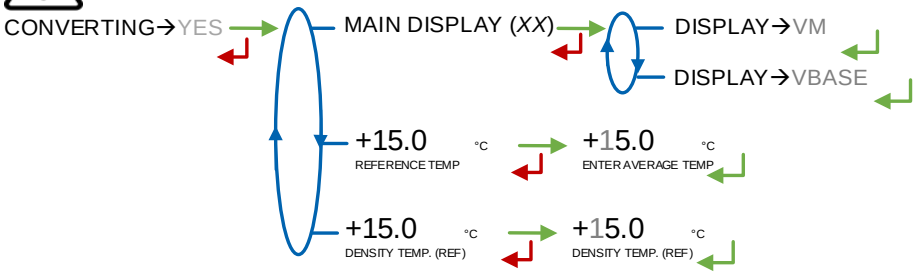
VM : Volume measured under measurement conditions

VBASE : Volume converted at basic conditions

REFERENCE TEMP : Enter the reference temperature for the conversion. Default value: 15°C for the most common conversions

DENSITY TEMP. (REF) : Enter the reference temperature for the densities entered. Default value :15°C for density at 15°C (MV15)

If the value of one of the reference temperatuees is changed, the metrological log is erased and a 'LOSS OF MEMORY' fault is triggered.



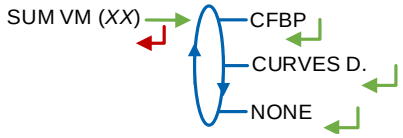
6.2.3 Sub-menu SUM VM

This menu is available when conversion is not activated (CONVERTING→NO). The density can be calculated in two ways :

SUM VM→CFBP : Using the CFBP conversion table

>CURVE D. : Use another curve. If this option is selected, the coefficients of the polynomial must be entered in a special menu in SUPERVISOR mode: DENSITY CURVES

>NONE: No density calculation

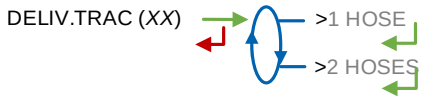


6.2.4 Sub-menu DELIV. TRAC

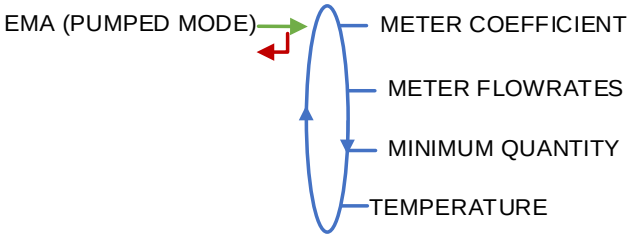
This menu is used to configure the number of delivery channels.

> 1 HOSE: Flexible hose operation.

> 2 HOSES : Operation with two hoses.



6.3 Menu measuring system EMA (PUMPED MODE)



6.3.1 Sub-menu METER COEFFICIENT

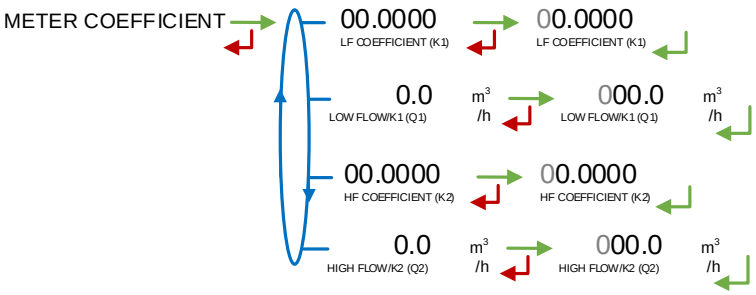
This menu is used to enter the coefficient of the measuring set in pulses/litre.

LF COEFFICIENT (K1) : Coefficient to be applied for low flow rates.

LOW FLOW/K1 (Q1) : Small reference flow rate such as [Qmin]≤Q1≤[Qminx1.5]. Depending on the flow unit configured.

HF COEFFICIENT (K2) : Coefficient to be applied to the flow rate.

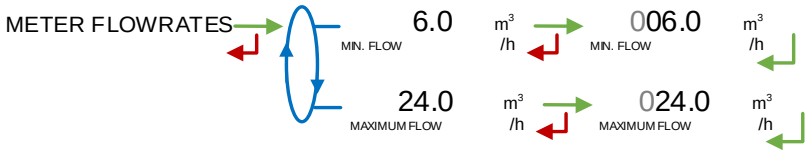
HIGH FLOW/K2 (Q2) : Reference flow rate such that [Qminx3]≤Q2<[Qmax]. Depending on the flow rate unit configured.



6.3.2 Sub-menu METER FLOWRATES

MINIMUM FLOW : Enter the minimum metrological flow rate of TRONIQUE LPG in m3/h or l/min depending on the flow rate unit configured (CONFIGURATION>UNIT AND PRECISION).

MAXIMUM FLOW : Enter the maximum metrological flow rate of TRONIC LPG in m3/h or l/min depending on the flow rate unit configured (CONFIGURATION>UNIT AND PRECISION).

