Programming Instructions Typ G

Swiss Mambo

Softwareversions	up from G 2.00; G3.01
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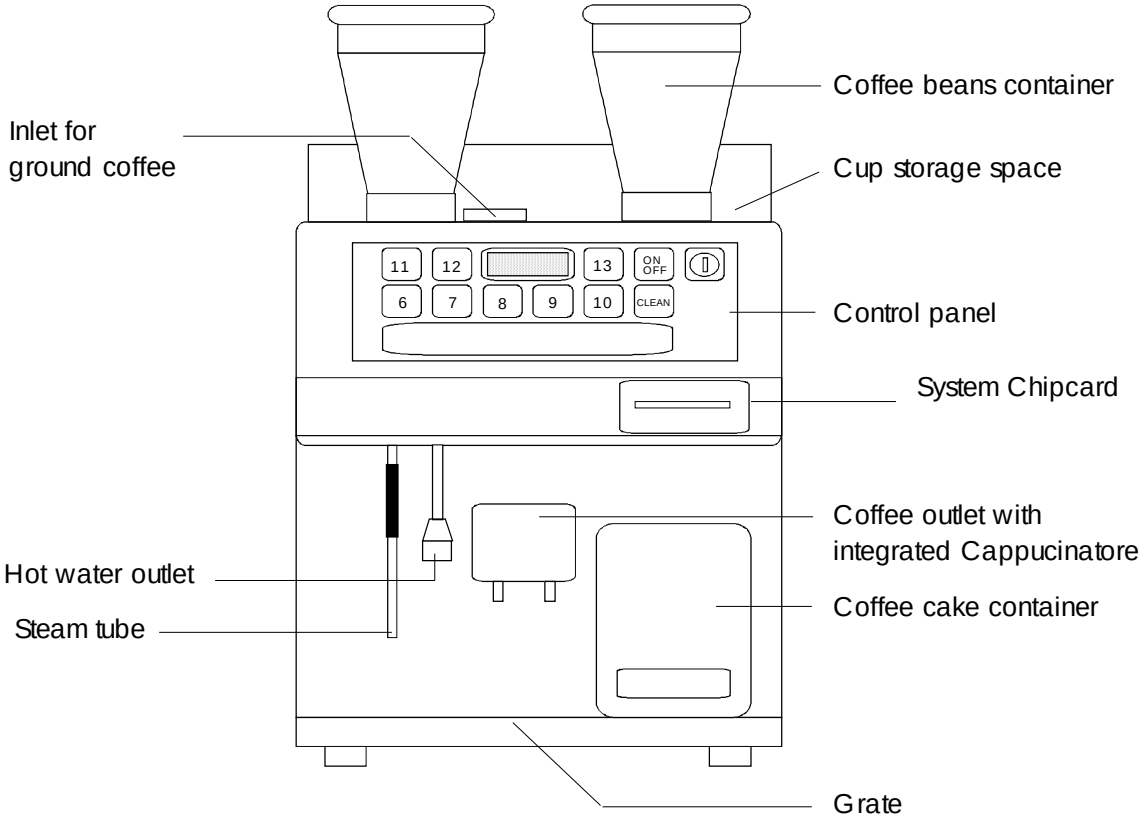
1. Programming keyboard

1.1 General view



1.2 Access into program parameters

User:

The "Adjust-Card" allows fast and immediate access to adjust and optimize product parameters, such as water quantity, grind quantity, steam-time and milk quantity for Cappuccino, coffee brewing temperature and pricing for internal data central.

Procedure:

1. Insert "Adjust-Card"
2. Keep pressing button + until desired option is shown in digital display
3. Confirm desired option with button --
4. Press desired product button
5. Press button + to increase respectively button -- to decrease data
6. Remove "Adjust-Card", all data is stored

Service:

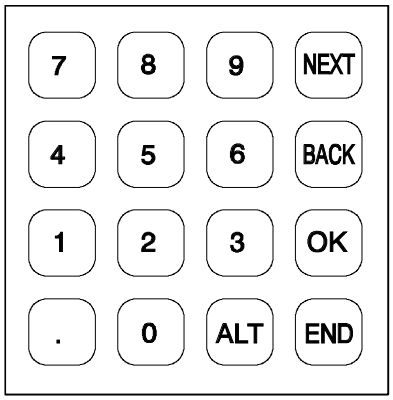
1. Plug in programming keypad on mainboard
2. Access programming mode by
   - Turn coffee machine off with the ON/OFF button
   - Press button "OK", keep it pressed
   - Turn machine back on with the ON/OFF button
   - Enter Service Code-No. 21 on keypad (Service Code)
3. Press button OK to access desired parameter

1.3 Exit of the programming tree structure

END Repeated actuation of the END key takes us back up the programming tree until the programming mode is left and the normal operating mode started.

