SERVICE MANUAL

Food Preparation

FOR INTERNAL AND PARTNERS USE ONLY

Consumer Service - EMEA
Quality & Continuous Improvement - Technical Support

Induction Appliances

Alarm Management

Induction - Error codes

EN

Publication number
599 7290 – 30

1 PRECAUTION

Information
"Warnings"

All work with open appliances must be done with the mains supply disconnected.

Work on electrical equipment should only be carried out by qualified personnel.

Before working on a device, check the efficiency of the system casing using appropriate equipment. As an example, refer to the indications described / illustrated in the portal Electrolux Learning Gateway (http://electrolux.edvantage.net).

After the work, carry out electrical safety tests and ensure that the all safety devices are working properly.

In the case of manipulation / replacement of the PCB, use the ESD kit (Code 405 50 63-95/4) to prevent electrostatic discharge damage the circuit board see SB No. 599 72 08-09

Document Revisions

Revision	Date	Description	Approved by
0.05	07/2017	• Document new landscape look • Added UI ED6 standards • Moved the POB information to module level SM's	Claus Meider Ulrich Hautle
0.00 - 0.04	11/2015	Revisions eliminated since its more than 5 years	

2 PURPOSE OF THIS MANUAL

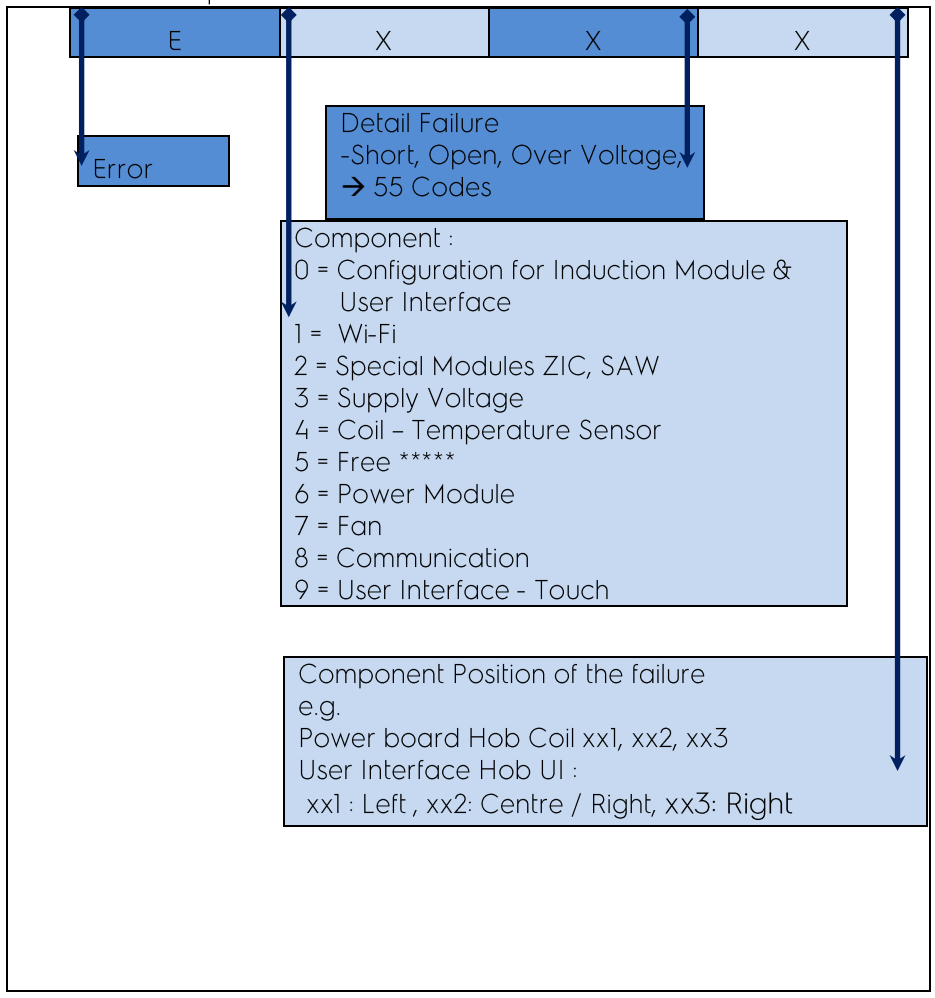
The purpose of this Manual is to provide information of 2-Digit , 3-Digit Error Codes generated by Induction Hob's and Failure tree analysis to perform troubleshooting of Induction Hobs Electronics

3 CONTENTS

4 ALARM MANAGEMENT

Alarm codes defined in families of alarms and current alarms, displayed as

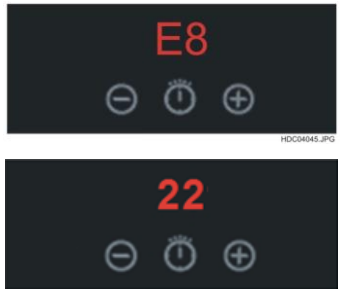
E1 & E5 component level has a change in 3-Digit codes E1 is allocated to Wi-Fi and E5 is open for future use



4.1 3-DIGITS CODES

! Attention: alarms can often only generated during operation, so operate the appliance always for 1 min. with high power!

Example Display:

1) Alarm code displayed for 10 sec. after switch on. The 3 digit code is shown alternating in 2 steps example "E822"	2) 2 zones defect, right induction module. Left two zones are functional
	

Since mid-2017 on most user interfaces the alarm are shown with 3 digits instead only one to allow a better analysis.

4.2 1-DIGITS CODES

Before mid-2017, we have one-digit codes and allocation of errors has no change.

E1: Configuration for User Interface

E5: Communication Timeout of User Interface & Zone Illumination control

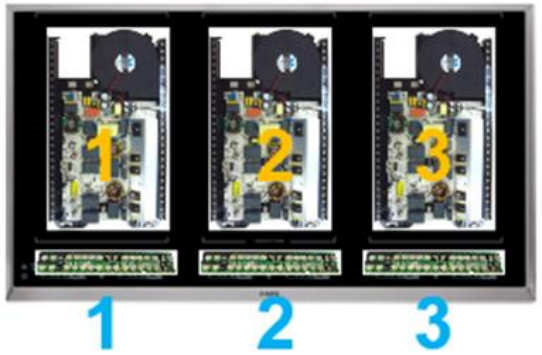
Remaining Errors codes maintain the same component level as 3-Digit Codes

In below table:

- For easy understanding we have 2-Digit and 3-Digit in same table
- For the 3 digit alarm codes the 3rd digit "x" corresponds to the related power board 1-3 or user interface 1-3
  Examples:

  E402– temperature sensor – power board 2 (normally the right)
  E9C1 – user interface 1

4.2.1 E0 & E1/E0XX WRONG CONFIGURATION FOR INDUCTION & USER INTERFACE

Fault Description	"1" Digit alarm	"3" Digit alarm	Possible Root Cause	Troubleshooting	Error Configuration
Alarm display in the User interface.	E0	E01X	Wrong configuration for Induction module	Disconnect the appliance from the mains for 30 sec. 1) If alarm still occurs, reprogram the left user interface 2) If alarm still occurs, replace User interface. 3) If no success replace induction module	
	E1	E02X E03X E04X E05X E08X	Wrong configuration on User interface	Disconnect the appliance from the mains for 30 sec 1) If alarm still occurs replace or reprogram left User interface. 2) If the user interface was replaced and then the alarm occurs, the user interface spare parts is wrong programmed or defect	

4.2.2 E1XX WI-FI

Will be updated during the connected hob development

Fault Description	"1" Digit alarm	"3" Digit alarm	Possible Root Cause	Troubleshooting	Error Configuration

4.2.3 E2/E2XX ZONE ILLUMINATION CONTROL MODULE FAULT

<table>
<tr><th>Fault Description</th><th>"1" Digit alarm</th><th>"3" Digit alarm</th><th>Possible Root Cause</th><th>Troubleshooting</th><th>Error Configuration</th></tr>
<tr><td rowspan="6">Only appliances with Zone Illumination</td><td>E2</td><td></td><td>Zone Illumination Control module has an fault detected on the LED's or 14VDC supply is missing</td><td rowspan="6">1) Check if 14V plug BC1 from left power board1 is connected.

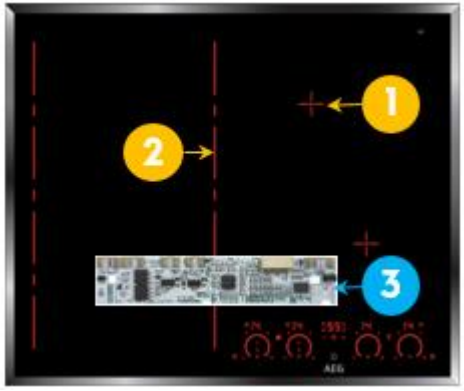
Then also, the backlight of the Raven zone rings are not working in ON state.

2) check the connection of the LED's at the zone illumination control module (XL01- XL04)

3) Check each LED for open/short and the wiring. With a multimeter, you can also test the LED direct.

Normally the LED's are connected supply 14V – front left - rear left – rear right – front right, means the first one not operating is normally the defect.

4) see E5 or "E871" communication to ZIC module

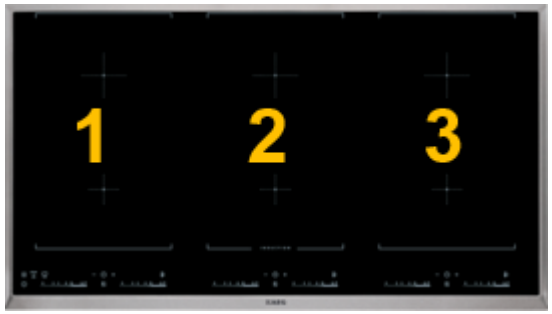
5) exchange the Zone Illumination Control module</td><td rowspan="6"> 

1. LED
2. LED Bar
3. Illumination ZIC module</td></tr>
<tr><td rowspan="5"></td><td>E20X</td><td>AD Converter on illumination electronics is defect</td></tr>
<tr><td>E21X</td><td>14V DC power supply to illumination electronics is missing, wiring connection</td></tr>
<tr><td>E22X</td><td>Led or Led bar open circuit</td></tr>
<tr><td>E23X</td><td>Led or Led bar short circuit</td></tr>
<tr><td>E24X</td><td>General illumination electronics is defect</td></tr>
</table>

4.2.4 E3/E3XX OVER OR UNDER VOLTAGE

Fault Description	"1" Digit alarm	"3" Digit alarm	Possible Root Cause	Troubleshooting	Error Configuration
Alarm display in the User interface.	E3		Over or under voltage	1) Check 230VAC between N and all Phase connectors. See connection label on bottom of appliance. Operate the appliance with pot for 1 min. 2) if supply is okay, then exchange induction module	
		E31x	Overvoltage – 400V also permanent beep will occur		
		E32x	Under voltage < ~ 160V		

4.2.5 E4/E4XX POT SHAPE & COIL TEMPERATURE SENSOR

<table>
<tr><th>Fault Description</th><th>"1" Digit alarm</th><th>"3" Digit alarm</th><th>Possible Root Cause</th><th>Troubleshooting</th><th>Error Configuration</th></tr>
<tr><td rowspan="4">Alarm display in the User interface.</td><td>E4</td><td></td><td></td><td rowspan="3">If all okay
Explain the customer that this is normal; the reason of over temperature is the air gap between pot bottom and the ceramic and therefore the slower reaction time for the sensor.</td><td rowspan="5"> 

E4xx is divided in to left and right side

The sensor failure is show with the "E" in the correct zone.

