KERN & Sohn GmbH
Ziegelei 1
D-72336 Balingen-Frommern
E-Mail: info@kern-sohn.com
Tel: 0049-[0]7433- 9933-0
Fax: 0049-[0]7433-9933-149
Internet: www.kern-sohn.com

KERN RXB

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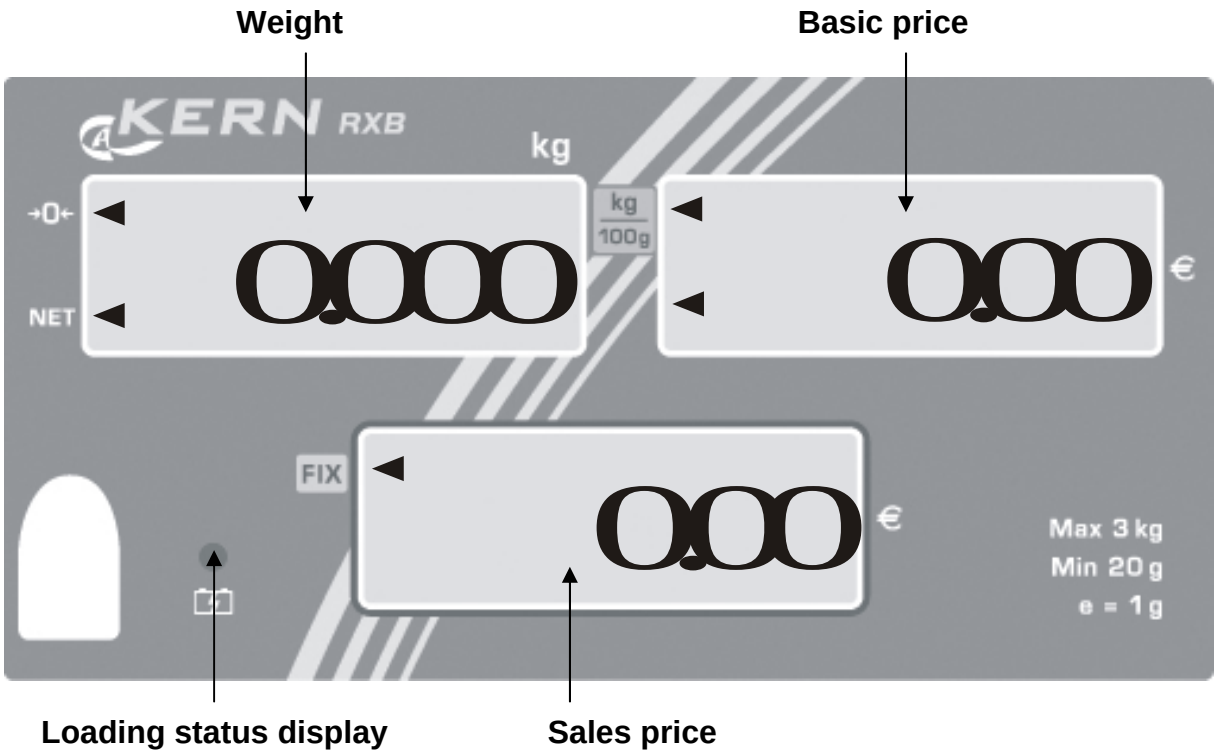
CONTENTS

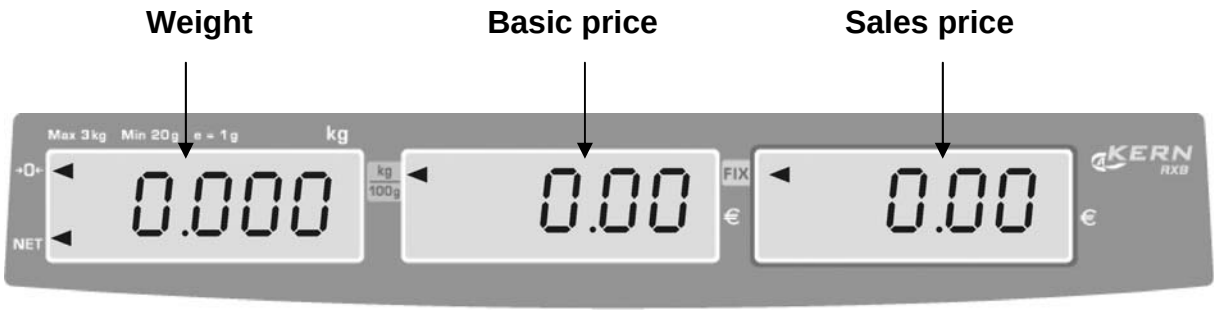
1 Explanation of display 3
2 Keyboard function 5
3 Service mode access 6
4 Function settings 7
4.1 Navigation in the menu 7
4.2 Menu overview 8
4.2.1 F0 ⇒ Program Version number 9
4.2.2 F1 ⇒ Linearity calibration 10
4.2.3 F2 ⇒ Specification settings 12
4.2.4 F3 ⇒ External calibration 14
4.2.5 F6 ⇒ Currency selection 15
5 Error messages 16
6 To check internal value 16
7 Troubleshooting 17
7.1 Scale does not turn on 17
7.2 Cannot use full capacity 17
7.3 Display “OL” and buzzer “beep” after turn on 17
7.4 Missing/unclear segment of the LCD display 17
7.5 The span value / internal value is unstable 18
7.6 Charging control lamp is always red or scale does not charge 18
8 Spare parts 19