OFF Exit from the programming mode is also possible by switching off the whole machine.

1.4 Input keys



NEXT — When this key is actuated we move on to the next programming step.

BACK — Similar function to the NEXT key to move back one step in the programming tree structure.

OK — This key is used to confirm an input, to access a main group of the programming tree structure or certain program steps to start a procedure.

END — Actuation of the END key exits from the current step. The program indicator moves one main group higher.

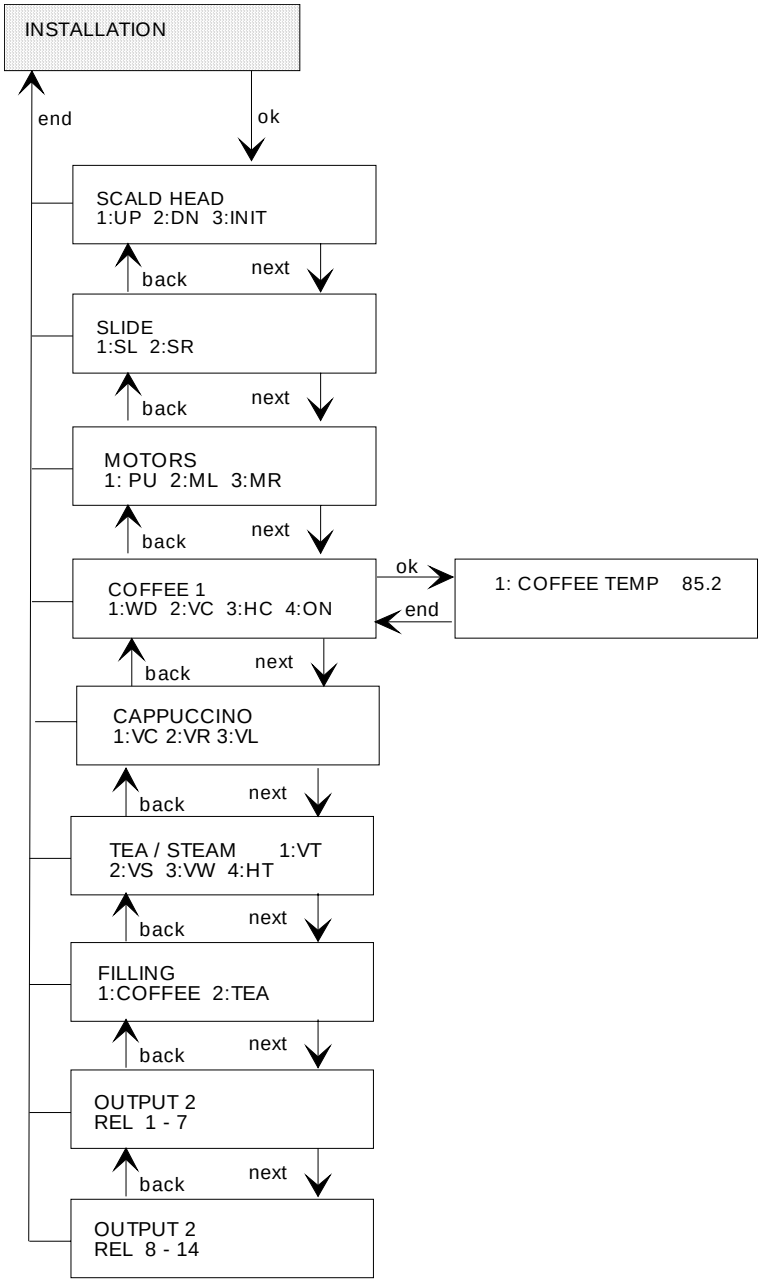
ALT — This key is used to display the old value again if a wrong input has been made and the OK key has not been actuated. It also has various functions in connexion with the definition of the waiters' keys and clearing the counter tables.