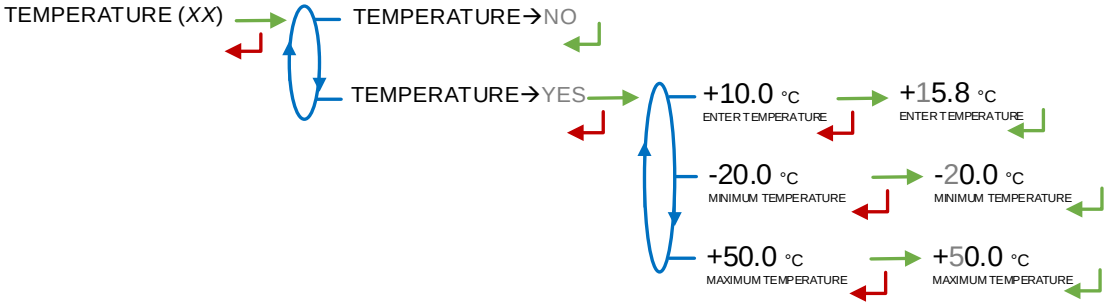


6.3.3 Sub-menu MINIMUM QUANTITY

This menu is used to enter the minimum delivery of TRONIQUE LPG in litres, provided by the combination of the meter, the MICROCOMPT+ and the other TRONIQUE LPG components.

6.3.4 Sub-menu TEMPERATURE

This menu is an option. It is used to calibrate the temperature in the MICROCOMPT+. See maintenance sheet FM 8510.



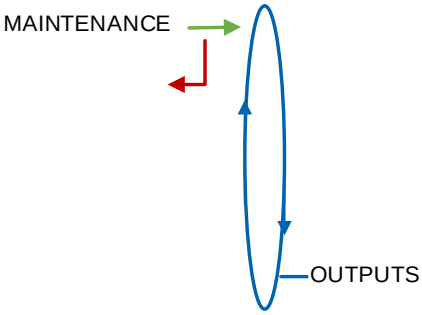
6.4 Menu DATE AND TIME

This menu is used to set the ECU's internal clock.

The stored measurement results are completely erased if you set the time back or forward by more than 2 hours.

7 USE THE LPG TRONIQUE

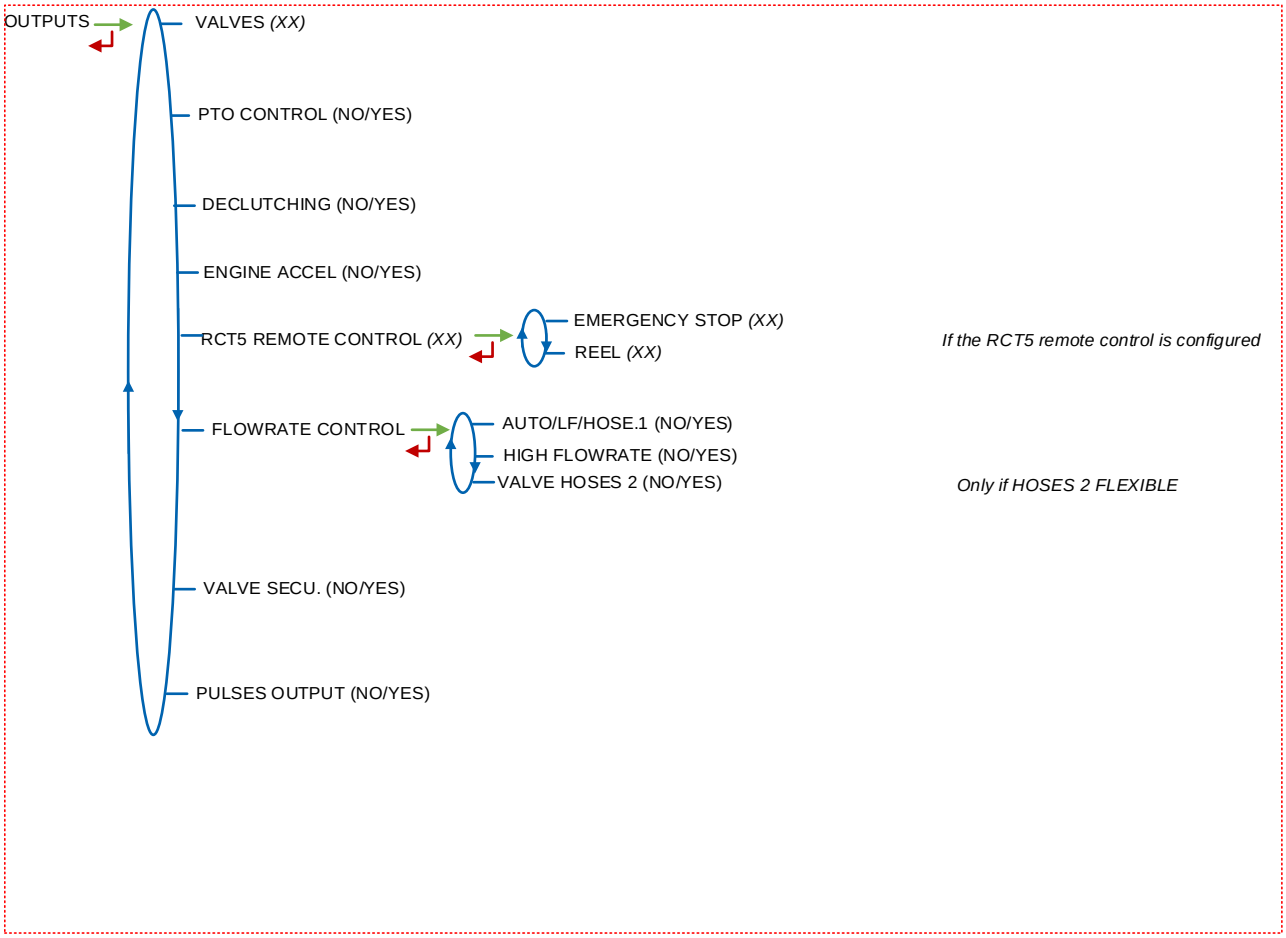
7.1 Menu MAINTENANCE



7.1.1 Sub-menu OUTPUTS

This activates the LPG TRONIQUE outputs.