1 Explanation of display

Operator display balance:



Secondary display on customer page:



Post-mounted display for models with tripod:

Display weight

Here, the weight of your goods is displayed.

The arrows next to the symbols show:

NET	Net weight
→0←	Zeroing display

Display basic price

Here, enter your basic price in €/kg or €/100 g via keyboard. The basic price can be switched to €/kg or €/100 g.

The arrows next to the symbols show:

€/kg	Basic price in €/kg
€/100 g	Basic price in €/100 g

Display sale price

Here the sales price is displayed in Euro [€].

The arrows next to the symbols show:

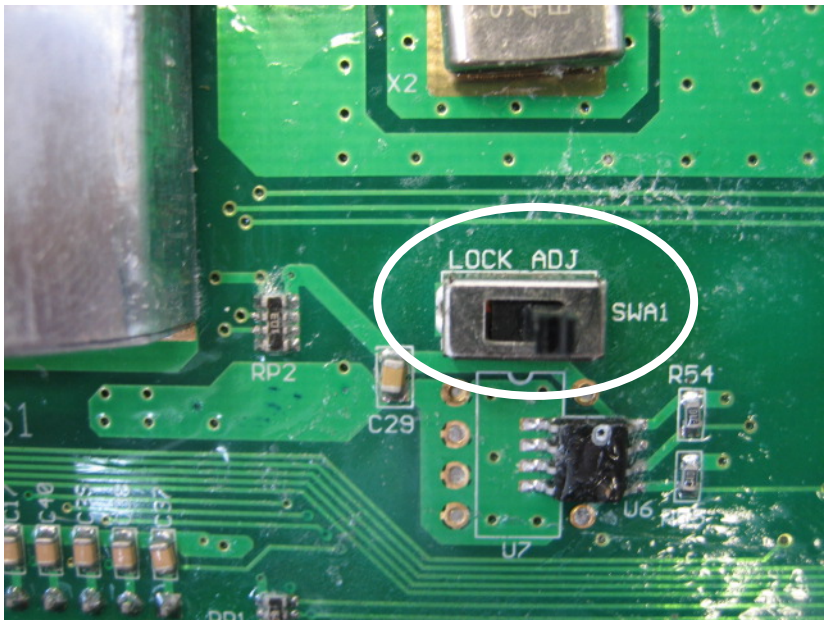
FIX	Stored basic price//FIX mode "on"

2 Keyboard function

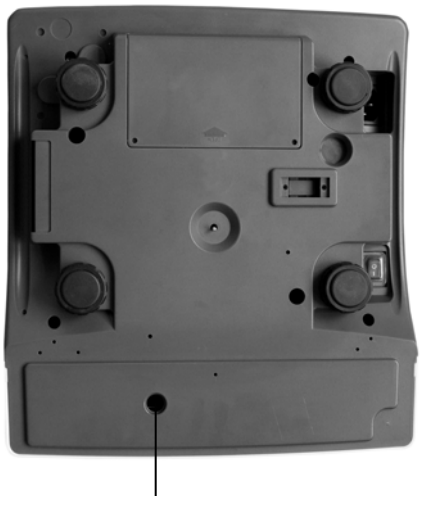
Choice	Function
0 - 9	• Number keys, enter basic price /PLU
00	• Enter "00"
	• Press -key, then 1 = basic price in €/kg • Press -key, then 2 = basic price in €/100 g
CE	• Delete total basic price
C	• Delete last input of basic price
→0←	• Zero key, range (± 0.2 % max)
TARE	• Taring key
FIX	• Store set basic price • FIX-Mode „on“/“off“

3 Service mode access

- Access to the service mode is controlled by jumper SWA1 on the main PCB. The jumper has two positions LOCK, which prevents access to the service mode and ADJ, which allows access to the calibration and configuration routines.
- SWA 1 jumper is located adjacent to the RF screening cover of the main PCB.