E411 → display Front left side cooking level "E"

E412 → display Front Right side cooking level "E"

4X elliptic/display will have no split on the single zone</td></tr>
<tr><td rowspan="3"></td><td>E40X</td><td>Failure occurs while heating up empty pan with level "P"</td></tr>
<tr><td>E43X</td><td>Sensor slope:
Pot has a large pan bow which is causing an over temperature at the coil temperature sensor.

The failure disappears after 15 min.</td></tr>
<tr><td>E4</td><td></td><td>Coil Temperature sensor defect or Wrong mounted</td><td rowspan="4">1) Check coil temperature sensor connector at induction module
2) Check the coil sensor; it should be placed in the silicon carrier. See chapter 7.2 – Testing cooking zone NTC probes
3)) Appliances with 3 zones: check if the "Dummy" temperature sensor at the 2nd terminal mounted?
4) Exchange coil with sensor.

5) If no success after all these steps, exchange induction module.</td></tr>
<tr><td rowspan="4"></td><td rowspan="4"></td><td>E40X</td><td>Temperature Sensor short circuit</td></tr>
<tr><td>E41X</td><td>Temperature Sensor Open circuit</td></tr>
<tr><td>E42X</td><td>Temperature Sensor exceeded the tolerances</td></tr>
<tr><td>E48X</td><td>Fault at temperature measurement sensor. Only UI Crystal (Teppan Yaki Thick Film)</td></tr>
</table>

4.2.6 E5 COMMUNICATION ALARM

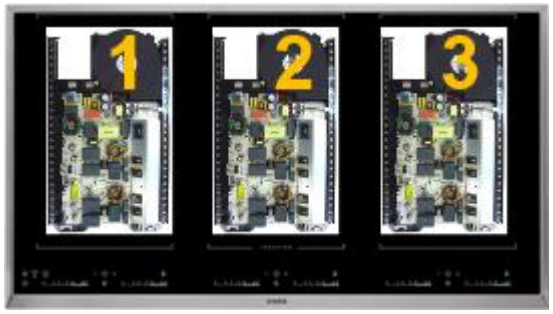
Fault Description	"1" Digit alarm	"3" Digit alarm	Possible Root Cause	Troubleshooting	Error Configuration
Only appliances with several User Interfaces	E5	E855	Communication timeout detected by user interface for other Hob User Interface	HUI communication timeout (for hobs with several hob user interface, the user interface without the main switch to which this alarm belongs will not be able to display this as the communication is interrupted) Disconnect the appliance from the mains for 30 sec. If alarm still occurs 1) Check wiring between all the User interface, re-plug the cable, if necessary exchange. 2) If above without success, exchange User interface. 3) If for Roadrunner or Toucan/Crystal this is without success, the power supply from the induction module is missing. Exchange the related induction module	
		E842	2nd – right interface or centre (if hob has 3 Interfaces)		
		E843	3rd – right user interface for hobs with 3 interfaces		
Only appliances with Cooking Zone illumination	E5	E851	Communication timeout of Zone Illumination Control (ZIC)- the zone indication crosses will not be active	ZIC communication timeout (Raven, CrissXCross, Jackdaws, Cardinal) - the zone indication crosses will not be active 1) Check wiring between the zone illumination control board and the User interface or short circuit in RASt2.5 plug, if necessary exchange. 2) Exchange zone control module.	
		E871			

				3) If above without success, exchange User interface.	
Only cooker with communication to oven user interfaces	E5	E861	Communication timeout oven user interface	1) Check wiring between the zone illumination control board and the User interface or short circuit in RASt2.5 plug, if necessary exchange. 2) Exchange Oven User Interface. 3) If above without success, exchange Hob User interface.	

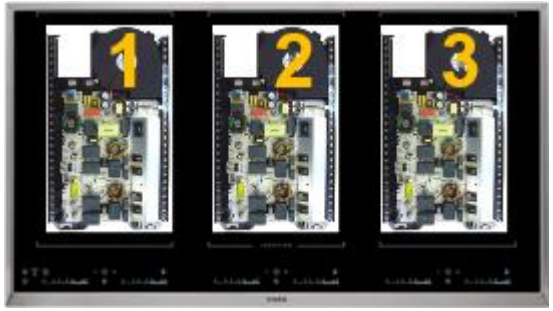
Communication Alarm HUIx or Zone Illumination board, see E842, E843, E851, E861, E871

E5XX is open and will be defined when its assigned

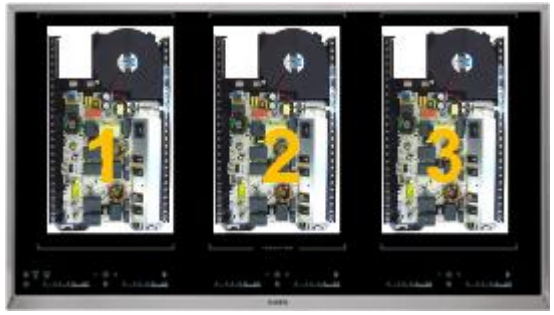
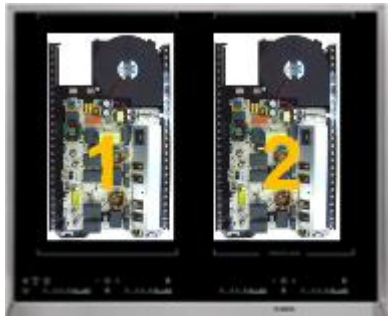
4.2.7 E6/E6XX DEFECT INDUCTION MODULE

Fault Description	"1" Digit alarm	"3" Digit alarm	Possible Root Cause	Troubleshooting	Error Configuration
	E6	E60X	Power supply of 14V DC is out of tolerance	Disconnect the appliance from the mains for 30 sec. If alarm still occurs after 1-2 min operation exchange induction module	
		E61X	IGBT / Heat sink temperature sensor short- or open-circuit		
		E62X	Inconsistency between IGBT current and measured mains current.		
		E64X	Mains relay is glued, cannot switch off		
		E65X	Internal synchronization error between power boards microcontroller		
		E6AX	Inconsistency between A/D measurement of two power board micros of mains current.		

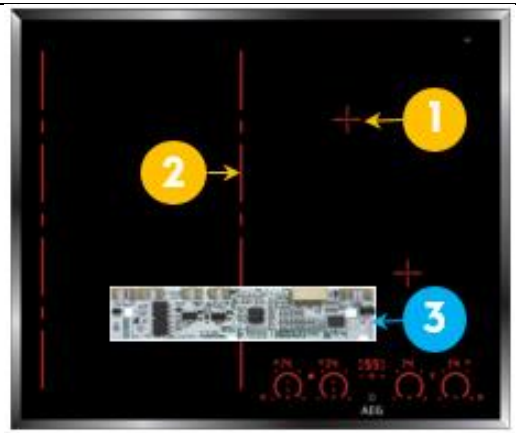
4.2.8 E7/E7XX FAN DEFECT

Fault Description	Display "1" Digit alarm	Display "3" Digit alarm	Possible Root Cause	Troubleshooting	Error Configuration
	E7		Fan Defect	1) Operate 1 zone on high power level for 3 min. Fan should start running. If not, check for blocking of fan and connector at induction module. 2) Exchange fan. Attention: this is not possible on all Induction modules. 3) If this is without success or not possible then replace, Induction module. It can be that the housing of the induction module is bended and the fan is blocked	 E7xx is divided in to left and right side E701 → left side , fan is blocked, opened, defect etc E702 → Center/Rigt side fan is blocked, opened, defect etc E703 → Right side fan is blocked, opened, defect etc
		E70x	Fan Blocked		
			Fan not connected		

4.2.9 E8/E8XX COMMUNICATION: WIRING FROM INDUCTION MODULE TO USER INTERFACE

Fault Description	"1" Digit alarm	"3" Digit alarm	Possible Root Cause	Troubleshooting	Error Configuration
	E8	E81X	For Radiant power board HC1	Check 230V AC between N and all phase connectors to the induction power board HC2. Check the wiring from power board to user interface. Unplug and plug the MACS cable. If the alarm still occurs, reprogram the left user interface via SidekickPC If the alarm still occurs, exchange the user interface. If the alarm still occurs, exchange the right*[1] induction module. If the alarm still occurs, exchange the left*[1] induction power board *	
		E82X	Communication timeout between hob user interface HUI1 and induction power board HC1 or HC2 or HC3		
		E83X	Hob user interface HUI1 detects MACS acknowledgements missing to induction power board HC1		
		E82X E821	Communication timeout between hob user interface HUI1 and induction power board HC1 or HC2		
		E822 E823	Communication timeout between hob user interface HUI1 and induction power board HC1 or HC2		

		E84X	Communication timeout between hob user interface HUI1 and other hob user interfaces HUI2 or HUI3.	Disconnect the appliance from the power supply for 30sec. Check the wiring between zone illumination electronics to user interface. Unplug and plug the cable Check the RAST 2,5 plug at short circuit. If the alarm still occurs, exchange the hob user interface HUI1. If for user interface "Roadrunner" and "Toucan/Crystal" the alarm still occurs, the power supply from the power board is missing. Exchange the related power board	
		E86X	Communication timeout between hob user interface HUI1 and oven user interface OUI .	Check the wiring between zone illumination electronics to user interface. Unplug and plug the cable Check the RAST 2,5 plug at short circuit. If the alarm still occurs, exchange the OUI oven user interface. If the alarm still occurs, exchange the HUI1 hob user interface	 

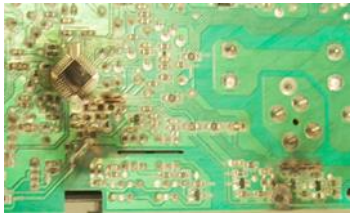
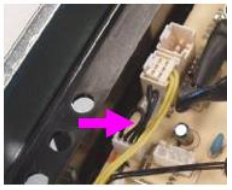
		E85X	Illumination electronics communication timeout. The zone indication crosses will not be active	Check the wiring between the zone illumination electronics to user interface. Unplug and plug the cable. Check the RAST 2,5 plug at short circuit If the alarm still occurs, exchange the illumination electronics. If the alarm still occurs, exchange the user interface.	 1. LED 2. LED Bar 3. Illumination ZIC module
		E87X	Communication timeout between hob user interface HUI1 and illumination electronics		
*[1] Has been considered to have the Jumper (ID-Code BC1-BC5) on left module by default. In the case of opposite placing of the jumper, invert in the sentence right and left.					

4.2.10 E9/E9XX USER INTERFACE TOUCH SYSTEM DEFECT

Fault Description	Display "1" Digit alarm	Display "3" Digit alarm	Possible Root Cause	Troubleshooting	Error Configuration
	E9	E91x	Too low key reference value	Disconnect the appliance from the mains for 30 sec. If alarm still occurs after 1 min operation 1) See Charter 7.3 - User interface with Slider – installation tips + key operation 2) Check Wiring 3) Exchange User interface.	
		E92x	Too low key reference signal. (~ ¼ of normal value for Atmel processor)		
		E93x	Too high key reference value		
		E94x	Too high key reference signal		
		E96x	Communication with external key module		
		E97x			
		E98x			
		E99x			
		E9Ax			
		E9bx			
		E9Cx			
		E9Fx			
Only appliances with rotary switch (CrissXcross, CrissCrossEd6,Redbreast)		E951	Rotary switch system defect	1) Check wiring diagram for rotary switches. Eventually exchange defect rotary switches (Potentiometer). 2) If no use then exchange User interface.	