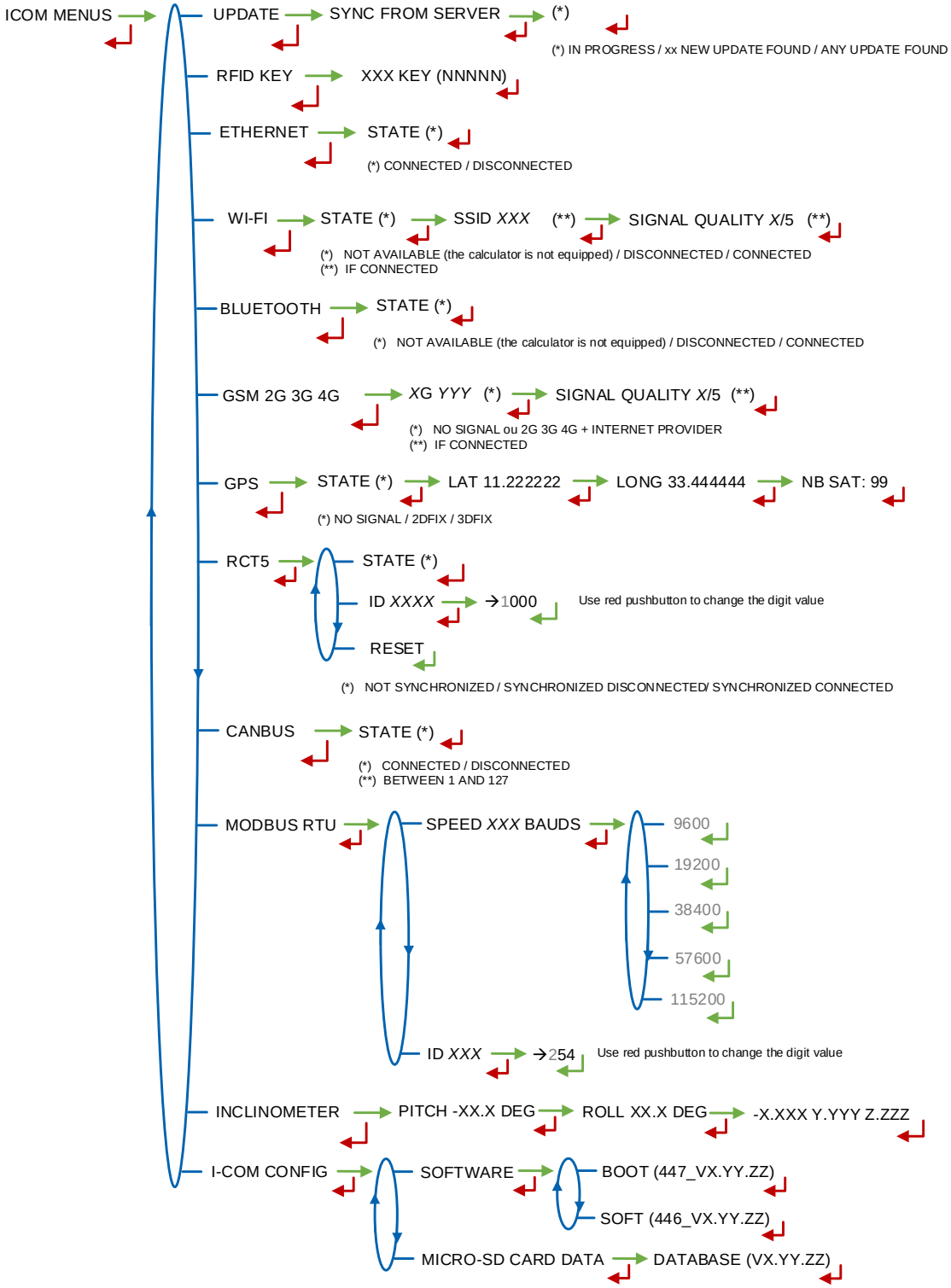
The VALVES, PTO CONTROL and DECLUTCHING release outputs are only available if the commands are heard.


OUTPUTS
VALVES (XX)
PTO CONTROL (NO/YES)
DECLUTCHING (NO/YES)
ENGINE ACCEL (NO/YES)
RCT5 REMOTE CONTROL (XX)
EMERGENCY STOP (XX)
REEL (XX)
If the RCT5 remote control is configured
FLOWRATE CONTROL
AUTO/LF/HOSE.1 (NO/YES)
HIGH FLOWRATE (NO/YES)
VALVE HOSES 2 (NO/YES)
Only if HOSES 2 FLEXIBLE
VALVE SECU. (NO/YES)
PULSES OUTPUT (NO/YES)

8 ANX 0001 – PRESENTATION OF THE MENU SUPERVISOR>ICOM MENUS

8.1 Operator

The blue RFID key allows display or set the parameters that follow.