- Place your balance upside down and remove seal/cap. For calibration and configuration routines the jumper “SWA1” must be set to position “ADJ”.



Sealing mark / unlocking switch

Position of unlocking switch	**Status**
To the right	Unlock the balance for calibration process (ADJ)
To the left	Verification position - calibration locked (LOCK)

4 Function settings

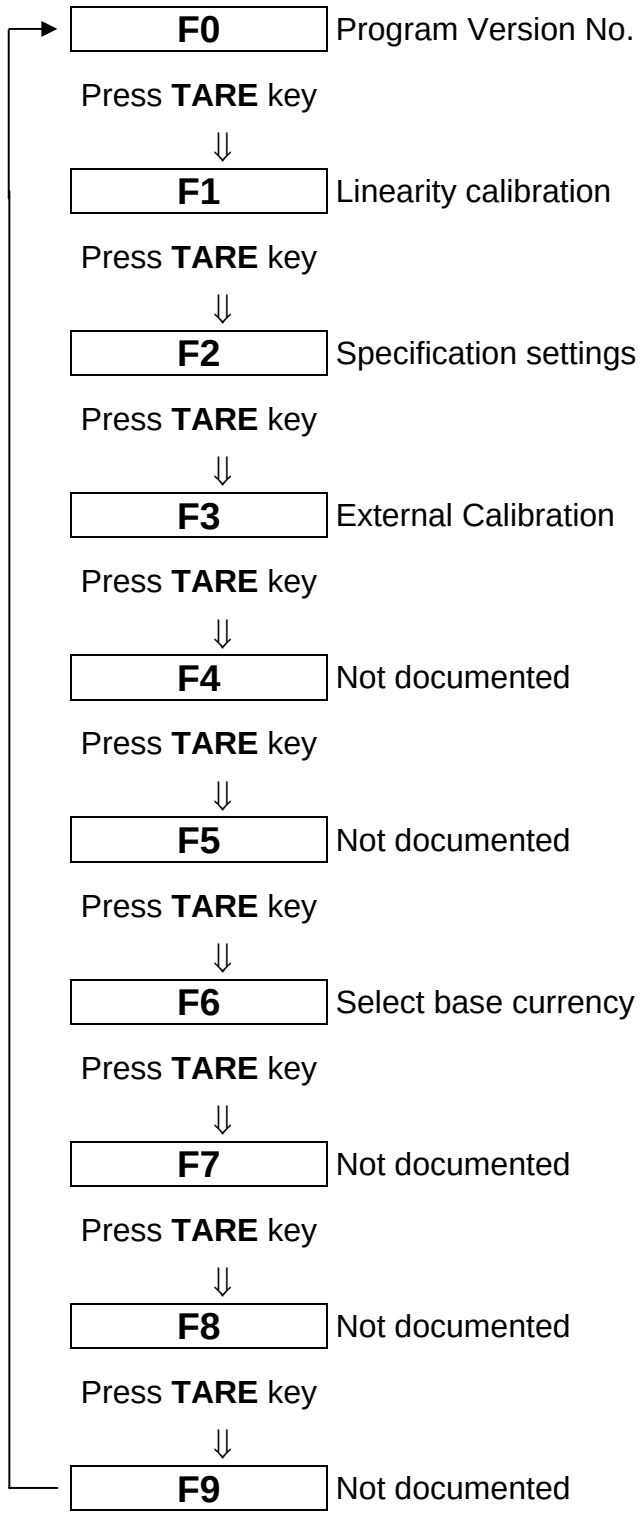
4.1 Navigation in the menu

Menu activation key (not visible)
Press this key and keep on pressing it when balance is turned off. Whilst doing this, turn on balance. Keep pressing down the key until the balance counts down to zero and the first function F0 appears.

Further functions F0 – F9 are selected by pressing the TARE key.

Exit menu by pressing the 00 key, balance returns to weighing mode.