5 FAILURE TREE ANALYSIS

5.1 APPLIANCE WITHOUT ANY FUNCTION, NOT POSSIBLE TO SWITCH ON

Fault Description	Display	QES Error Code	Possible Root Cause	Troubleshooting
Fuse or RCD interrupted mains.	Dark		Wrong connection at mains terminal	Check cables connection and supply voltage according with label on the bottom of appliances
	Dark maybe the left fan is permanently running but UI is dark	604	Internal bus wiring jammed and caused short circuit	Remove left induction board form the housing and look on the backside; damaged area is black >> replace ALL induction modules and the UI 
Cook top is not switching ON. No short flash of the display shortly after the application of voltage (as would normally happen).	Dark	851	Electronic is not reaction any longer.	Disconnect the appliance from the mains for 30 sec.
			No power supply or Wrong connection at mains terminal or at the house installation	1) Check 230V according to label on bottom of appliance 2) appliances with rotary switch (Crisscross): check connector at the oven. Plug has to be snap in at both sides!
		851	No power supply for the user interface (only module with jumper). Induction module left defect. 	Swap Jumper from left to the right Power board; if the UI is now starting the left board is broken
				1) Check the 230V at the Supply box 2) Check the outer Pin 1+3 5VDC of the openings at the bottom side of the induction module of the hob (these pins correspond to the bus wiring to the user interface). ! Attention: live potential 230V.

				 Additional information: alternative pins 1 + 3 (more accessibile for the multimeter test leads) for 5VDC supplied on both induction power boards  BOARD WITHOUT JUMPER (usually right board): 5VDC OK → Macs cable correct; No 5VDC → Macs cable bad connection/defect or Board with jumper defect; BOARD WITH JUMPER (usually left board): 5VDC OK → UI correctly supplied; No 5VDC → Board with jumper defect; BOTH BOARDS LEFT AND RIGHT 5VDC OK → Macs cable between board and UI bad connection/defect or UI defect;
		604	Connector of wiring to user interface not correctly plugged.	Check wiring between both Induction modules and the User interface.
		855	User interface defect.	How to check UI >> see Chapter 5.1.9 If above measures without success, exchange User interface.
User interface remains dark/blank/blinking			check 230VAC on power box (mains terminal block)	If something wrong or broken fix it
			check 5VDC on module	No 5VDC => Replace left module*1
			check the cable between module and user interface	If something wrong or broken fix it
			If SideKick available: Check UI with Sidekick 5V	

			If Sidekick not available: Move temporarily the Jumper (BC1-BC5) from the left module* to the right module	UI works => Replace left module*[1]	Display off => Replace UI
*[1] Has been considered to have the Jumper (ID-Code BC1-BC5) on left module by default. In the case of opposite placing of the jumper, invert in the sentence right and left.					

5.2 INDUCTION COOKING ZONE IS NOT RUNNING (PERMANENTLY OR PART TIME) OR WITH LOW POWER OR ARE NOT OPERABLE

Fault Description	Display	QES Error Code	Possible Root Cause	Troubleshooting
Pot is not getting hot.	Normal cooking level		The magnetic properties of the pot are not good enough to allow a start of the generator	Exchange pot or try this pot on a smaller cooking zone. See SM " 599 XXXX XX" - Hints for Pots (pot detection system).
	Flashing „F" or „? "	632	Pot not detected	See SM " 599 XXXX XX" - Hints for Pots (pot detection system).
			Coil not connected correct to induction module	Coil is not connected: can happens after repair; check connection of coil once more
			Distance between coil and ceramic glass too large	Check all coils for correct position and that all are pressed correct to the ceramic.
	Flashing „F"	632	Defect Induction module , the circuit for pot detection is defect	A pot which is working on other zone and not working on the zone with "F" is a clear indication for the broken induction board
No Power on all zones	Normal cooking level		Demo Mode Activated	See Chapter 9 - User interface - Demo mode – Alarm history

Single keys are not operable		855	User interface not correct pressed to ceramic or defect.	1) See Charter 7.3 - User interface with Slider – installation tips + key operation 2) If these hints do not help, exchange User interface.
Too low power or only short term	Normal cooking level		Wrong build in situation. No ventilation in the front (air gap between work top and furniture)	Correct build in situation, see user manual.
			Fan is running on high speed	Too less cold air, open a hole in the cabinet (rear side)
			Distance between coil and ceramic glass too large	Check all coils for correct position and that all pressed correct to the ceramic.
			Unsuitable pots	See SM " 599 XXXX XX" - Hints for Pots (pot detection system).
Permanent "H" in the display; or Permanent "_" in the display		856	The hob is cold but the Residual heat indication is not working correctly	1)The Coil NTC is defective, exchange the sensor If Not success 2) Fault on Induction module
Appliances with rotary switch (Crisscross): Zone not corresponding to display or cooking levels jumping wild. Single cooking level not selectable	Bad operation, contact lost partly	855	Rotary switch wrongly connected or defect.	1) See wiring diagram for potentiometers Check also for short circuits 2) Exchange defect rotary switch. 3) if above without success, exchange User interface
			Rotary switch uptight mounted or defect.	1) Reassemble Rotary switch. Turn on screws not with excessive torque. 2) If above without success, exchange rotary switch. 3) If rotary turns heavily exchange also energy controller.
			Connection between hob and oven	Check the pins inside of the both plugs
	"-" in the display		Short interruptions (see lines bevor are interpreted from the Software and hob will be stopped temporally)	Switch off and on – the hob will restart; but the damaged part should be found and exchanged
User interface displays correctly, but hob not heating			Test conditions : • Induction hob switched ON • Power can be selected on the user interface (from 1 to P) • Placed a suitable cookware and select a power request on the zone/s not heating	• Replace the board related to zone/s not heating • If problem not solved replace UI

User interface displays correctly, but the heating performance is poor			Check the characteristics of the used cookware	See SM " 599 XXXX XX" - Hints for Pots (pot detection system).
The appliance works correctly, but the house Residual Current Circuit Breaker (RCD) opens from time to time				Install the service kit (405 51 75-86 / 5) to reduce the leakage current. (See TDS Service Bulletin 599752151 TRIPPING OF RESIDUAL CURRENT CIRCUIT BREAKER)

5.3 OTHER SYMPTOMS OF USER INTERFACE FAILURE

Fault Description	Display	QES Error Code	Possible Root Cause	Troubleshooting
Buzzer defect		855	User Interface defect	Replace User interface
			Buzzer deactivated	See user manual, in some UIs the buzzer can be deactivated by the customer
Single segments of the display are defect			User Interface defect	Replace User interface
Some of the segments on Raven user interface seems to be defect	Backlight on zone level rings not working if switched ON		Supply of 14VDC missing or defect	1) Check wiring between the left induction module BC01 (14VDC), optional the zone illumination control board and the User interface or short circuit in RASt2.5 plug, if necessary exchange. 2) If above without success, exchange User interface.

6 INDUCTION MODULE CHECK

6.1 OPERATING VOLTAGE & INSTALLATION

The induction board is specified 200V/240V but it is working until ~ 180V

The net situation can have impact on the performance.

Zones with High Boost power can have a significant power reduction (see table).

Zone	Pot	Power @230V	Power in W @210V		Power in W @240V	
210plus, P	210mm, Steanless steel	3500	2850	-19%	3600	3%
210plus, P	210mm, Silargan	3300	2700	-18%	3450	5%
210plus, L14	210mm, Steanless steel	2300	2200	-4%	2300	0%
210plus, L15	210mm, Silargan	2300	2200	-4%	2300	0%
180	180mm, Steanless steel	2800	2450	-13%	2850	2%
140	145mm, Steanless steel	2400	2300	-4%	2450	2%

6.2 TESTING POWER BOARD ELECTRONIC SWITCHES (IGBT)

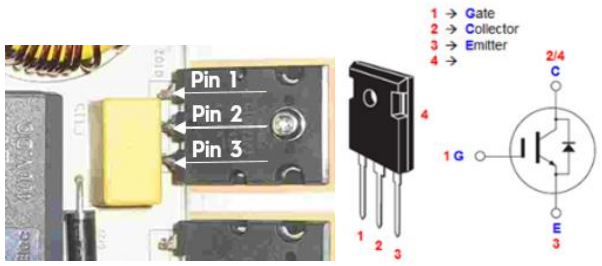
The IGBT is protected by Software and hardware circuit to avoid too high current and too high temperature protects the IGBT. High current can be created with strange pot materials (too less effective current in the coil). Too high temperature is possible if the cooling is not sufficient enough (fresh air…).

IGBT cannot be repaired; you can verify the resistance of the IGBT's between:

How check IGBT: measure between Pin1-Pin2 or Pin2-Pin3:

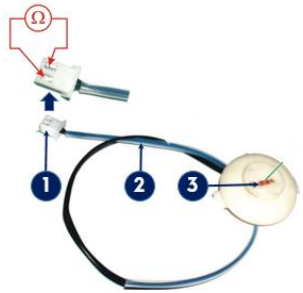
High impedance (kOhm…MOhm) > Okay

Low impedance (<50 Ohm) > defect



6.3 TESTING COOKING ZONE NTC PROBES

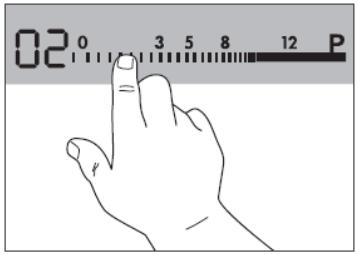
In the event of doubts regarding NTC probe operation, the Ohm value of the NTC probe can be measured. The correct value is approximately 100 K Ohm at room temperature (approximately 25°C).



1. NTC Probe connector
2. Connection Cable
3. NTC Probe

6.4 USER INTERFACE WITH SLIDER INSTALLATION TIPS + KEY OPERATION

- Direct access of the cooking levels
  If the customer has, difficulties directly hitting a cooking level recommend him to:
  - Touch the level; Check the display.
  - Correct the level if necessary by shifting (without lifting) the finger left or right.



Problems besides the above tips:

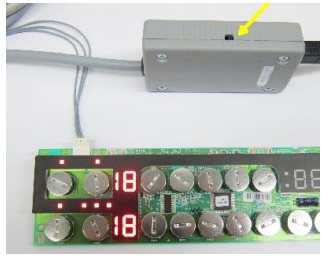
18°	~ 140 k ohm
25°	~ 100 k ohm
30°	~ 80 k ohm

- Check build in position of the user interface and correct if necessary.
- The LED should be central above the main switch.
- If some keys or cooking levels are difficult to operate or unstable.
  - Disconnect the appliance from the mains for 30 sec. and try again.
  - If the problem exists, probably the user interface is either pressed too less or not equal to the ceramic glass
    - Check if there is a cable between user interface and carrier
    - Check if the carrier of the user interface is correct positioned and all spring elements present
    - In addition, the coils have to be correctly assembled, so that the distance between the support plate and the ceramic is not increased. Otherwise:
    - Appliances with carrier; exchange
    - Appliances with silicon element; put underneath the silicon element in the area of the keys that are unstable to operate e.g. a metal sheet with a thickness of 1-1.5mm.