• — The dot key is used to input numerical values with decimal places, when product names are to be selected from a table (program parameters) and when the counter readout are to be printed out on a report printer.

Input of digit — Enter a digit by means of the key board including the decimal point.
If the input is correct, confirm with the OK key.
If the input is incorrect, the BACK key can be used to move back one place or the ALT key to recall the previous display content.
An input must therefore be terminated either by OK or by ALT before we can move on further in the tree.

2.1 Installation

In this maingroup we have the possibility to activate all actuators manually. In the display will appear a small menu. By pressing the corresponding numeric pad the desired actuator is activated.



2.1.1 Explanations of the INSTALLATION main group

Scald head	1 : UP	The piston moves up as long as the key is actuated. Switch-off is not effected before the mechanical end stop is reached.
	2 : DN	The piston moves down as long as the key is actuated. Once again, no switch-off is effected before the end stop is reached.
	3 : INIT	Actuation of the key 3 triggers a reference cycle. The piston runs down to the lower end stop, changes its sense of rotation and runs up to the top end stop.

It then travels to the basic position. This reference cycle enables the piston itself to measure the geometry of the brewing assembly and set its top and bottom points, together with the position of the stop switch.

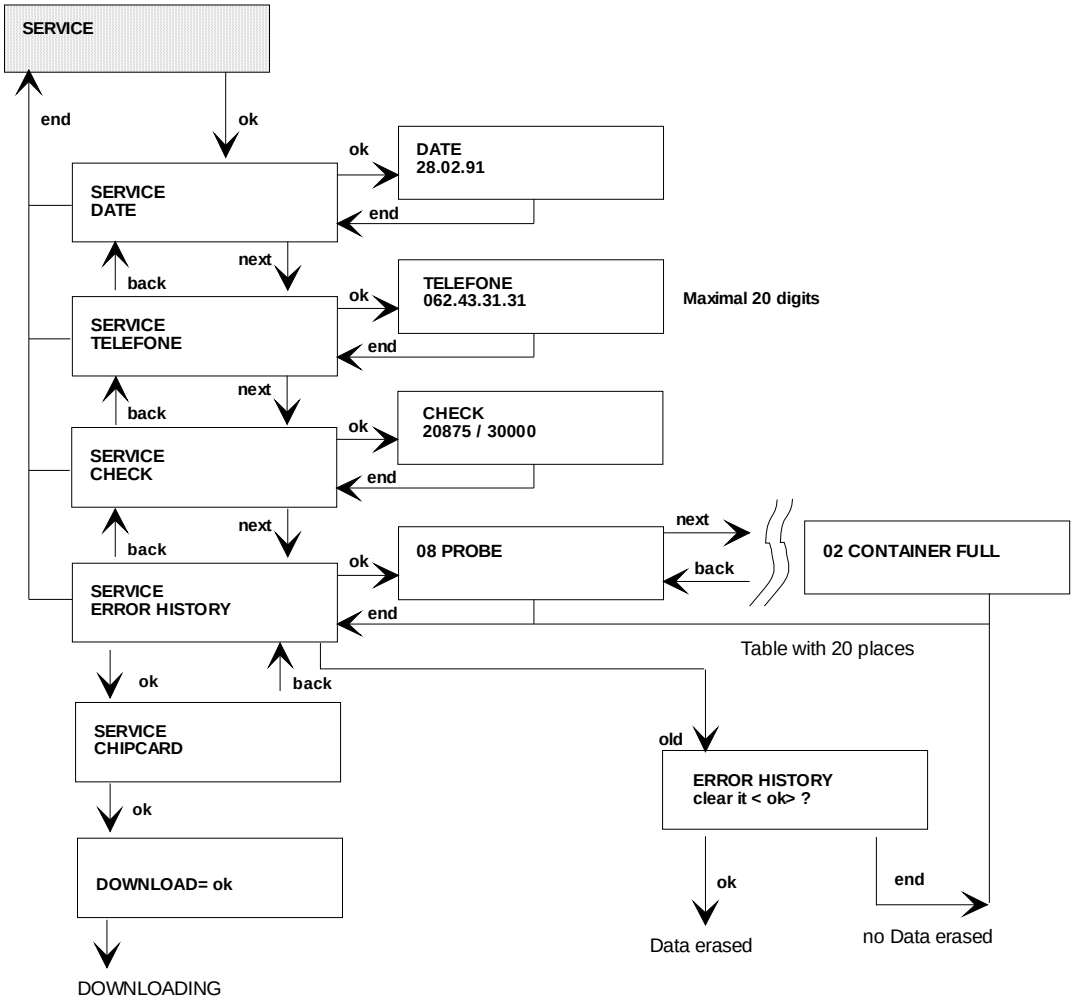
Slide	1 : SL	The left slide is activated (Y10) as long as the key is pressed.
	2 : SR	The right slide is activated (Y11) as long as the key is pressed.
Motors	1 : PU	Activation of the pump motor (M2).
	2 : ML	Activation of the left grinding mill (M3).
	3 : MR	Activation of the right grinding mill (M4).
Coffee	1 : VC	Activates the coffee valve (Y1).
	2 : HC	The relay on the output card and the power relay (K1) for the heating system of the coffee heater (E1) are activated.
Cappuccino	1 : VC	Valve Cappu (Y20) is actuated
	2 : VR	Valve Cappu (Y30) is actuated
	3 : VL	Valve Cappu Air (Y21) is actuated
Temp. display	1 : COFFEE TEMP	Actual temperature displayed; Operation of the key 1: Coffee heater on.
Tea/Steam	1 : VT	Valve tea 1 (Y4) is actuated.
	2 : VS	The steam outlet valve (Y6) is actuated.
	3 : VW	Activation of the steam feed valve (Y5).
	4 : HT	The relay on the output card and the power relay (K2) for the heating system of the tea heater (E2) are activated.
Filling	1 : COFFEE	The pump (M2) and the coffee valves (Y1/Y2) are activated. This enables the system to be filled. 1. Operation of the key 1: The piston is going down to the rinsing position. 2. Operation of the key 1: Filling.
	2 : TEA	The pump (M2), the steam valve (Y6) and the valve tea (Y4) are activated.