8.2 manager and maintenance

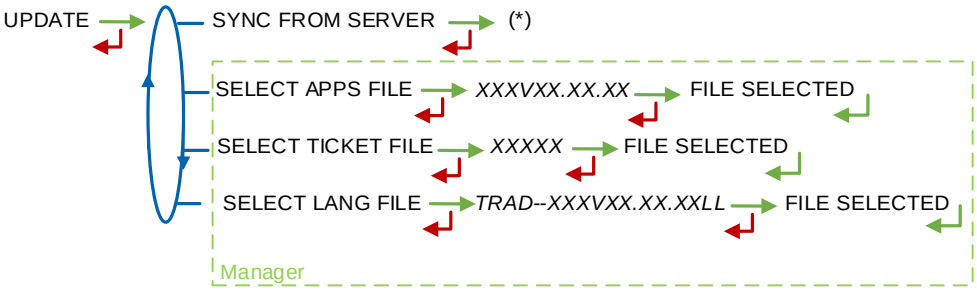
This section presents the whole menu SUPERVISOR>ICOM MENUS. Access to settings depends on the key used. The parameters that are not highlighted are available with any type of key.

- ⇨ As an operator, the blue RFID key allows display or set the parameters that are not highlighted (see §1 for simplified presentation).
- ⇨ As a manager of a truck fleet or a loading terminal: the green RFID key allows display or set the operator parameters and those indicated in green boxes.
- ⇨ As an installer and/or a maintenance operator: the red RFID key allows display or set all the parameters of the menu SUPERVISOR>ICOM MENUS.

NOTE: The menus indicated in red boxes are available with the red key only.

8.3 Menu UPDATE

The MICROCOMPT+ connects to the server via Wi-Fi, Bluetooth, Ethernet or GSM.



(*) IN PROGRESS / xx NEW UPDATE FOUND / ANY UPDATE FOUND

SYNC FROM SERVER: Synchronization of the updated files from ALMA server. If an update of the functions or the communication configuration is uploaded, it will be applied on the next reboot of the MICROCOMPT+.

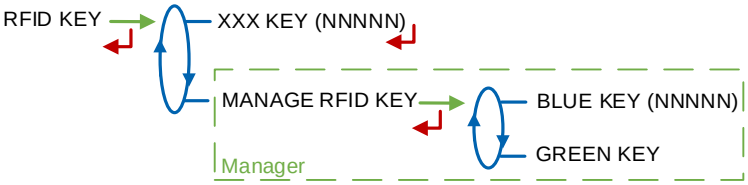
SELECT APPS FILE (*) – *Access restricted to the Manager with green key and/or to the Maintenance with red key.* Used to display and select the version(s) of the application available on the SD card. NO FILE is displayed if there's no file to download.

SELECT TICKET FILE (*) – *Access restricted to the Manager with green key and/or to the Maintenance with red key.* Display and select the version(s) of the ticket file available on the SD card. NO FILE is displayed if there's no file to download.

SELECT LANG FILE (*) – *Access restricted to the Manager with green key and/or to the Maintenance with red key.* Display and select the version(s) of the translation catalogue available on the SD card. NO FILE is displayed if there's no file to download.

(*) Selected files are automatically downloaded onto the AFSEC board when switching the MICROCOMPT+ into 'Resident' mode. See the operating manual MU 7037 (§2).

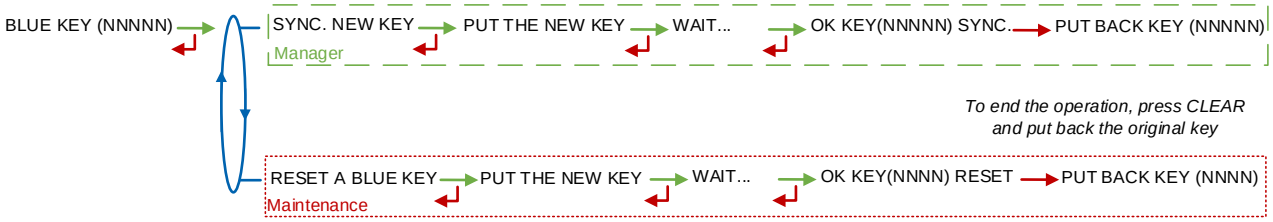
8.4 Menu RFID KEY



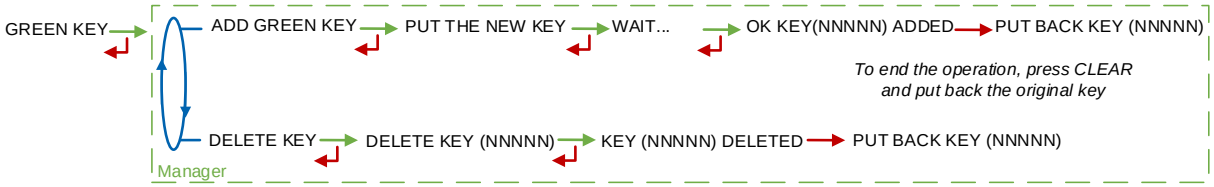
XXX KEY (NNNNN): Displays the information about the RFID placed on the screen with: XXX = color and (NNNNN) = identifier. E.g.: RED KEY (01234)

MANAGE RFID KEY – *Access restricted to the Manager with green key and/or to the Maintenance with red key*

- **BLUE KEY (NNNNN)**: Display in brackets the number of the blue key associated with the MICROCOMPT+; if no blue key is associated, the number is replaced by dashes.
  - **SYNC. NEW KEY**: Used to associate a blue key to the MICROCOMPT+
  - **RESET A BLUE KEY –** *Access restricted to the Maintenance with red key*: Used to reset a blue key



- **GREEN KEY**
  - **ADD A GREEN KEY**: Used to associate a Manager green key to the MICROCOMPT+. To initialize the first green key, use the blue key associated to the MICROCOMPT+.
  - **DELETE KEY**: Used to remove keys that have already been associated to the MICROCOMPT+.