6.5 HOB IS DARK – HOW TO CHECK USERINTERFACE

The UI is dark: missing 5V for the Userinterface, or defect UI

- Check the cables: the UI is supported on the PIN 1 & 3; the other port is inverted
- How to check Check Userinterface
  use AMI gateway from Sidekick (Switch in the indicated position)
- During startup you can you can see the end number of the config in the timer display
- After approximatly 10…15 sec a E9 will appear; this is due to missing glas

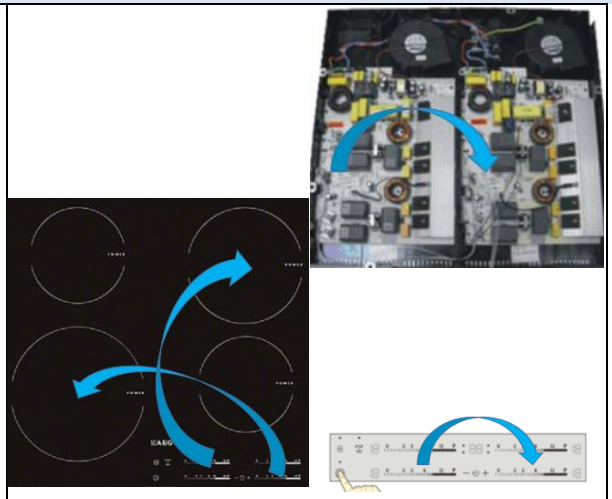
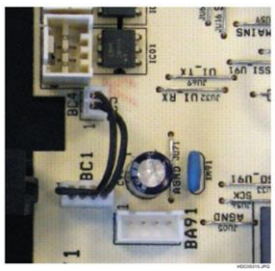


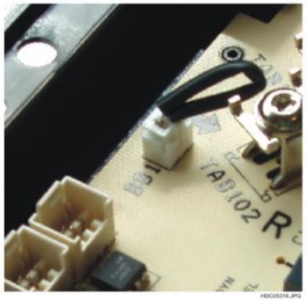
6.6 JUMPER AND DUMMY NTC - VALID FOR "TIGER" AND "CHEETAH"

<table>
<tr>
<td>Jumper
(387484500)</td>
<td>
The Macs-Bus communication requires a clear identification of all components; only one board is allowed to generate the supply voltage for the interface.
➢ Jumpers on both power boards: both boards and the user interface will be destroyed immediately after plug-in.

UI dark, fast verification with jumper:

In the case of UI off (remain dark) it's possible to move the jumper from left board to right board. If, in this way, the UI works the left board have to be replace, instead if the UI remain dark probably the issue is on the UI or on cables., pay ATTENTION as the left and right controls are inverted ! After the checking restore the original jumper position
! Disconnect the appliance before you do this

➢ Service mistake If there is no jumper you have no power on the user interface (dark); unplug the hob and plug the jumper.
➢ To meet this requirements a jumper is placed normally on the left power board ; some exceptions see wiring diagram - follow the assembled hob.
➢ The right side is normally labelled with red/pink labels.
Exception: Roadrunner hobs, there each User interface is supplied by 1 board and the communication bus is separated via Optocoupler
</td>
<td>



</td>
</tr>
<tr>
<td>"Dummy" NTC
(387540300)</td>
<td>
Due to the security requirements all sensor must be plugged. In all 3 zone versions, the not used connector has to be plugged with a dummy NTC. The part is a 100kOhm Resistor.
➢ This hobs are equipped with Dummy NTC:
▪ 3 zone Tiger all versions
▪ Cheetah 3 zone Panorama
▪ Cheetah 5 zone
▪ PC-TFT 3 zone
➢ If NTC is not plugged or damaged you will get E4xx, the same message as damaged temperature sensors.
</td>
<td>

</td>
</tr>
</table>

7 USER INTERFACE - ALARM HISTORY & EXTENDED SERVICE FUNCTION (FROM END 2017)

On some User interfaces, the alarm history menu moved inside the customer menu and extended functionality for most user interfaces, in the service menu from mid of 2017 on.

Table refers to index number to achieve the functionality

7.1 ALARM HISTORY & EXTENDED SELF TEST FUNCTIONS

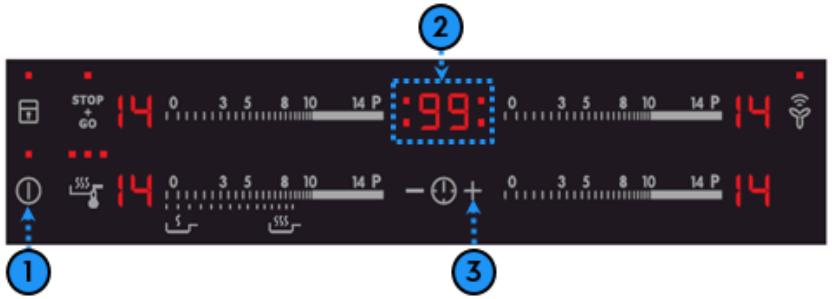
Depending on the user interface, the access to the menu functions can be slightly different, see the next pages

7.1.1 DEMO MODE

Demo mode activated after activation of the menu (see next pages):

- Activate the menu mode. On the display appears **"d"** (2)
- Touch the **"Plus"**-key (3) to switches on and off the demo mode.
- Display **"d "** (2) = demo mode no activate
- Display **"do"** (2) = demo mode activate
- The demo mode is activated, if the cooking zone on (without pot) and no error **"F"**(3) appear on the display.

! When the appliance switched off or disconnected from the power supply, the demo mode will still be active, when you switch on the appliance.



Function	Glass Gaphics	Number
On\Off		1
Display		2
Plus		3
Minus		4
Timer		5
H2H		6
Child Lock		7
Stop + Go		8
Wi-Fi		9
Chef Assist		10
Bridge		11
Multi Zone		12
Oval Zone		13
Power		14
Power Level		15
Decreasing		16
Increasing		17
Boost		18
Auto boiling		19
Fry Assist		20
Zone Display		21

7.1.2 SERVICE MODE – EXTENDED FUNCTIONS

Example UI : KiteC

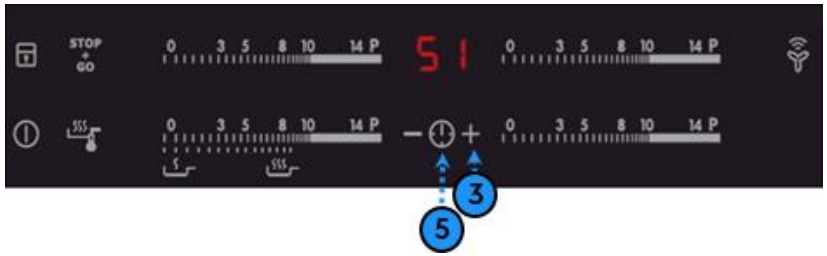
Service mode activated after activation of menu (Check the Menu access steps for each UI; in next pages)

7.1.3 S1 MENU - SHOW ALL THE SOFTWARE VERSIONS: *2

Service mode S1 activation:

Activate the menu mode. On the display appears „d".

Touch the „Timer"-key (5) once, "S1" appears on the display. Touch the "Plus"-key (3) to activate the service mode S1.



Steps	Display
All displays and LED's lights up	
For 3sec. Software of the user interface or user interfaces HUIx appears	
For 3sec. Software of the power modules HC1 and HC2 appears ! King Tiger has one processor only	
Service mode **S1** appears	

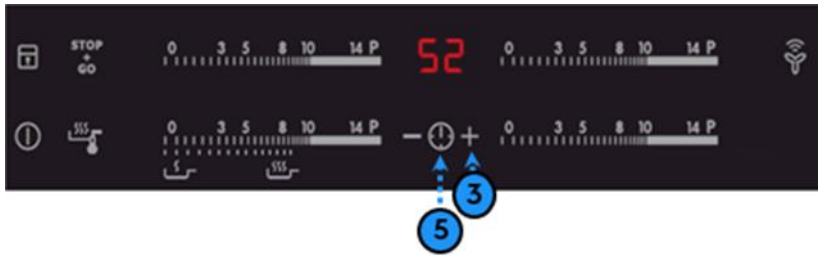
7.1.4 S2 MENU – SELF DIAGNOSTIC INDUCTION IN OFF STATE- NO POTS ON THE HOB: *2

Service mode S2 activation:

Activate the menu mode. On the display appears „d".

Touch the „Timer"-key (5) twice, "S2" appears on the display. Touch the "Plus"-key (3) to activate the service mode S2.

*2Function available only for KingTiger and KingCheetah induction module



<table>
<tr><th>Steps</th><th colspan="2">Display</th></tr>
<tr><td>Self-test starts with generator OFF (3sec.).
Power board should be in Standby mode. User interface send commands to all power boards HCx.
Check the configuration, 400V circuit, 15V circuit and
relay glued.</td><td colspan="2">  </td></tr>
<tr><td rowspan="2">For 5sec. Show result of test</td><td>Good result of the HC, Hob correctly connected</td><td>Failed result of the HC, Hob connected to 400V</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>Service mode S2 appears</td><td colspan="2">  </td></tr>
</table>

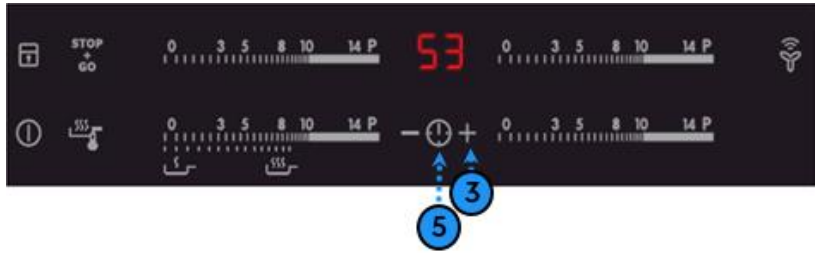
7.1.5 S3 MENU - SELF DIAGNOSTIC INDUCTION IN ON STATE- POTS ON ALL ZONES OF THE HOB: *2

Service mode S3 activation:

Activate the menu mode. On the display appears „d".

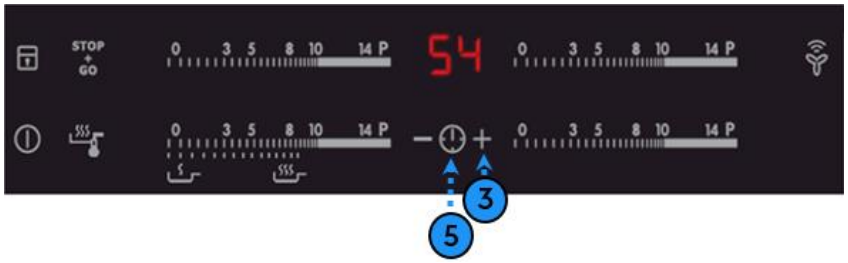
Touch the „Timer"-key (5) thrice, "S3" appears on the display. Touch the "Plus"-key (3) to activate the service mode S3.

*2Function available only for KingTiger and KingCheetah induction module



Steps	Display	
Place a pot on all the cooking zones		
Self-test starts with generator **ON** (6sec.). All cooking zones are supplied by 500W and user interface sends a test command to the power boards. Ventilator check of blocking and open (4,2sec.).		
For 6sec. Show result of test	Good result 	Failed result on the left cooking side  ➢ No load or pot on one cooking zone. ➢ Cooking zone defect. ➢ Temperature sensor disconnected. ➢ Ventilator disconnected.
Service mode **S3** appears		

7.1.6 S4 MENU - POT POWER & SUPPLY VOLTAGE CHECK: *2



Service mode S4 activation:

Activate the menu mode. On the display appears „d".
Touch the „Timer"-key (5) four times, "S4" appears on the display. Touch the "Plus"-key (3) to activate the service mode S4.