Output 2	Key 1:	Y21 = Coffee outlet in front.
	Key 2:	Y22 = Common outlet.
	Relay 1- 7:	Key 1 = Relay 1
		Key 7 = Relay 7
	Relay 8-14:	Key 1 = Relay 8
		Key 7 = Relay 14

2.2 Service

This main group is considered as a help for the service engineer. It consist of the following possibilities:

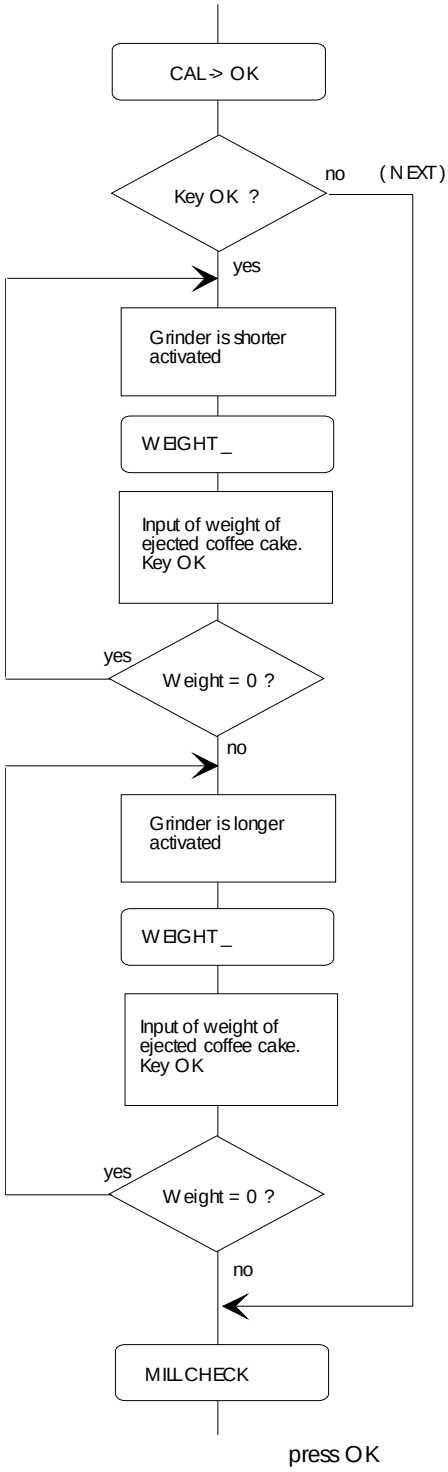
- Date of last service
- Telephone number of service center
- Service check number of piston movements ACTUAL NUMBERS / SETTING
- Error history of the last 20 failures

