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**ERF2500**

**2<sup>nd</sup> Generation**

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### REVISIONS:

Revision	Date	Description
00	06/2010	Document creation
01	09/2010	Added variants on "Service Mode" activation

## 1 PURPOSE

The purpose of this manual is to provide service personnel (who already have the basic knowledge necessary for repairing refrigerators) with information on appliances equipped with the ERF2500 electronic control system.

This Manual describes:

- User Interfaces that could be connected with
- Service Mode activation
- Tests that could be processed

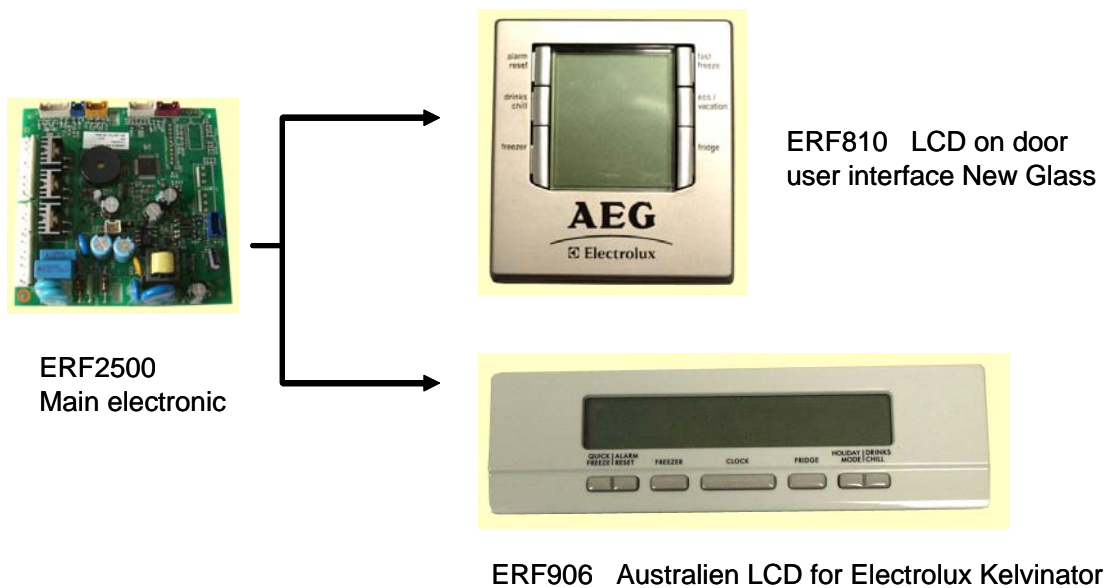
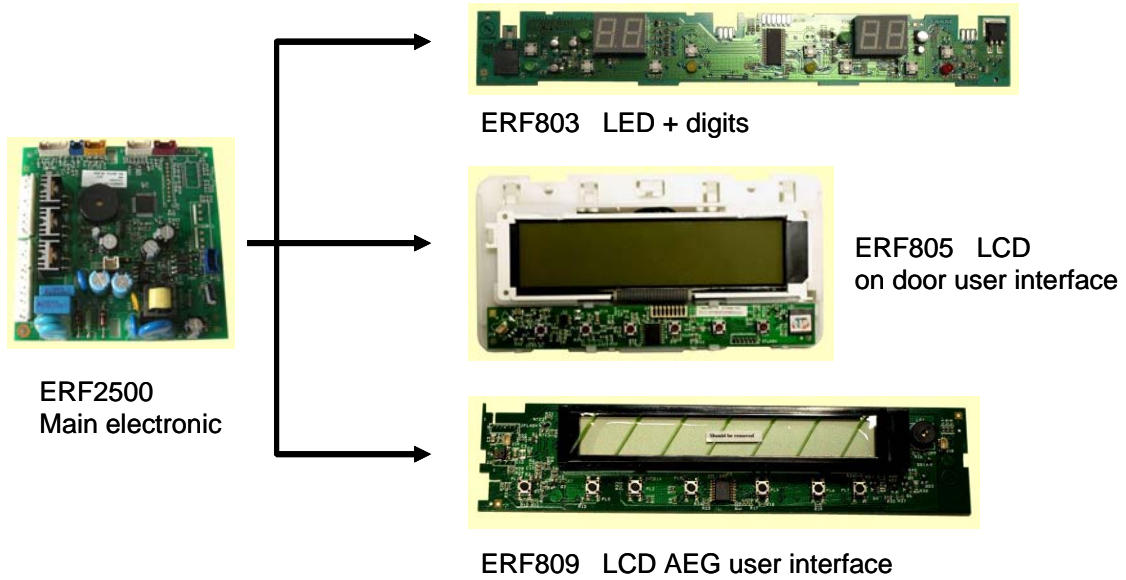
## 2 PRECAUTIONS



- **Electrical appliances must be serviced only by qualified Service Engineers.**
- **Always remove the plug from the power socket before touching internal components.**

### 3 GENERAL CHARACTERISTICS

The main electronic can be connected to different types of user interfaces:



## 4 SERVICE MODE

### 4.1 Service Mode Activation

The activation of the Service Mode is depends on the Software, which is loads on the electronic. There are two variants of activation in the Service Mode.

