

Quick Reference

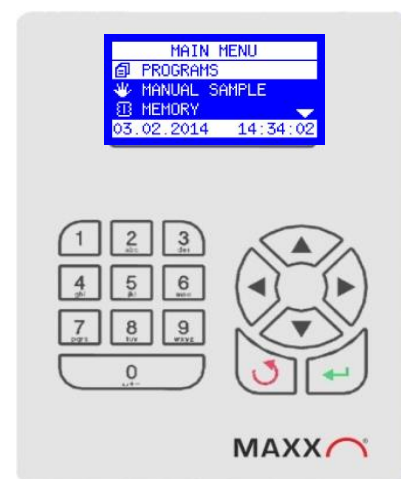
P6



HOW TO PROGRAM

The menu structure is similar to a directory tree and is split up in main menus and submenus.

NOTE: Please note that not all menu items of this manual are absolutely relevant for your device. According to the supplied equipment, these may differ!



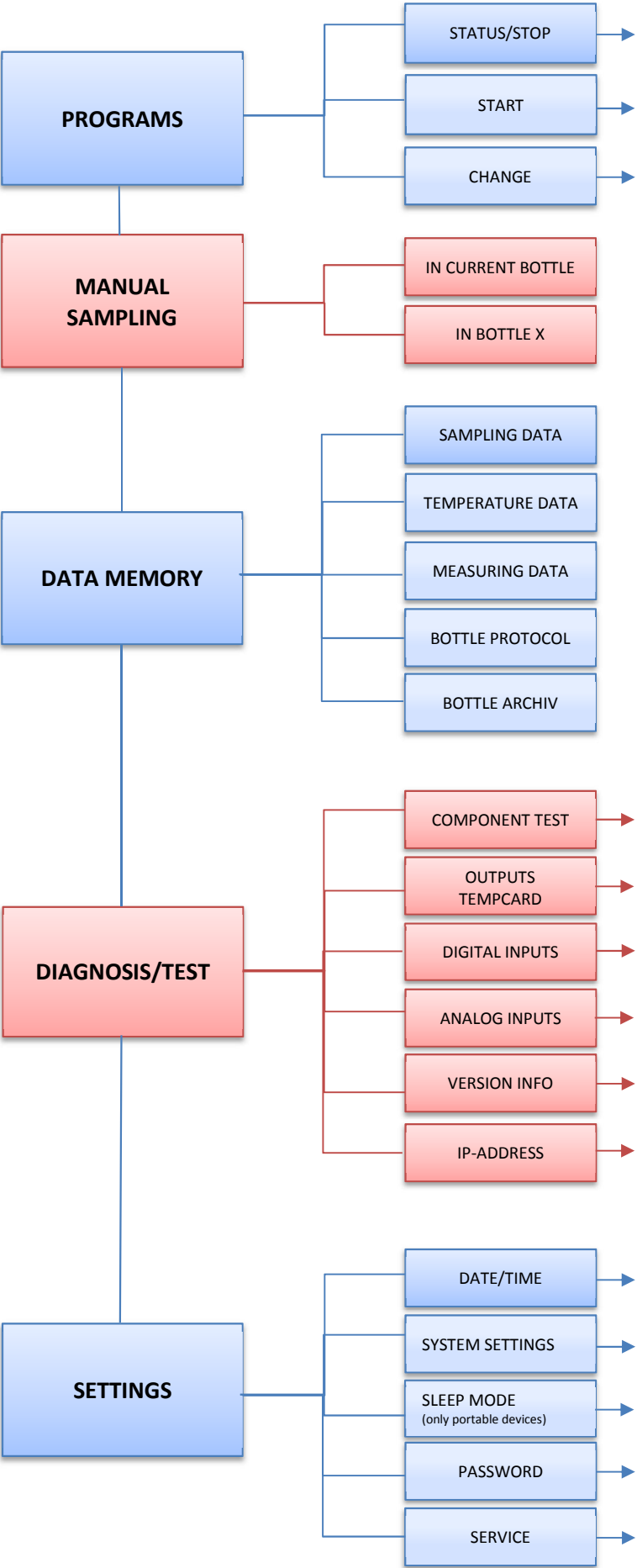
Assignment and function of keys

The apparatus is interactively programmed by the user.