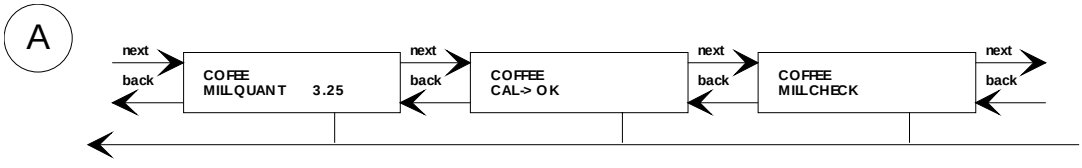


Calibration of grinders

If in the main group "SETUP" under "MILL OPTIONS" the "CL AFTER CHECK" is set on 2, it is necessary to calibrate the grinders prior to the "MILLCHECK".
Each grinder has to be calibrated only once!

Adjust degree of fineness of grind before calibration to +/- 1/2 scale setting. If a considerable adjustment is made repeat calibration.





3. Parameters in Programming Tree

Tree	Parameter	Function	Min	Max	Default-facts from E-prom	Remarks
SERVIC	DATE	Date of last service				
	TELEPHONE	Telephone no. of service station 20 digits	00000.00.00.00	99999.99.99.99		
	SERVICE CHECK	Automatically reminder to the operator to call the service for a check-up	0	30000	0	
	ERROR HISTORY	List of errors with 20 places (ring buffer)				
	CHIPCARD	DOWNLOAD with card Datas on card				
PROGR PARA METER Coffee	PRODUCT	Group of product 0 = empty key 1 = COFFEE			0 to 2	
	NAME	Select name of product out of table with dot key				See Man 3/3
	CUPS	Numbers of cups	1	99	1	
	PRICE	Price unit per cup	0	9999.99	0	
	CYCLES	Numbers of cycles	1	99	1	
	PREINFUSION	Preinfusion 00 = OFF 35 (example) 3 = 3.0 sec. waiting 5 = 0.5 sec. water injection	0	1	0	
	PUMP	Pump on/off for this key 0 = OFF 1 = ON	0	1	1	1 only when free in SETUP
	PRESS	0 = Function off Ground will be pressed 1 = Coffee ground will be pressed first, then piston automatically retracts 2 = Brew coffee Piston stops in cleaning-position 40 - 255 = OFF-set function Piston stops before pressing	0	255	0	
	CAPPU	0 = Without common outlet (in front) 1 = With common outlet steam and coffee at the same time 2 = With common outlet, first coffee, then steam 3 = With common outlet, first steam, then coffee	0	3	0	
	MILK	Proportion milk to froth	0	100	10	
	CAPPU TIME	Actuation time steam valve	0.1	99.9	1	seconds