If the key does not match the expected key format, a message is displayed:

OTHER DEVICE KEY: The blue key is locked

KEY FROM THIS DEVICE: Attempt to reset a blue key that corresponds to the recorded blue key

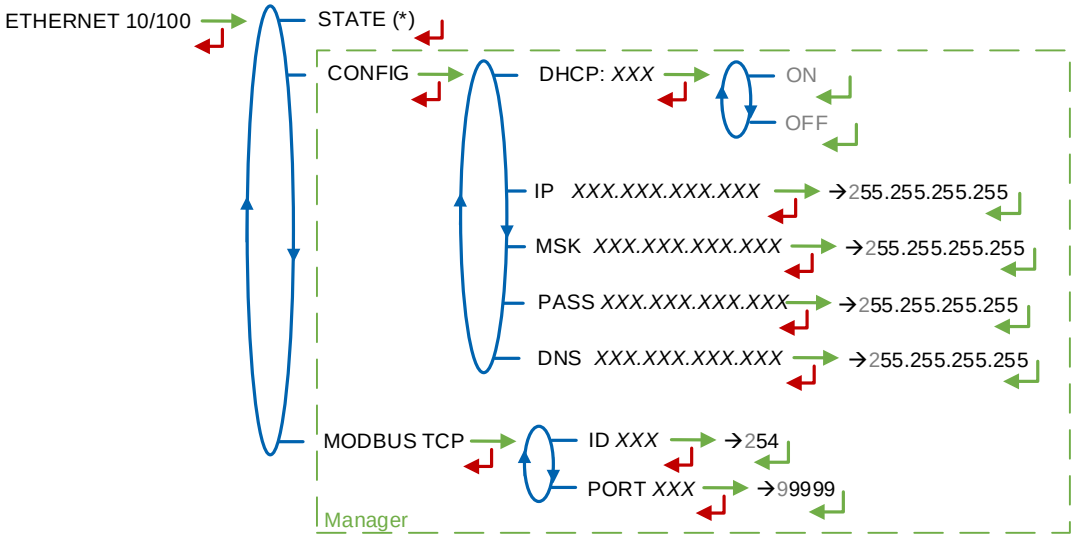
KEY ALREADY INITIALIZED: The blue key is already initialized

KEY ALREADY ADDED: Addition of a green key already recorded

KEY ERROR: The re-applied key is not the right color

INCORRECT KEY: The format of the key is unknown.

8.5 Menu ETHERNET



(*) CONNECTED / DISCONNECTED

STATE: Status of the Ethernet connection

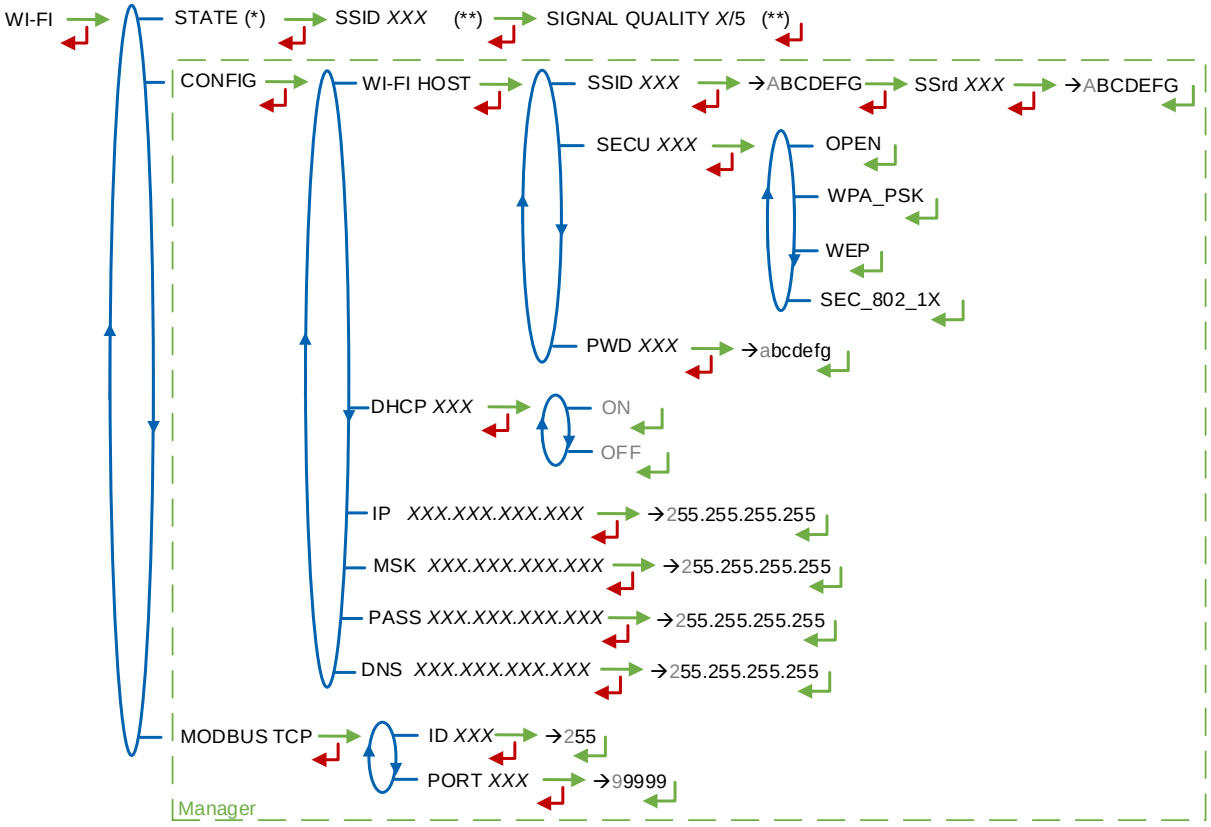
CONFIG – *Access restricted to the Manager with green key and to the Maintenance with red key*