<table>
<tr><th>Steps</th><th>Display</th></tr>
<tr><td>Test the quality and power function of consumer pots on the different cooking zones</td><td></td></tr>
<tr><td>Starts to search the pot. The first detected pot is take for the test. (10sec.). Starts the searching in clockwise on the left front cooking zone.</td><td>  </td></tr>
<tr><td>Measured voltage on the electronics. (6sec.). Appears for twice</td><td>  </td></tr>
<tr><td>Cooking zone is supplied with nominal power and send the value to the user interface (6sec.).</td><td>  </td></tr>
<tr><td>Appears for 10sec. the maximum available power supply for the pot of consumer

Attention:
Influence of temperature at IGBT and supply of power to the coils:
From the IGBT temperature of 80°C, the supply of power to the coil will regulated down.</td><td> 
<table>
<tr><th rowspan="7">Not acceptable</th><th>Display</th><th>Power of the pot</th><th rowspan="7">Acceptable</th><th>Display</th><th>Power of the pot</th></tr>
<tr><td>P1</td><td>10 - 19%</td><td>P7</td><td>70 - 79%</td></tr>
<tr><td>P2</td><td>20 - 29%</td><td>P8</td><td>80 - 89%</td></tr>
<tr><td>P3</td><td>30 - 39%</td><td>P9</td><td>90 - 99%</td></tr>
<tr><td>P4</td><td>40 - 49%</td><td></td><td></td></tr>
<tr><td>P5</td><td>50 - 59%</td><td></td><td></td></tr>
<tr><td>P6</td><td>60 - 69%</td><td></td><td></td></tr>
</table></td></tr>
<tr><td>Displays the voltage of the related HC during power phase (6sec.) in step 4. (Normally 10V less against as in step 3). Appears for twice.</td><td>  </td></tr>
<tr><td>Service mode S4 appears</td><td>  </td></tr>
</table>

*2Function available only for KingTiger and KingCheetah induction module

7.2 MENU ACCESS – KITE C / PELICAN

The 3 digit alarm, extended self-diagnostic and the alarm history inside customer menu is valid for UI KiteC with Firmware >37, Pelican > 39

7.2.1 MENU CUSTOMER – ALARM HISTORY

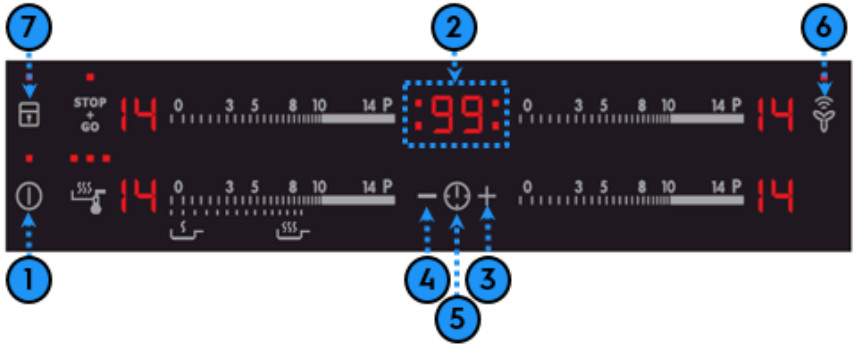
The induction hob is started in Off-state.

- Touch the "**On/Off**"-key (1) for 3sec...
- The display is switched on and off. (Buzzer sounds)
- Touch the "**Child safety**"-key (7) for 3sec. On the display appears **"b0"or "b1"**(2) for the buzzer sound (if this hob has this function)
- Touch the "**Timer**"-key (5). On the display appears the automatic mode hob level **"H5"** (3) (if this hob has this function)
- Touch the "**Timer**"-key (6). On the display appears the automatic mode hob level **"E "** (2)
- Touch the "**Plus**"-key (3) to start the alarm history.
  The newest occurred alarm is shown first. See chapter 6 – Alarm Display "E" for the details.

7.2.2 MENU SERVICE MODE ACTIVATION:

- Touch for approx. 3sec the **"On/Off"**–key (1). The display switches on and then off.
- The buzzer sounds twice.
- Afterwards, touch for approx. 3sec. on the left user interface the **"H²H"** -key (6).
  The glass can have also a different key function or no key at this position. "**d** "appears on the display (2).
- Touch the **"Timer"**-key (5) one more time. **"S1"** appears on the display (2).
  Touch the **"Plus"**-key (3) to start the service mode S1.

KiteC 4 Zone



Pelican 5 Zone

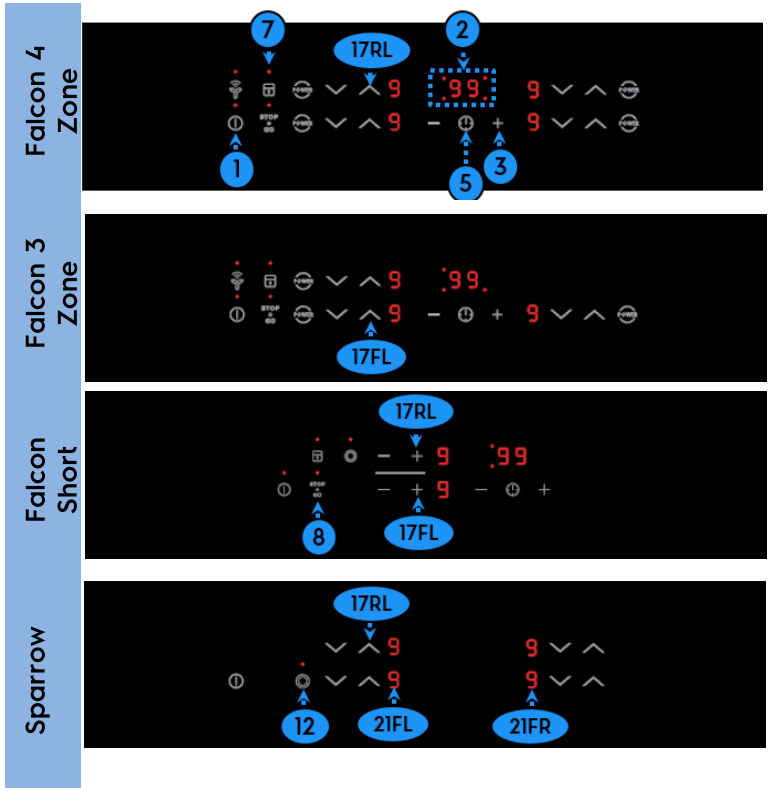
- Touch the **"Timer"**-key (5) one time. **"S2"** appears on the display (2)
  Touch the **"Plus"**-key (3) to start the service mode S2.
- Touch the **"Timer"**-key (5) one time. **"S3"** appears on the display (2)
  Touch the **"Plus"**-key (3) to start the service mode S3.
- Touch the **"Timer"**-key (5) one time. **"S4"** appears on the display (2)
  Touch the **"Plus"**-key (3) to start the service mode S4.
- The menu mode after 20sec. automatically deactivates, if no keys are touched.

7.3 MENU ACCESS-FALCON ED6, FALCON ED6 SHORT, FALCON VERTICAL, SPARROW

7.3.1 MENU CUSTOMER – ALARM HISTORY

The induction hob is started in Off-state.

- Touch the "**On/Off**"-key (1) for 3sec...
- The display will switch on and off. (Buzzer sounds)
- Touch the "**Child safety**"-key (7) for 3sec.
  FalconEd6 short: touch "**Stop+Go**" 8 (Ikea).
  Sparrow: touch "**Two Zone**" 12
  On the timer display appears **"b0"or "b1"**(2) for the buzzer sound (if this hob has this function)
  For the Sparrow variant the displays (21FL , 21 FR)*3 of front cooking zones are used (timer not mounted)
- Touch the "**Timer**"-key (5). On the display appears the automatic mode hob level **"H5"** (2) (if this hob has this function).
  FalconEd6 Short, Sparrow variant: touch **"+ rear left"** (17RL)*3
- Touch the "**Timer**"-key (5). On the display appears the automatic mode hob level **"E "** (2)
- Touch the "**Plus**"-key (3) to start the alarm history.
  For Sparrow, Falcon Short, Falcon Vertical variants touch **"+ front left"** (17FL)
- The newest occurred alarm is shown first. See chapter 6 – Alarm Display "E" for the details.



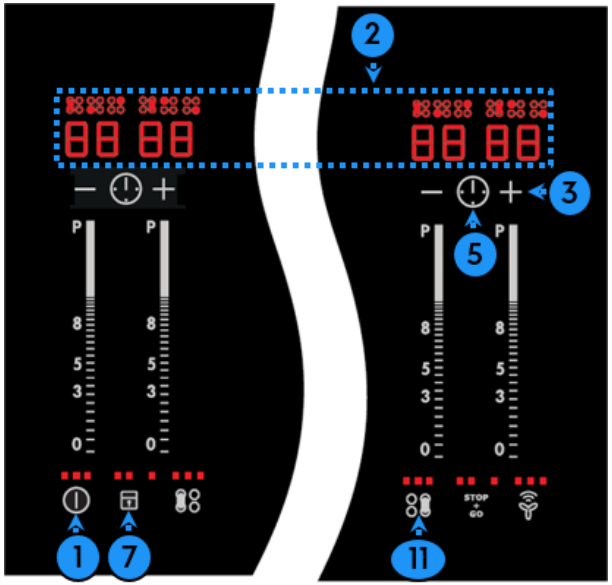
7.3.2 MENU SERVICE MODE ACTIVATION:

- Touch for approx. 3sec the **"On/Off"**–key (1). The display switches on and then off.
- The buzzer sounds twice.
- Afterwards, touch for approx. 3sec. the **"+ rear left"** (17RL)*3
  The glass can have also a different key function or no key at this position. "**d** "appears on the display (2).
- Touch the **"Timer"**-key (5) one more time. **"S1"** appears on the display.
  FalconEd6 Short, Sparrow: touch "+ rear left" (17RL).
  Touch the **"Plus"**-key (3) to start the service mode S1.
  For FalconEd6 Short, Vertical & Sparrow press "+ front left" (17FL) instead.
- Follow same process to achieve S2, S3, S4.....

*3*FL: Front Left, FR: Front Right, RL: Rear Left, RR: Rear Right*

7.4 MENU ACCESS-BUDGIES

The difference between Kitec/ Pelican and Budgies is the usage of Bridge-key instead on left User interface as 2nd step to activate the Service Menu mode
The 3 digit alarm , extended self-diagnostic and the alarm history inside customer menu is valid with SW22 or SW>=24



7.4.1 MENU CUSTOMER – ALARM HISTORY

The induction hob is started in Off-state.