Tree	Parameter	Function	Min	Max	Default-facts from E-prom	Remarks
PROGR PARA METER Coffee	MILLTIME OR MILL QUANT	Mill time / Mill quantity	0	12 s 18 g	0.1	time (s) weight (g)
	MILLTIME 2 OR MILL QUANT 2	Second milltime or quantity when mixture	0	12 s 18 g	0	time (s) weight (g)
	MILL CHECK	Quantity of Mill check				press OK key
	WATER QUANT	Quantity of water	0	500	10	ml
	WATER CHECK	Quantity of water check with coffee				press OK key
	ENABLE	Clearing price of SEND CODE	0	63	0	only when SEND code
	SEND CODE	Code to be transmitted by SEND CODE	0	99	0 to 12	only when SEND code
PROGR PARA METER Tea	PRODUCT	Group of product 0 = empty key 2 = TEA			0 to 2	
	NAME	Name of product from the table with point-key				
	PORTION	Mode of tea 0 = free flow 1 = dosed	0	1	0 to 1	
	CUPS	Numbers of cups for price	0	99	1	
	PRICE	Price unit per cup	0	9999.99	0	
	WATER QUANT	Quantity of water	0	180	0	sec.
	WATER CHECK	Water quantity check				press ok key
	ENABLE		0	63	0	only when SEND
	SEND CODE	Code to be transmitted by SEND CODE	0	99	0 to 12	only when SEND code
PROGR PARA METER Steam/ Cappu	PRODUCT	Group of product 0 = empty key 3 = STEAM	0	3	0 to 2	
	NAME	Name of product with point-key				
	Price	Price unit	0	9999.9	0	
	Milk permanent	0 = Start-Stop function 1 = Key funciton	0	1	0	
	Cappu	0 = Steam trough steam tube 1 = Steam trough Cappu	0	1	0	
	Time	Time for steam	0	99.9	0	
	MILK		0	100	10	
	Enable	Enable by send code	0	63	0	
	Send code	Sending code by send code	0	99	0	
Rinse key	Cycles	Number of cycles (Rinse)	1	99	1	
	Water	Quantity of water	0	500	100	ml
	Cycles	Number of cycles (Cleaning)	3	9	3	

Tree	Parameter	Function	Min	Max	Default-facts from E-prom	Remark
SETUP	**LANGUAGE**					
	LANGUAGE	Dialogue language 0 = English 1 = German 2 = French 3 = Spanish	0	2	1	
	DEVICE					
	SELF	0 = NORMAL, 1 = SELF	0	1	0	
	LOCK LEVEL	0 = No locking of boilers 1 = Coffee, tea, steam interlocked 2 = Heaters, grinders, pump, piston motor interlocked 3 = Coffee, grinder interlocked	0	3	1	see Install In-struction page 2
	CLIENT (only for machines without Chipcard)	Categorie of client 1 = Access authorization 0 2 = Access authorization 1 3 = Access authorization 2	1	3	1	SERVIC without chipcard
	TRAIN	0 = Normal machine 1 = Train-machine			0	
	CONFIG					
	MILL	Numbers of mills 1 = Mill left side 2 = Mill left side and right side	1	2	2	
	COFFEE	Coffee 0 = Coffee OFF 1 = Coffee ON	0	1	1	
	TEA/STEAM	Tea 0 = No tea 1 = Tea 2 = Steam 3 = Tea/Steam/Cold water 4 = Tea / Steam unlocked	0	4	2	
	PUMP					
	PUMP COFFEE	Coffee 0 = Without pump 1 = With pump	0	1	1	
	PUMP TEA/STEAM	Tea 0 = Without pump 1 = With pump	0	1	1	
	HEATER					
	Heater	Temperature coffee boiler	60	99	86	°C

					Default-facts from	
Tree	**Parameter**	**Function**	**Min**	**Max**	**E-prom**	**Remarks**
SETUP	**MILL OPTIONS**					
	CL AFTER CHECK	Measuring of the coffee quantity 0 = No ejection after check 1 = Ejection after check 2 = Measuring with scald head in g	0	2	1	
	AUTO MILL	0 = without AUTO MILL 1 = with AUTO MILL	0	1	0	
	NUM PARAMS					
	PRESS TIME	Dewatering time after brewing process	0	9.9	1.0	sec.
	ERROR WATER	Minimum water quantity in 10 s	1	99	3	ml
	WATER CREDIT	Credit for water softener	1	9999	6000	
	GROUNDS MAX	Max. numbers of coffee cakes 0 = No monitoring	10	999	100	
	SC HEAD MAX	Increment lowest position of piston BK-init			800	
	SC HEAD MIN	Position of ejection BK-init			200	
	COFFEE OPTIONS					
	CAPPU	0 = Without common outlet 1 = With common outlet	0	1	0	
	COFFEE TIMEOUT	0 = OFF 0 - 255 = After XX seconds, the extraction cycle will be terminated	0	255	0	
	MILL MIX	Mill mix 0 = Without mill mix 1 = With mill mix	0	1	0	
	COVER FREE	0 = Related to buttons 1 = Not related to buttons	0	1	0	
	CLEAN CYCLES	0 = OFF 0 - 9999 = After the desired number, the display will show "PLEASE CLEAN"	0	9999	0	
	BUZZER	0 = OFF 1 = Switch off the machine by key switch. Now, the message "PLEASE CLEAN" will appear on the display if the function before was not cleaning	0	1	0	
	AUTO CLEAN	Automatical cleaning cycle 0 = No function X = Single cycle of rinse after X minutes	0	60	10	
	ADD RINSE 1	0 = Without rinse request 1 = Rinse request after start			0	
	SYSTEM WARM UP	0 = OFF 1 = Piston warm up (after 3 min.) 2 = Only temperature increase 3 = Temperature increase and piston warm-up	0	3	0	
	TEMP PLUS	Input-possibility 1 - 10°C	1	10	1	
	Time Plus	Input-possibility 1-30min	1	30	1	