- **DHCP**: If ON is enabled, IP parameters can be initialized through the DHCP protocol. If OFF is enabled, parameters are set manually
- **IP**: MICROCOMPT+ IP address
- **MSK**: Subnet mask (IP mask for the internal IP address allocation)
- **PASS**: Gateway (IP Address for the internet access of the Ethernet interface)
- **DNS**: IP address to access a DNS server

MODBUS TCP – *Access restricted to the Manager with green key and to the Maintenance with red key*

- **ID**: MICROCOMPT+ Modbus identifier between 0 and 255
- **PORT**: TCP/IP access port for Modbus protocol

8.6 Menu Wi-Fi



(*) NOT AVAILABLE (the calculator is not equipped) / DISCONNECTED / CONNECTED
(**) IF CONNECTED

STATE: Status of the Wi-Fi connection. If connection is successful, you can do a check of SSID and quality

CONFIG – *Access restricted to the Manager with green key and to the Maintenance with red key*

- **WI-FI HOST**: Set the characteristics of the wireless network access point
  - **SSID**: Wi-Fi network name (32 characters-alphanumeric key that identifies the wireless network uniquely)

    SECU: Type of security protocol for the network

    OPEN: Free Wi-Fi

    WPA_PSK: Encryption protocol by a 128 bits-dynamic key

    WEP: Encryption protocol by a key encoded in 64 or 128 bits

    SEC_802-1X: Encryption protocol compatible with the standard IEEE 802.1X
  - **PWD:** Wi-Fi network password.

    Permitted characters: <space>!"#$%&'()*+,-./0123456789:;<=>?@ABCD EFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~<DEL> (Visualization of the permitted characters on the MICROCOMPT+ display)
- **DHCP**: If ON is enabled, IP parameters can be initialized through the DHCP protocol. If OFF is enabled, parameters are set manually
- **IP**: MICROCOMPT+ IP address
- **MSK**: Subnet mask (IP mask for the internal IP address allocation)
- **PASS**: Gateway (IP Address for the internet access of the Ethernet interface)

- **DNS**: IP address to access a DNS server

MODBUS TCP – *Access restricted to the Manager with green key and to the Maintenance with red key*

- **ID**: MICROCOMPT+ Modbus identifier between 0 and 255
- **PORT**: TCP/IP access port for Modbus protocol