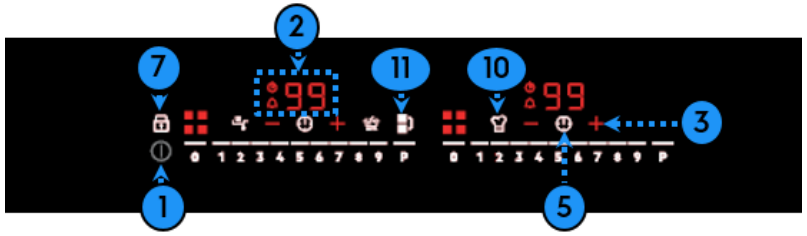
- Touch the "**On/Off**"-key (1) for 3sec...
- The display is switched on and off. (Buzzer sounds)
- Touch the "**Child safety**"-key (7) for 3sec. On the display appears **"b0"or "b1"**(2) for the buzzer sound (if this hob has this function)
- Touch the "**Timer**"-key (5). On the display appears the automatic mode hob level **"H5"** (2) (if this hob has this function)
- Touch the "**Timer**"-key (6). On the display appears the automatic mode hob level **"E "** (3)
- Touch the "**Plus**"-key (5) to start the alarm history.
  The newest occurred alarm is shown first. See chapter 6 – Alarm Display "E" for the details.

7.4.2 MENU SERVICE MODE ACTIVATION:

- Touch for approx. 3sec the **"On/Off"**–key (1). The display switches on and then off.
- The buzzer sounds twice.
- Afterwards, touch for approx. 3sec. on the left user interface the **"Bridge"** –key (11) right bottom.
  The glass can have also a different key function or no key at this position.
  "**d "**appears on the display (2).

7.5 MENU ACCESS-ROADRUNNER HOR & VERTICAL

The difference between Kitec/ Pelican and Roadrunner is a different key on left User interface as 2nd step to activate the Service Menu mode



7.5.1 MENU CUSTOMER – ALARM HISTORY

The induction hob is started in Off-state.

- Touch the "**On/Off**"-key (1) for 3sec...
- The display is switched on and off. (Buzzer sounds)
- Touch the "**Child safety**"-key (7) for 3sec. On the display appears **"b0"or "b1"**(2) for the buzzer sound (if this hob has this function)
- Touch the "**Timer**"-key (5). On the display appears the automatic mode hob level **"H5"** (2) (if this hob has this function)
- Touch the "**Timer**"-key (5). On the display appears the automatic mode hob level **"E "** (2)
- Touch the "**Plus**"-key (3) to start the alarm history.
  The newest occurred alarm is shown first. See chapter 6 – Alarm Display "E" for the details.
  Menu mode deactivation: The menu mode is after 10sec. automatically deactivated, if no any keys touched

7.5.2 MENU SERVICE MODE ACTIVATION:

- Touch for approx. 3sec the **"On/Off"**-key (1). The display switches on and then off.
- The buzzer sounds twice.
- Afterwards, touch for approx. 3sec. on the left user interface the **"PowerSlide/ProCook/Chef"** -key right on left user interface for Roadrunner horizontal (10). For Roadrunner vertical, this is the "**bridge /Coil Group"** -key (11)
  The glass can have also a different key function or no key at this position.
  "**d "**appears on the display (2). The menu is activated

Touch the „Timer"-key to choose the menus „Demo mode, Service mode S1 – S4".

Menu mode deactivation: The menu mode is after 10sec. automatically deactivated, if no any keys touched

7.6 MENU ACCESS-CRISSXCROSSED6, REDBREAST USER INTERFACES WITH ROTARY

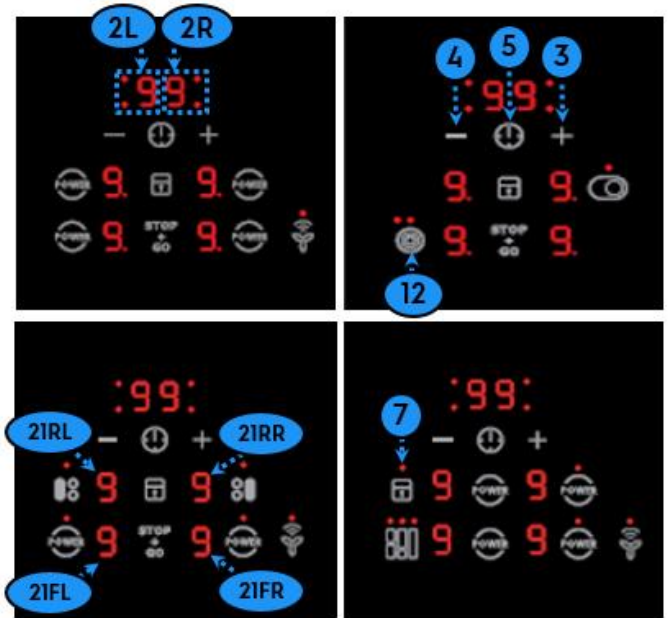
- CrissXCross and Redbreast have no On/Off –Key. They use rotaries to power On/Off.
- Customer menu can manage beep off (Off sound control), Hob2Hood, Alarms. Can choose if needs beeps or do level change.
- Readbreast alarm history is stored in service menu and it has no customer menu, so no beep off option

7.6.1 MENU CUSTOMER – ALARM HISTORY

The induction hob is started in Off-state.

- Touch the "**Timer**"-key (5) for 3sec… ; The display remains off (it does not go on) (Buzzer sounds)
- Touch the "**Child Lock**"-key (7) for 3sec ; 2nd beep when Key detected and 3rd beep … (Buzzer sounds)
- After 3 seconds : Touch "**Timer**"-key (5) to toggle through menu
  - Beep Mode :
    - Left time displays (2L) shows "b" for beep mode on
    - Activate menu : Touch "Timer +" –key (3) to switch on or off the beep
    - Right timer display (2R) shows "0" : Beep on , shows "1" : Beep Off
    - Set back to normal : Touch "Timer +" –key (3) for deactivation (toggles between "0" and "1" , default value is "0")
    - If no change for 10 sec , take over settings and switch off
  - Alarm/Error mode :
    - Left time displays (2L) shows "E" for error mode on
    - Activate menu : Touch "Timer +" –key (3) to switch Alarm/Error mode
    - The last 5 stored alarm codes are displayed

4 different variants



  - Hob2Hood Mode:
    - Left time displays (2L) shows "H" for hob2hood communication mode
    - Activate menu : Touch "Timer +" –key (3) to toggle between different levels
    - Right timer display (2R) shows different modes of fan speeds 0 to 6
    - Modes : 0 : no automatic function , 1: Light , 2: light + fan speed 1 , 3: IR connection, 4: light + fan speed 1, 5: light + fan speed 2, 6: light + fan speed 3
    - Touch "Timer – "-key to decrease the modes
    - Power failure will keep the settings unchanged

7.6.2 MENU SERVICE MODE ACTIVATION: CRISSXCROSS

Hob is off and no timer active

- Touch the "**Timer**"-key (5) for 3sec… , within 5 seconds touch "Multi zone" – Key(12) for 3 sec….
- The buzzer sounds twice. ; Enters the Menu mode
- After 3 seconds ; Touch the "**Timer**"-key (5) to toggle between Demo and Service mode

  Demo Mode
  - left timer display (2L) shows "d" for demo Mode
  - Right timer display (2R) shows " " for not active demo mode
  - Press "Timer +" –key (3), Right timer display (2R) shows "o" for active demo mode
  - Press "Timer +" –key (3) again for deactivation of demo mode

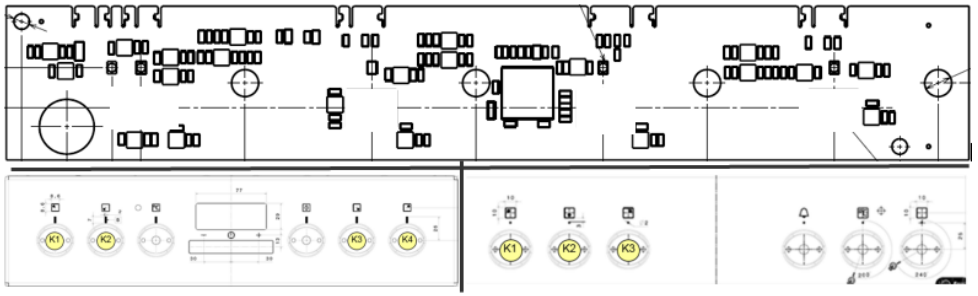
Service Mode

- Touch the "**Timer**"-key (5) ; left timer (2L) shows "S" for service Mode
- 1st step : displays all LEDs for 5 sec
- 2nd step : displays software "X. y y" User Interface version
  HUI displays SW version for 5 sec and displays;
  - y y on timer display (2)
  - X on rear left cooking zone (21RL)
  - Firmware on rear right cooking zone(21RR)
- 3rd step : displays software of Induction module
  Displays Induction module SW version for 5 sec and displays;
  - Shows digit "2" of SW on timer display (2L)
  - Shows digit "C"=control or "P" power µproc on timer display (2R)
  - Rear left cooking zone (21RL) shows digit 1 of SW version
  - Rear Right cooking zone (21RL) shows number of power board

7.6.3 MENU SERVICE MODE ACTIVATION: REDBREAST

Hob is off

- Turn rotary K1 and K2 to the left and hold them there for 4 sec ; 1st beep
- Release the rotaries and within 5 seconds , Turn rotary K2 and K3 to the left and hold them there for 4 sec; 2nd beep
- After the 3 sec :



Demo Mode

Activate demo mode: Turn rotary of zone 2 left

- Cooking level display (2C) of Zone 3 (4-Zone model) / (2B) of Zone 2 (3-Zone model) shows "d" for demo mode
- Cooking level display (2C) of Zone 2 (4-Zone model) / (2A) of Zone 1 (3-Zone model) shows "o" for activated demo mode

! Appliance can be operated normally, but heaters are not activated.

Set back to normal: Turn rotary of zone 2 left

- Cooking level display (2C) of Zone 3 (4-Zone model) / (2B) of Zone 2 (3-Zone model) shows "d" for demo mode
- Cooking level display (2C) of Zone 2 (4-Zone model) / (2A) of Zone 1 (3-Zone model) shows "" for not activated demo mode

! Appliance can be operated normally, heaters are activated.