Variant 1:

- Switch on the appliance
- Open the door
- Unplug the appliance
- Plug in the appliance

Variant 2:

- Switch on the appliance

Then valid for both:

- After 6 sec. pressing any push button („**action**“-key) except the On/Off-button for 5 sec.
  - The push button must be pressed in the timeframe from 6 to 16 sec, otherwise the Service Mode is not activated.

The Service Mode activation is confirmed by a short beep from the buzzer device.

- Define the „**action**“-key choosing any push button except the On/Off-button. With the „**action**“-key, you can activate the Service Mode and switch on and off the components.
- Define the „**next**“-key choosing any push button except the „**action**“-key. With the „**next**“-key, you can change in a new test-phase.

### 4.2 Component test

The component tests are different notified in the several phases on the user interface.

All LEDs <b>on</b> or <b>off</b>	→	ERF803	LED + digits
„SUPER FREEZING“-sign <b>on</b> or <b>off</b>	→	ERF805	LCD on door
„FROSTMATIC“ word <b>on</b> or <b>off</b>	→	ERF809	LCD AEG
On LCD <b>on</b> or <b>off</b>	→	ERF810	LCD on door with New Glass
On LCD <b>on</b> or <b>off</b>	→	ERF906	AUS LCD for Electrolux Kelvinator

### 4.3 User Interface visual test

Depending on the version of the appliance, all notification on the display and LEDs are switched **on**.

Pressing the push button „**next**“.

All notifications on the display and LEDs are switched **off**. The push button „**action**“ is not used in these phase.

Pressing the push button „**next**“ again to goes in the next phase.

#### 4.4 AC output test

AC-Load	Index
Cooler Compressor	0
Freezer Compressor	1
Heater	2
Cooler Lamp	3
AC Evaporator Fan	4
AC Cooler Fan	5
Electro Valve	6
AC Zero-Degree Fan	7
no displayed	8
Freezer Lamp	9
no displayed	10
no displayed	11
AC Condenser Fan	12
Cooler VCC Compressor	37
Freezer VCC Compressor	38
Balance Heater	42
Frame Heater	43

Are defined to be tested every AC component connected to the electronic. There are 5 ACS Triacs on the electronic for only 5 components to test. On the display is notified the index of component. When the Service Mode starts, all components are switched off.

Pressing the push button „**next**“, you actived the next component.

Pressing the push button „**action**“ to switched **on** and **off** the component.

Pressing the push button „**next**“ again to goes in the next phase.

#### 4.5 Digital output test

Digital Output	Index
Cooler Torch	13
Zero Degree Torch	14
DC Evaporator Fan	15
DC Cooler Fan	16
DC Zero Degree Fan	17
DC Condenser Fan	18
no displayed	19
no displayed	20
no displayed	21

Are defined to be tested every digital output of components connected to the electronic. On the display is notified the index of the component. When the Service Mode starts, all components are switched **off**.

Pressing the push button „**next**“, you actived the next component.

Pressing the push button „**action**“ to switched **on** and **off** the component.

Pressing the push button „**next**“ again to goes in the next phase.

#### 4.6 Damper test

Damper test	Index
Damper	22

When the Service Mode starts, the damper is closed.

On the display is notified the index of the component.

LED **on**: damper is open

LED **off**: damper is closed

Pressing the push button „**action**“ the damper is open and closed.

Pressing the push button „**next**“ again to goes in the next phase.

#### 4.7 Digital input test

Digital Input	Index
Cooler Door	23
Freezer Door	24
Zero Degree Door	25
Heater Switch	26
no displayed	27
no displayed	28
Rapid Drink Cooler	40

Are defined to be tested every digital input of components connected to the electronic.

On the display is notified the index of the component.

LED **on**: Input is open

LED **off**: Input is closed

Pressing the push button „**next**“, you active the next component.

The push button „**action**“ is not used in these phases.

Pressing the push button „**next**“ again to goes in the next phase.

#### 4.8 Temperature probe test

Temperature	Index
Cooler Air Temperature	29
Freezer Air Temperature	30
Cooler Evaporator Temperature	31
Zero Degree Air Temperature	32
PB Ambient Temperature	33
UI Ambient Temperature	34
no displayed	35
Freezer Evaporator Temperature	39

Are defined to be tested every temperature probe connected to the electronic.

**If the sensor related to the probe detects an acceptable value of temperature:**

The display is notified the index.

**If the sensor has an interrupt:**

The display is notifying and blinking the current temperature index and message failure „Er“.

Press the push button „**next**“, to activate the next component.

The push button „**action**“ is not used in these phases.

Pressing the push button „**next**“ again to goes in the next phase

## 4.9 Software and Parameters

All codes of software and parameters are notified on the display.

The digits shows letter by letter. The digits shows each character in second steps and a short beep from the buzzer.

Between two different codes a bar is showed **on** digits for one second.

The push button „**action**“ is not used in these phases.

Pressing the push button „**next**“ again to goes in the next phase

Software
Storage Code (8 numeric characters)
PB Software Name (8 characters)
PB Software Production Name (8 characters)
UI Software Name (8 characters)
UI Software Production Name (8 characters)

## 4.10 Life time display

The maximum value can be notified 9999 days. Each number is notified on the display (starting from Most Significant) if you pressing „**next**“ push button, a short beep from the buzzer device and showing the next digit.

Pressing the push button „**next**“ again to goes in the next phase.

## 4.11 Final phase

On the display is notified a time counter in second steps the number 0 to 99.

To return to the normal mode you have to press for 5 seconds the „**action**“ push button which made start the Service mode.