Function of the keys:

Display of help texts. To activate the help text when selecting a new display, first press the arrow key pointing to the left.	Arrow key	
Move from one to the next menu	Arrow keys	
Select the desired menu	Enter key	
Move within the menu	Arrow keys	
Selection within the menu or scrolling within the data memory or bottle memory	Arrow keys	
Confirm the choice (is automatically marked with a)	Enter key	
Entry/change of values	Arrow keys	
Confirmation of entered values	Enter key	
Return to higher menu level	Back key	
Initialization (reset) display	Back key + Enter	Press both keys at the same time
Terminate sleep mode (only portable samplers)	Back key	Press for at least 5 sec.
RESET / reset to factory settings (NOTE: all settings <u>and</u> data will be deleted!)	Back key	Keep pressed when switching on

Structure of Main Menus



GENERAL TROUBLESHOOTING AND ERROR MESSAGES

Symptom	Possible cause	Action / Solution
Instrument / Motor will not power on	Battery is not charged.	Replace with a fully charged battery.
	Battery does not hold charge.	Replace battery or use the AC power supply.
	Defective controller (PLC).	Replace the controller (PLC) or contact the service center.
	Peristaltic pump board defective	Replace the board
	Cabling problem, broken wire or loose wire	Fix or Replace wiring
	Pump Motor output defective	Test pump motor output at pin 31/32
	Motor or gear defective	Replace the pump unit
Sampler will not create sufficient lift.	Suction hose is not completely submerged.	Make sure the suction hose is completely submerged.
	Intake tube has a leak.	Replace intake tube.
	Pump tube is worn.	Replace pump tube.
	Wrong tube	Replace by manufacturer tube
	tube connectors	Check whether the tube is properly mounted at the tube connectors
Inaccurate sample volumes.	Incorrect volume calibration.	Repeat the volume calibration and take a grab sample to verify accuracy.
	Intake tube is not completely purging.	Make sure the intake tube is on a downward slope as vertical as possible, with no low points where liquid can accumulate.
	Worn pump tubing	Replace pump tubing.
Error message sensors	Dirt in the tube (in front of the sensor)	Clean the tube (or replace)
	Water in the tube at the lower sensor	Tube is not correctly fixed (straight down)
	Sensor defective	Check the sensors in the Software DI3 and DI4 and if defective, replace
	System is not calibrated	Calibrate
	Upper sensor 2 detect water before lower sensor 1. Can be because tube is not inserted correctly or cables are broke	Put him correctly or replace/reconnect the cables
	Time until water reaches sensor 2 is too long	Upper sensor defective, replace or pump tube is broken, replace

DISTRIBUTOR		
Symptom	Possible cause	Action
No function	Distributor not programmed in software	Program (see operating instructions)
	Cabling problem, broken wire or loose wire	Check connections
	Power board defective,	test motor output 49/50. If defective replace the board
	Motor or gear defective	Replace distributor drive unit
Distributor shows timeout in display	Forked light barrier defective	Replace distributor drive unit
Distributor only finds position 1 but no other bottle position	Encoder defective	Replace distributor drive unit
	Cabling defective	Check cabling or, if necessary, replace power board
Wrong positioning of distributor	Wrong type of distributor programmed in software	Re-program
	Mechanically blocked e.g. a bottle is up,	The safety clutch activates the protective mechanism. Remove the blocking reason

ERROR MESSAGES	
Text / meaning	Description
ERROR DISTRIBUTOR	Distributor is blocked, pulse generator or light barrier are defective.
ERROR SUCTION	No water, hose clogged, no vacuum (check system)
ERROR LIQUID SENSOR	Vacuum system: Sensors are soiled with deposits or there is still water in the metering vessel. Peristaltic pump: if there is any dirt in the tube in front of the sensors
VOLTAGE LOST - END	DATE/TIME end of voltage lost
CHARGE STORAGE BATTERY	If battery voltage is lower than 11,5 V in idle operation
STORAGE BATTERY EMPTY	If battery voltage is lower than 11,15 V in idle operation
ERROR ANALOG SIGNAL A1	Error message if the calibrated limit values are exceeded by 2 mA for at least 2 min.
EMERGENCY CUTOFF	Current flow at an output of the controller is too high or there is a short circuit 1= error at a digital output 2=pinch valve/valve system error 3=over-current pump /distributor hardwaremessage 4=motor current distributor, software message 5=pump current too high, software message
NO ANALOG SIGNAL	Error message if the calibrated limit values of analog inputs 2-9 are exceeded by 2 mA for x minutes (has to be ordered separately by the customer!).
POS1 NOT FOUND	If distribution reference position is not recognized
Water sensor (only Peristaltic Pump)	1 = upper before lower Sensor 2 = maximum time between the sensors exceeded
PUMP TUBE (only Peristaltic Pump)	If the pump hose is damaged and water enters in the pump housing
PROGRAM PARAMETERS	Program System: Configuration error, Program cannot be started. (1-12)