4.2 Menu overview

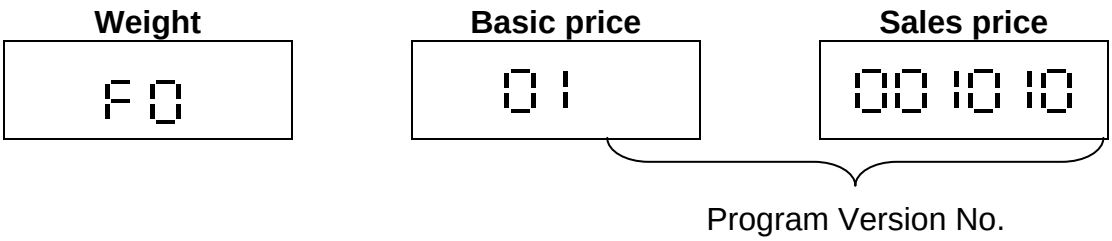


Remark:

- F0, F1, F2, F3 can only be set while SWA1 is in the ADJ position.
- F6 can be altered with SWA1 in LOCK or ADJ positions.

Exit menu by pressing the 00 key, balance returns to weighing mode.

4.2.1 F0 ⇒ Program Version number



- Press TARE key to continue the next function setting.
- Press 00 key to return to the weighing mode.

4.2.2 F1 ⇒ Linearity calibration

- **The linearity calibration should be done with 3 points**.
- Press the 9 key **to abort** the linearity calibration and return to the weighing mode.
- The example is for a 30kg capacity scale as following:

Weight	Basic price	Sales price
F 1	LinEr	CAL.

❶ Place the weighing pan on the scale, press the 0 key. LCD displays as following:

Weight	Basic price	Sales price
0L.		XXXXXX
↑ Initial point		↑ Span value (with weighing pan)

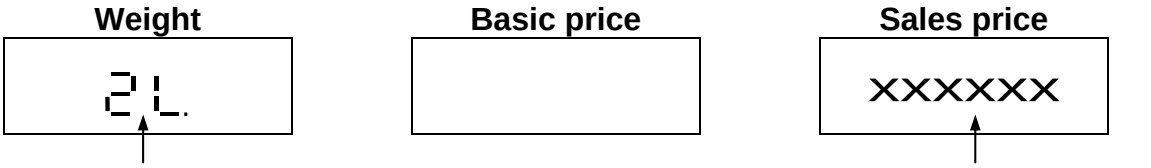
❷ Press the 00 key to memorize the initial value. LCD displays as following:

Weight	Basic price	Sales price
1L.		XXXXXX
↑ The first point (put 1st weight on the weighing pan)		↑ Span value (with weighing pan)

After the scale is stable, place the first weight on the weighing pan (e.g.10kg).

❸ Press the 00 key to memorize the first point of linearity calibration. LCD displays as following:

❹



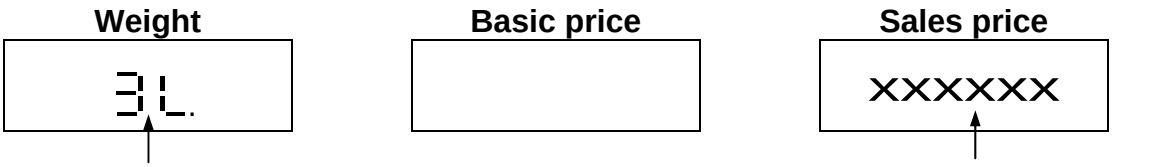
The Second point
(put the 2nd weight on the weighing pan)

Span value (with weighing pan)

After the scale is stable, place the second weight (e.g.10kg+10kg) on the weighing pan.

❺ Press the 00 key to memorize the second point of linearity calibration. LCD displays as following:

❻

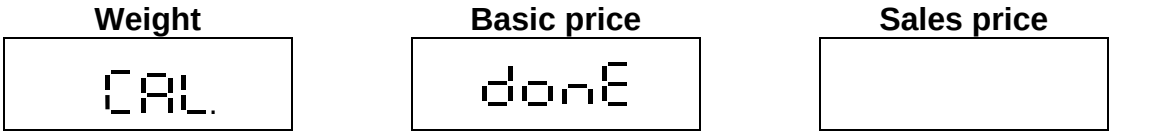


The Third point
(put the 3rd weight on the weighing pan)

Span value (with weighing pan)

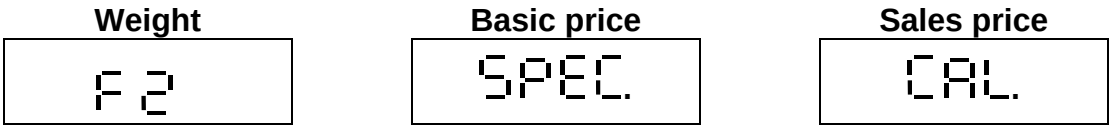
After the scale is stable, place the third weight (e.g.10kg+10kg+10kg) on the weighing pan.