Service Mode

Activate service mode: Turn rotary of zone 2 left

- 1st step : displays all LEDs for 5 sec
- 2nd step : displays software "X.YY" User Interface version HUI displays SW version for 5 sec and displays;
  - FW (F y y) is shown on (?) , y y is the version of FW
- 3rd step : displays configuration version of HUI (C 3/4 y y)
  - 3 is for the 3 zone and 4 is for the 4 zone models
  - y y is the version of the configuration
- 4th step : displays software of Induction module Displays Induction module SW version for 5 sec and displays;
  - Shows digit "2" of SW on timer display (2L)
  - Shows digit "C"=control or "P" power µproc on timer display (2R)
  - Rear left cooking zone (21RL) shows digit 1 of SW version
  - Rear Right cooking zone (21RL) shows number of power board

Alarm/Error mode

- Left time displays (2L) shows "E" for error mode on
- The last 5 stored alarm codes are displayed , each for 5 seconds
- Alarm for individual cooking zone is shown as "E"
- Front left digit display "2FL" shows the number of alarm

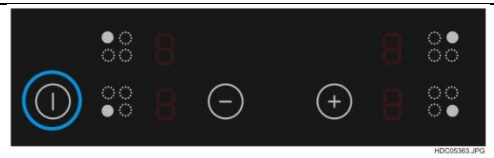
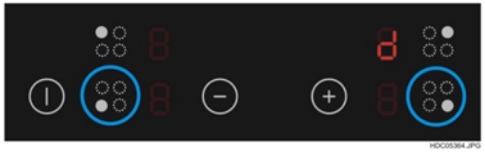
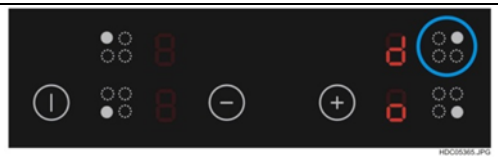
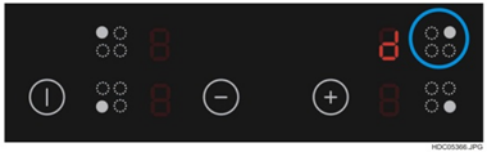
8 USER INTERFACE - DEMO MODE – ALARM HISTORY (UNTILL PROD. DATE MID 2017, 1 DIGIT ALARM CODE)

- On all User interfaces an exhibition modus (Demo Mode) can be activated, then the heaters are inactive.
  Menu for activation see below.
- Also a alarm history is available.
  From mid 2017 , on new Firmware versions and the 3 digit alarm code the alarm history menu is moved inside the customer menu and got extended functionality for most user interfaces, see chapter before.
- All in the past occurred error messages are stored.
  - The display of the alarms is activated similar to the Demo mode menu, see below.
  - After step 2 (display of „d" for demo mode)

  press 2x Timer Select key (Sparrow „-„ key of front left zone)
  → Display changes 1st to „S" (Software versions)
  2nd key press→"E" („error").
  - Press the key which is described in step 3 of the demo mode to start the alarm history display.
    The last occurred alarm will be displayed first.

8.1 KINGFISHER DEMO MODE MENU

8.1.1 KINGFISHER 4 ZONE

With the appliance completely off, press the power button On / Off for 3 seconds	
Press the Power keys of the front zones at the same time until you see the letter "d" or "d" and "o" in the display of the cooking zones	
Using the power key of the right rear zone activates the demo mode. Select "d" in the upper display and "o" in the lower **[1]	
Using the power key of the right rear zone deactivates the demo mode. The display shows "d"	

8.1.2 KINGFISHER 2 ZONE (MIX INDUCTION - GAS)

With the appliance completely off, press the power button On / Off for 3 seconds	
Press the Power keys of the front zones at the same time until you see the letter "d" or "d" and "o" in the display of the cooking zones In these appliances the function of this button (even if not marked on the silk screen) is required for the function demo	
Using the power key of the right rear zone activates the demo mode. Select "d" in the upper display and "o" in the lower **[1]	
Using the power key of the right rear zone deactivates the demo mode. The display shows "d"	

- The appearance of the letter "o" under the letter "d" appears on the display, indicating that the demo function is active. **[1]
- In case of system failure, the demo function remains active.

8.2 KITE C

Menu Mode 1

The induction hob is started in Off-state.

- Touch the "**On/Off**"-key (1) for 3sec...
- The display is switched on and off. (Buzzer sounds)
- Touch the "**Child Lock**"-key (7) for 3sec. On the display appears "B0"or "B1"(3) for the buzzer sound.
- Touch the "**Timer**"-key (5). On the display appears the automatic mode hob level **"H1"** (2).
- Touch the "**Plus**"-key (3) to increase the automatic mode.

Menu mode 2

Menu mode activation:

- Touch for approx. 3sec the **"On/Off"**-key (1). The display switches on and off.
- The buzzer sounds twice.
- Afterwards, touch for approx. 3sec. on the left user interface the **"H²H"**-key (6). "**D"** appears on the display (2). The menu is activated.
- Touch the **"Timer"**-key (5) to choose the menus "**Demo mode**, **Service mode** and **Error mode**".

Menu mode deactivation:

- The menu mode after 20sec. automatically deactivates, if no keys are touched.

Demo mode

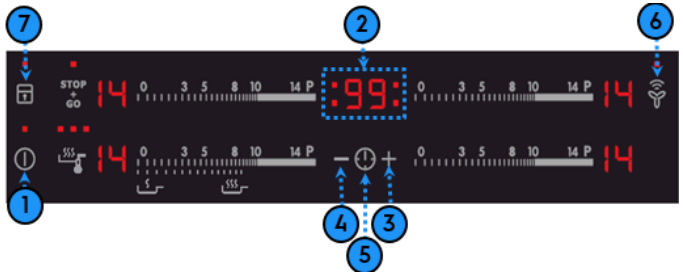
Demo mode activation:

Activate the menu mode. On the display appears **"d"** (2)

- Touch the **"Plus"**-key (3) to switches on and off the demo mode.
- Display **"d"** (2) = demo mode no activate
- Display **"do"** (2) = demo mode activate
- The demo mode is activated, if the cooking zone on (without pot) and no error **"F"(2)** appear on the display.

! Attention

When the appliance is switched off or it is disconnected from the power supply, the demo mode is still activated when you switched on the appliance.



Service mode

Service mode activation:

- Activate the menu mode. On the display appears **"d"** (2)
- Touch the **"Timer"**-key (5) one time. All display lights up and **"S" (2)** appears on the display. Touch the **"Plus"**-key (6) to start the service mode.
- All displays are shown the software:

1. Software for the induction module
   - → Processor BA81 — Power software: 84
   - → Processor BA91 — Control software: right
     Control software: left
2. Software for the user interface → Firmware: >=32

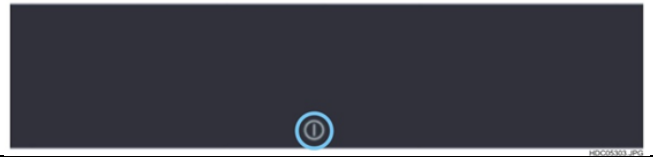
! Attention: All combination of induction module and user interface are configured with the same firmware

Error mode

Error mode activation:

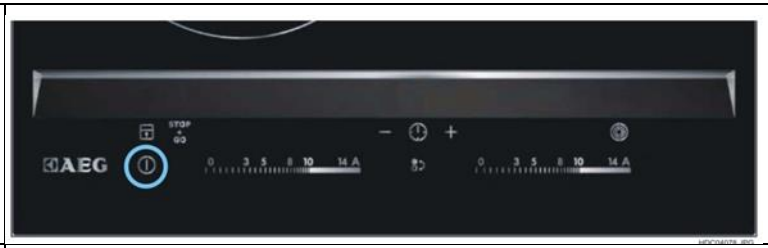
- Activate the menu mode. On the display appears **"d"** (2)
- Touch the **"Timer"**-key (5) twice, **"E"(2)** appears on the display.
- Touch the **"Plus"**-key (5) to activate the error mode.
- In 5 second steps, the last five alarms (eldest alarm first) are shown on the displays.
- The alarm appears on the display for the concerned cooking zone.
- When the displays are shown **"E"(2)** only, no alarm is in the error memory.

8.3 RAVEN DEMO MODE MENU

Touch the button ⏻ until the appliance turns On and then shuts down with emitting an beep (after 3 seconds)	
Touch the multi zone button for the right rear zone **[2] until emitting an beep (after 3 seconds) and…	
The left zone of Timer display indicate “d” this indicates that we have entered the special function menu.	
To activate the demo mode at this point , touch the “+” button of Timer and the right side of the timer display will show "o"	
To deactivate the demo mode, touch again the “+” button of Timer and the right side of the Timer display will turn off	

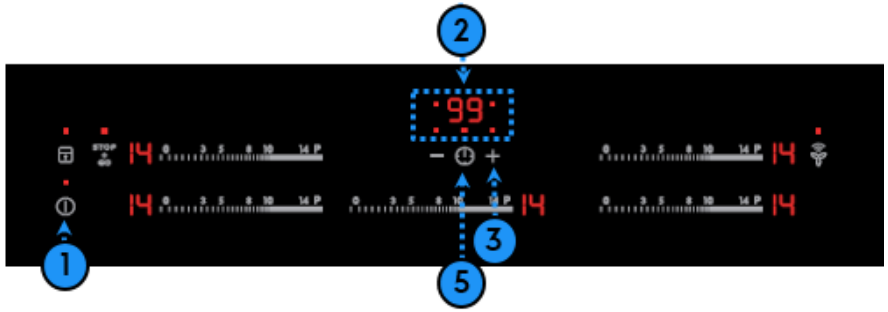
**[2] Note: This area in the functions of the induction hob is not used, however is used to enter the special functions menu.

8.4 CRYSTAL MODULE/ TUCAN DEMO MODE MENU

Press on/off key until all displays off and a second beep sounds.	
Press the multi-zone key for zone rear right (If not available press on this area) for 3 sec. until "d"/"do" is shown in the timer display.	
With the + Key of the Timer the DEMO MODE can be switched on. The Timer display shows „do".	
With the + Key of the Timer the DEMO MODE can be switched off. The Timer display shows „d".	

8.5 PELICAN

User interface for 5 cooking zones with slider with Fry Function and Hob2Hob compatible



Menu mode

Menu mode activation:

- Touch for approx. 3sec the „On/Off"-key (1). The display switches on and off.
- The buzzer sounds twice.
- Afterwards, touch for approx. 3sec. on the left user interface the "Bridge"-key (11).
- **„d"** appears on the display. The menu is activated.
- Touch the „Timer"-key (5) to choose the menus „**Demo mode**, **Service mode** and **Error mode**".

Menu mode deactivation:

The menu mode is after 20sec. automatically deactivated, if no any keys touched.

Demo mode

Demo mode activation:

- Activate the menu mode. On the display (2)appears **„d"**.
- Touch the „Plus"-key (3) to switches on and off the demo mode.
- Display **„d"** (2) = demo mode no activate

Display **„do" (2)** = demo mode activate
The demo mode is activated, if the cooking zone on (without pot) and no error **„F"** appears on the display(2)

Service mode

Service mode activation:

- Activate the menu mode. On the display appears **„d"** (2)
- Touch the „Timer"-key (5) once. All displays are lights up. **"S"** appears on the display for the timer. Touch the „Plus"-key (3) to start the service mode.
- All displays are shown the software:
  1. Software for the induction module
  2. Software for the user interface

! Attention
All combination of induction module and user interface are configured with the same firmware

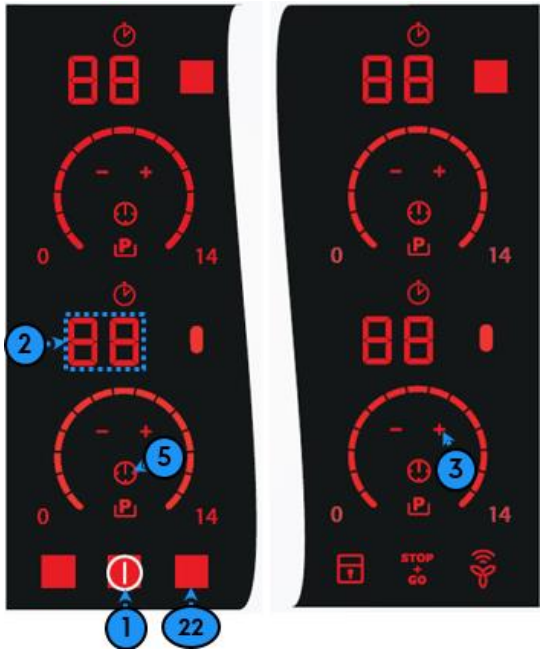
Error mode

Error mode activation:

- Activate the menu mode. On the display appears **„d"**.
- Touch the „Timer"-key (5) twice, **„E"**appears on the display.
- Touch the „Plus"-key(3) to activate the error mode.
- In 5 second steps, the last five alarms (eldest alarm first) are shown on the displays.