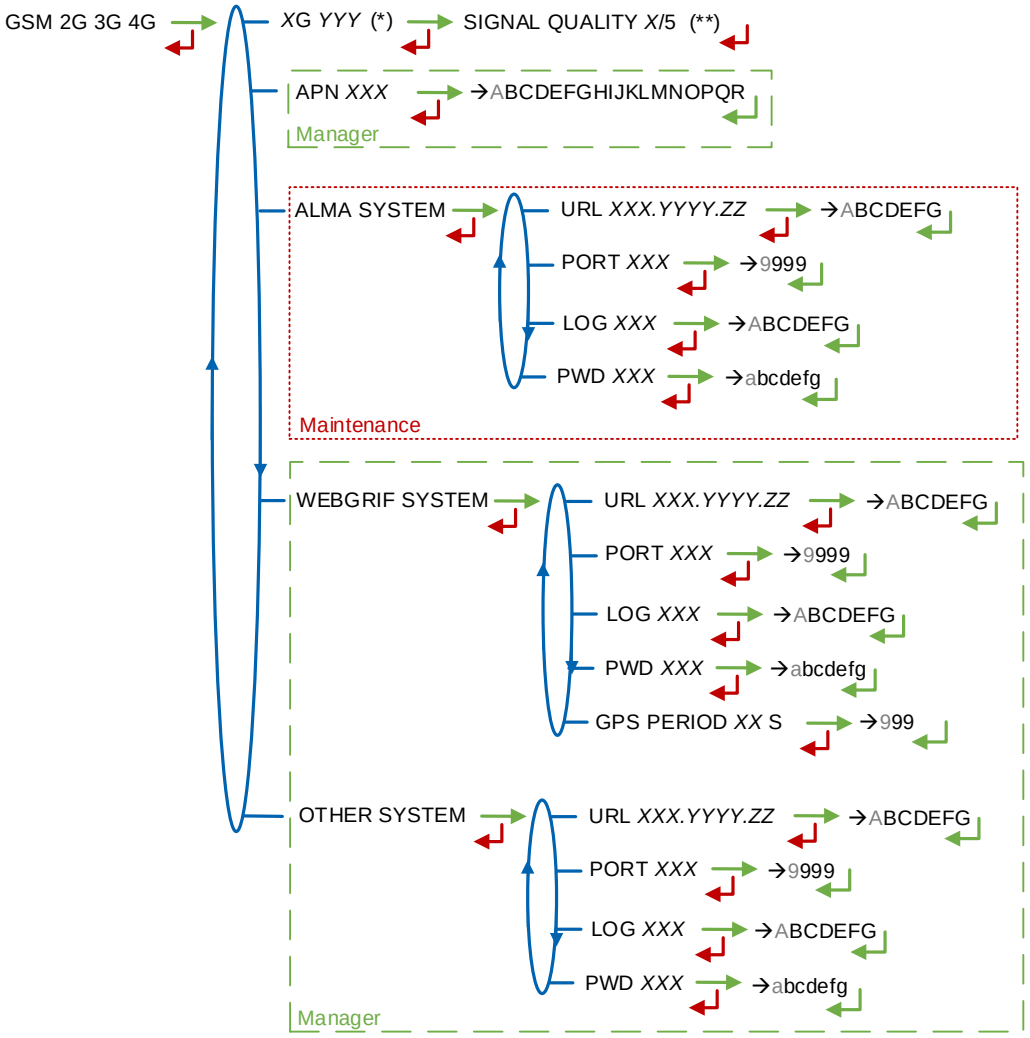
8.7 Menu BLUETOOTH

(*) NOT AVAILABLE (the calculator is not equipped) / DISCONNECTED / CONNECTED

STATE: Status of the Bluetooth connection

NAME – *Access restricted to the Manager with green key and to the Maintenance with red key.* The default name of the Bluetooth device includes the Microcompt+ serial number.

8.8 Menu GSM 2G 3G 4G



(*) NO SIGNAL ou 2G 3G 4G + INTERNET PROVIDER
(**) IF CONNECTED

XG YYY: The signal is being received, the type of mobile network is displayed according to the protocols GSM / GPRS / EDGE, UMTS / HSPA+ / LTE, followed by the name of the service provider. Otherwise, NO SIGNAL is displayed

APN – *Access restricted to the Manager with green key and to the Maintenance with red key* Name of the internet access point, only if ALMA does not supply it

ALMA SYSTEM – *Access restricted to the Maintenance with red key.* Information of connection to the ALMA FTP server for files transfer

- **URL**: Web address of the ALMA FTP server (host)
- **PORT**: ALMA FTP server port, default value: 21
- **LOG**: ALMA FTP server identifier
- **PWD:** ALMA FTP server password.

Permitted characters: <space>!"#$%&'()*+,-./0123456789:;<=>?@ABCD EFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~<DEL> (Visualization of the permitted characters on the MICROCOMPT+ display)

WEBGRIF SYSTEM – *Access restricted to the Manager with green key and to the Maintenance with red key* Information of connection to the Webgrif FTP server for files transfer

- **URL**: Web address of the Webgrif FTP server (host)
- **PORT**: Webgrif FTP server port, default value: 21
- **LOG**: Webgrif FTP server identifier
- **PWD:** Webgrif FTP server password.

Permitted characters: <space>!"#$%&'()*+,-./0123456789:;<=>?@ABCD EFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~<DEL> (Visualization of the permitted characters on the MICROCOMPT+ display)

GPS PERIOD: Backup period of GPS coordinates (from 1 to 999 seconds)

OTHER SYSTEM – *Access restricted to the Manager with green key and to the Maintenance with red key* Information of connection to the FTP server for files transfer

- **URL**: Web address of the FTP server (host)
- **PORT**: FTP server port, default value: 21
- **LOG**: FTP server identifier
- **PWD:** FTP server password.

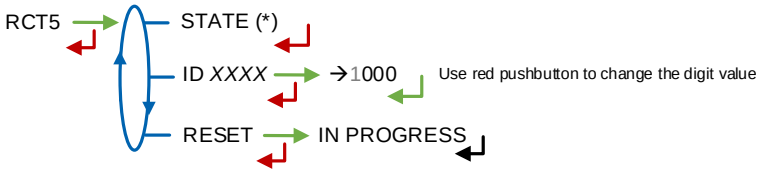
Permitted characters: <space>!"#$%&'()*+,-./0123456789:;<=>?@ABCD EFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~<DEL> (Visualization of the permitted characters on the MICROCOMPT+ display)

8.9 Menu GPS

(*) NO SIGNAL / 2DFIX / 3DFIX

STATE: The signal is being received: the type of signal is displayed 2DFIX or 3DFIX. Validating the data makes the GPS coordinates appear (latitude then longitude), and lastly appears the number of satellites which signals are simultaneously received (that gives information about the position accuracy). Otherwise NO SIGNAL is displayed