Tree	Parameter	Function	Min	Max	Default-facts from E-prom	Remarks
SETUP	**OTHER OPTIONS**					
	SOFTENER	Water softener system 0 = Without water softener system 1 = Water softener connected	0	1	0	
	PRINTER	Tape printer 0 = Without printer 1 = With printer LF 2 = With printer CR LF	0	2	0	
	CYCLES INC	Increment of product touch 0 = Increment locked 1 = Increment possible	0	1	1	
	MONEY	Numbers of figures after the command 0 = without 1 = 0,0 2 = 0,00	0	2	2	
	ADD STEAM	0000 = OFF 0410 (example) 04 = Number of seconds of time delay between cappuccino intervals 10 = 1 seconds increase of steam time	OOOO	9999	O41O	
	EXTERNAL DEVICES (not used)					
	WAITER					
	SYSTEM	Waiter accounting system 1 = Coin validator (without Chipcard) 2 = CCI/CSI (without Chipcard) 3 = CCI/CSI + Coin validator (without Chipcard) 4 = KAS + Chipcard 5 = only Chipcard	0	63	0	
	WAITER KEY	Waiter key 0 = No key for internal counter 1-63 = With waiter key	0	63	0	
	KEY X (1 - 10)	Clear key X 0 = Key locked	0	255	0	

4. Additional programming possiblities with the Software G .301

Tree	Parameter	Function	Min	Max	Default-facts from E-prom	Remarks
SETUP	FAST BREWING SYSTEM					
	FAST BREWING SYSTEM	0 = Fast brewing system 0ff 1 = Fast brewing system On	0	1	0	Pregrinding
	GRINDER	1 = Left grinder 2 = Right grinder 3 = Left and right grinder	1	3		
	OTHER OPTIONS					
	WATERTANK	0 = Control of alternate Watertank OFF 1 = Control of Watertank by level switches ON	0	1	0	Reset of Water amount 1 Empty tank of refilling 1 Press Clean key Automatic Water amount counter no more possible if "Watertank" = 1
PROGR PARA METER Coffee	VALVE Y21	0 = Y21 switched off 1 = Y21 switched on	0	1	0	Breakfast
	BREAKFAST	Wateraddition max 80%	0	80	0	
	MILK QUANTITY	in %	0	100	0	CT2-Version 0% = Foam 100% = Milk
	SYSTEM	0 = Fast brewing system off for this key 1 = Fast brewing system with grinder of "set-up/fast brewing system/grinder" 2 = Fast brewing system with grinder referin to key programmation	0	2	0	Pregrinding

5. Concise description of the special options

Grinding and mixing	When this option is selected, the quantity to be ground is requested twice. While coffee production is in progress, the left and right mills are activated for MILL QUANT 1 and 2.
Brewing	The production of brewed coffee is effected in accordance with the following cycle: the brewing piston stops at the topmost brewing position and the ground coffee is not compressed. When the brewing valve is opened the water circulates through the loose ground coffee; the result is a coffee brew.
Increment (Repetition)	The "Manual increment" option provides the following possibilities (for coffee). If the product key is actuated repeatedly during production of the corresponding beverage, these key actuations are memorized and the product repeated accordingly. However, if the key is pressed more than ten times, the machine switches over to continuous operation, i.e. the selected product is repeated continuously (up to a maximumof 99 cups). Pressure on the CLEAN key terminates the cycle after the current cup has been filled.
Self-service	When the machine is programmed for "self-service", operation of the cover on the filler opening triggers a cleaning cycle.