The alarm appears on the display for the concerned cooking zone.
When the displays are shown **„E"**only, no alarm is in the error memory.

8.6 JACKDAW



Menu mode activation:

- Touch for approx. 3sec the „On/Off"-key (1). The display switches on and off. The buzzer sounds twice.
- Touch "Blind"-key (22) for approx. 3sec. „do" appears on the display(2). The menu is activated.
- Touch the „Timer"-key (3) to choose the menus „Demo mode, Service mode and Error mode".

Menu mode deactivation: The menu mode automatically deactivated after 20sec., if no keys are touched.

Demo mode activation:

Activate the menu mode. On the display appears „do".

- Touch the „Plus"-key(3) to switch on and off the demo mode.
- Display „do" = demo mode not activate
- Display „d1" = demo mode activate

The demo mode is activated, if the cooking zone on (without pot) and no error „F" appears on the display.

! When the appliance is switched off or it is disconnected from the power supply, the demo mode is still activated when you switched on the appliance.

Service mode activation:

Activate the menu mode. On the display appears „do".

- Touch the „Timer"-key(5) once, All displays are lights up. "S" appears on the display of the timer.
- Touch the „Plus"-key (3) to start the service mode.
- The display is shown as sequential number and the software:
  1. Software for the induction module
  2. Software for the user interface

! All combination of induction module and user interface are configured with the same firmware

Error mode activation:

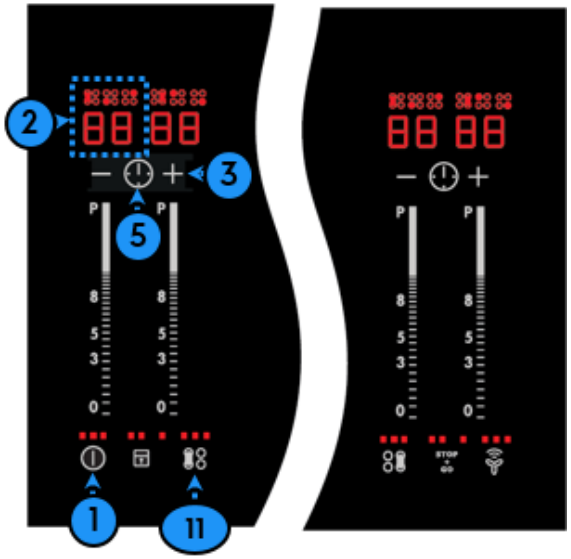
Activate the menu mode. On the display appears „do".

- Touch the „Timer"-key(5) twice. "E" appears on the display.
- Touch the „Plus"-key(3) to activate the error mode.

In 5 second steps, the last five alarms (eldest alarm first) are shown on the displays. The alarm appears on the display for the concerned cooking zone. When displays are shown **„E"** only, no alarm is in the error memory.

8.7 BUDGIES

The difference between Budgies and Jackdaws is the usage of Bridge-key instead of Blind-key to activate the Menu mode



Menu mode activation:

- Touch for approx. 3sec the „On/Off"-key (1). The display switches on and off. The buzzer sounds twice.
- Touch "Bridge"-key (11) for approx. 3sec. „do" appears on the display(2). The menu is activated.
- Touch the „Timer"-key (3) to choose the menus „Demo mode, Service mode and Error mode".

Menu mode deactivation: The menu mode automatically deactivated after 20sec., if no keys are touched.

Demo mode activation:

Activate the menu mode. On the display appears „do".

- Touch the „Plus"-key(3) to switch on and off the demo mode.
- Display „do" = demo mode not activate
- Display „d1" = demo mode activate

The demo mode is activated, if the cooking zone on (without pot) and no error „F"appears on the display.

! When the appliance is switched off or it is disconnected from the power supply, the demo mode is still activated when you switched on the appliance.

Service mode activation:

Activate the menu mode. On the display appears „do".

- Touch the „Timer"-key(5) once, All displays are lights up. "S" appears on the display of the timer.
- Touch the „Plus"-key (3) to start the service mode.
- The display is shown as sequential number and the software:

1. Software for the induction module
2. Software for the user interface

! All combination of induction module and user interface are configured with the same firmware

Error mode activation:

Activate the menu mode. On the display appears „do".

- Touch the „Timer"-key(5) twice. "E" appears on the display.
- Touch the „Plus"-key(3) to activate the error mode.

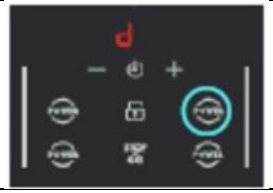
In 5 second steps, the last five alarms (eldest alarm first) are shown on the displays. The alarm appears on the display for the concerned cooking zone. When displays are shown **„E"**only, no alarm is in the error memory.

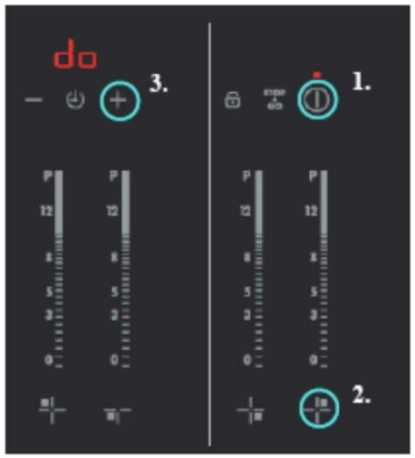
8.8 SPARROW/FALCON/KITE SPLIT/CRISSCROSS DEMO MODE MENU (UNTIL ~2017)

Sparrow			
	With appliance fully off (after the connection to the mains), press the Power On / Off button for 3 seconds.	Press + / - buttons to the front Cooking zones simultaneously until "d" in the left rear indicator lights	Pressing the + button on the front left, the demo mode is activated. The demo mode is activated when turning on the appliance does not feel the clicking of the relays.

Falcon				
	With appliance fully off (after the connection to the mains), press the Power On / Off button for 3 seconds.	Press + / - buttons to the front Cooking zones simultaneously until "d" or "do" in timer indicator lights	Using the + button on the front switch on the left of the demo mode. Select "do".	Using the + button left front off the demo mode. Display "d".

Kite				
	With appliance fully off (after the connection to the mains), press the Power On / Off button followed by a second beep.	Multi-loop button behind the right about 3sec to press "d" in timer indicator lights.	With the timer switch button + the demo mode. Select "do".	Turn off using the timer button + the demo mode. Display "d". At 5-use zones Kite same keys.

CrissXCross			
	With the appliance fully off. Press the timer button until you hear a beep	Power button / multi-loop back right button press for 3sec. Display "d" or "do"	With the timer button + the demo mode switch on /. "Do" = demo mode active "D" = demo mode off

Kite Split		1. With appliance fully off (after the connection to the mains), press the Power On / Off button followed by a second beep. 2. Multi-loop button/zone heading right rear 3sek press. The timer display shows "d" or "do". 3. Turns press the Demo Mode, the timer + key "Do" demo mode = active "D" = demo mode off

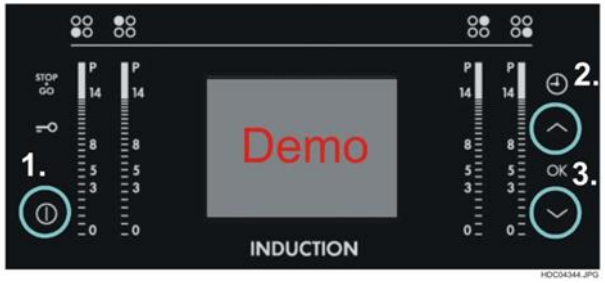
8.9 FALCON SHORT DEMO MODE MENU (UNTILL ~2017)

			
With the appliance completely off, press the power button On / Off for 3 seconds.	Press key ⌄ and ⌃ of both zones simultaneously until you see the words "d" or "do" in the timer display.	Using the key ⌃ of front zone the demo mode is deactivated. Select "do" (*).	Using the key ⌃ of front zone the demo mode is deactivated. The display shows "d"

(*) NOTE:

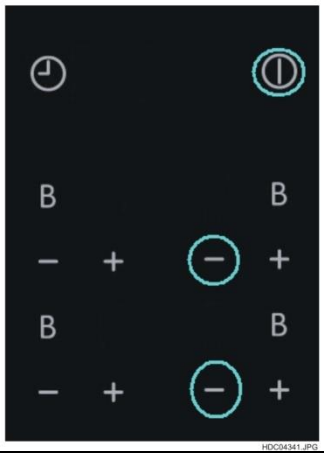
- The appearance of the letter "o" next to the letter "d" appears on the display, indicating that the demo function is active.
- In case of system failure, the demo function is automatically activated and remains active

8.10 TFT DEMO MODE MENU



1. Touch on/off ⏻ until all displays off and a second beep sounds.
2. As next step press key ⌃ until all displays off and a second beep sounds.
   The Demo Mode is active when at every switch on "Demo" is displayed for few seconds.
3. For switching of the Demo Mode do first the Step 1 and press key ⌄ for 3 seconds.

8.11 FALCON SPLIT DEMO MODE MENU

		
1. Press main switch (1.) for 3 sec. a beep sounds. 2. Press the both minus keys (2.) on the right side together continuous for 3 sec.	3. Press Timer key (3.).	4. Press key plus-key for zone front left (4.) for deactivation. "do" in the timer display is indicating "demo mode on", the "d" is indicating "demo mode off". Normal auto switch Off time if no key is pressed

8.12 COLIBRI DEMO MODE / SERVICE MODE MENU (FOR OLD HOBS)

To enter the Demo mode / service mode / factory test menu, the following sequence of buttons must be pressed:

1. Hob is off. Press main switch continuously until display is going off (without beep).
2. Press the "+" and " -" buttons (2a) of both front zones together (all 4 keys together) for about 3 seconds (-> short beep).
3. Press the timer selection key (-> again short beep).
4. The display (C) shows a "d" for demo mode
   If you press the timer select key again you switch to "S" for service mode, another press gets you to "E" the alarm menu!
5. By pressing the button "+" of a cooking zone, you activate the menu.
6. By pressing the button "-" of a cooking zone you deactivate the menu.

DEMO MODE "d"

If demo mode is activated the display with the „d" shows additionally a dot.
After selecting the demo mode, the electronic goes to off. Now it can be used like usual but only without heater activation. The deactivation of the demo mode is done in the same procedure as activating. After deactivating the demo mode, the electronic must go off. Now the hob can be used in normal mode.
The demo mode is mains failure safe, status is saved in power board EEPROM.

SERVICE MODE "S"

1. Show user interface SW version
2. Show control Software version
3. Show power Software version
4. 400V detection test: "400U" blink on displays until 400V is not applied. When 400V is detected, the buzzer ring and "OU" is shown on display until 230V is not applied.
5. Test all LED's / Displays for 7 sec; during this time, booster is set on rear zones to test sensors. When the time is elapsed, if the sensor are OK the test jump to the following step otherwise "S" is shown alternatively on zones where the error occurred.
6. Zone power test: a different power level is set on each zone for 2 seconds
7. Pot detection: power level 9 is set on all zones for 10 seconds in order to check pot detection by removing the load

ALARM MODE "E"

The last 5 stored alarm codes (if >o) are displayed like an actual alarm, each for 5 sec., starting with the oldest (read request '5' Alarm code message) to the newest (read request '1').