8.10 Menu RCT5



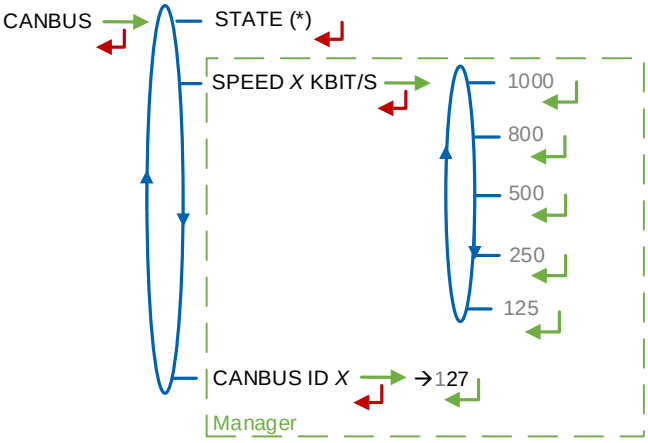
(*) NOT SYNCHRONIZED / SYNCHRONIZED DISCONNECTED/ SYNCHRONIZED CONNECTED

STATE: Status of the MICROCOMPT+ ICOM board

ID: 4-digit MICROCOMPT+ radio ID

RESET: Reset the pairing of the MICROCOMPT+ with the RCT5 remote control

8.11 Menu CANBUS



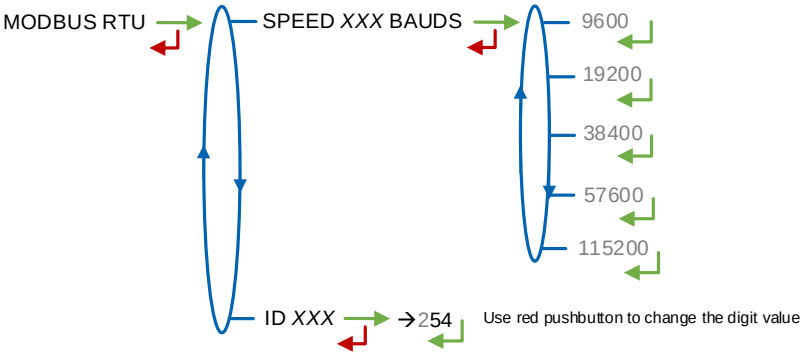
(*) CONNECTED / DISCONNECTED
(**) BETWEEN 1 AND 127

STATE: Status of the CANBus connection

SPEED – *Access restricted to the Manager with green key and to the Maintenance with red key*. Speed of the CANBus connection

CANBUS ID – *Access restricted to the Manager with green key and to the Maintenance with red key* MICROCOMPT+ identifier for the CANBus protocol (between 1 and 127)

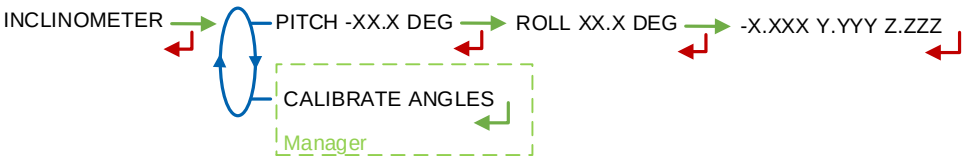
8.12 Menu MODBUS RTU



SPEED: Speed of the Modbus connection

ID: Modbus identifier of the slave (between 0 and 254)

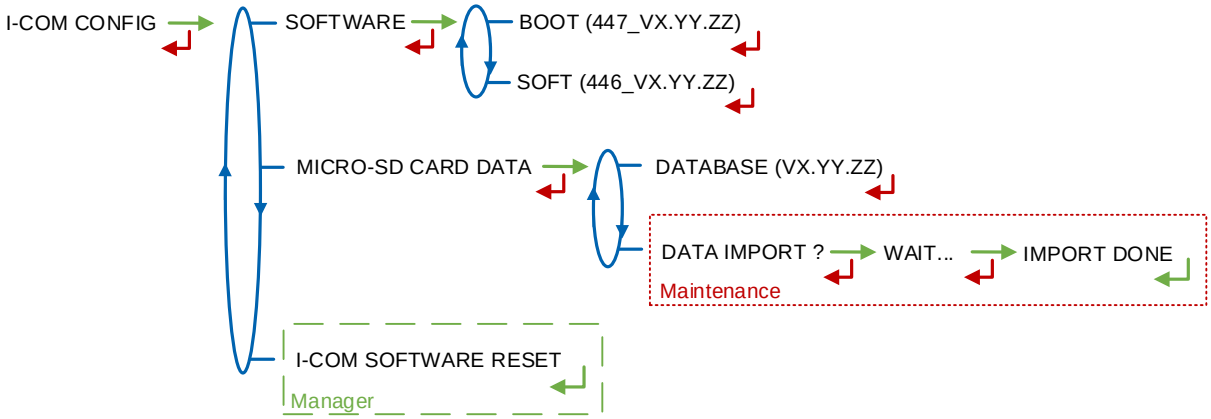
8.13 Menu INCLINOMETER



PITCH: Used to display the bank angles of the truck and the inclinometer raw data

CALIBRATE ANGLES – *Access restricted to the Manager with green key and to the Maintenance with red key.* Used to reset the angles 'pitch' and 'roll' when the truck has a horizontal position in order to correct the assembly tolerances of the MICROCOMPT+ on the truck.

8.14 Menu I-COM CONFIG



SOFTWARE: Used to display the number and version of the software

MICRO-SD CARD DATA

- **DATABASE (VX.YY.ZZ)**: Display the version of the database; the version number is replaced by dashes if there's no database
- **IMPORT DATA ? –** *Access restricted to the Maintenance with red key*. Import the ICOM settings onto the SD card

I-COM SOFTWARE RESET – *Access restricted to the Manager with green key and to the Maintenance with red ke*y. Reboot the I-COM board.