❼ Press the 00 key to memorize the third point of linearity calibration. LCD displays as following:

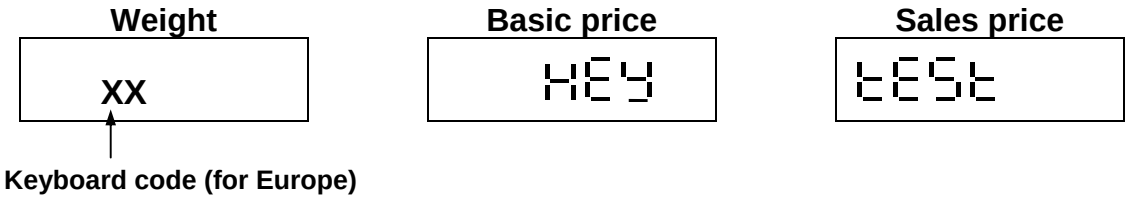


❽ Take the weights off the weighing pan before the scale resets back to zero. The linearity calibration procedure is completed.

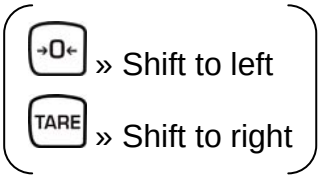
4.2.3 F2 ⇒ Specification settings

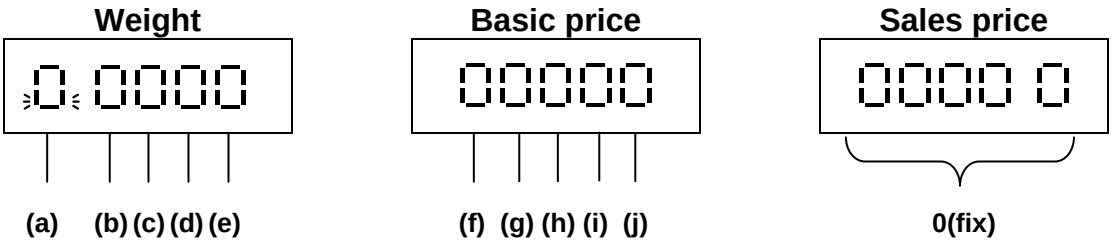


❶ Press the 0 key to enter the keyboard testing mode, LCD displays as following:

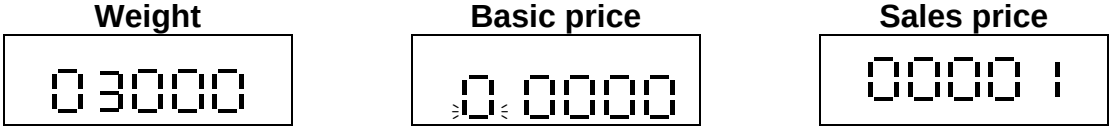


❷ Press the menu activation key (see chapter 4.1) and input the number into bits (a~g). ⇒ **Ref. to Appendix 1 (see chapter 4.2.3.1)**





❸ Press the menu activation key, LCD displays as following:



❹ Press the menu activation key, the scale resets back to zero automatically. The specification procedure is completed.

4.2.3.1 Appendix 1: Specification code table

In the menu all parameters of the balance can be modified.
Do not change any parameters in menus F2 or F6.
The following default settings must be preset.

	RXB 30K10M/RXB 30K10HM			RXB 15K5M/RXB 15K5HM			see chpt. 4.2.3 point
F2	06221	10000	00000	05221	10000	00000	**2**
	03000	00000	00001	15000	00000	00001	**3**
F6	Euro			Euro			

	RXB 6K2M/RXB 6K2HM			RXB 3K1M/RXB 3K1HM			see chpt. 4.2.3 point
F2	04221	10000	00000	02221	10000	00000	**2**
	06000	00000	00001	03000	00000	00001	**3**
F6	Euro			Euro			

Attention!
Check these settings before carrying out verification.

4.2.4 F3 ⇒ External calibration

Attention:
In calibrated balances the adjustment function is switch locked.
To carry out calibrations, you will have to throw the unlock switch SWA1
(See chpt. 3).
Observe stable environmental conditions. A warming up time of ca. 30 minutes is required for stabilization. Ensure that there are no objects on the weighing plate.

- Activate the calibrating function F3 in the menu

Weight	Basic price	Sales price
F3	**WEit**	**CAL.**

- Press 0-key, the following display will appear:

Weight	Basic price	Sales price
0,000	**kg**	**XXXXXX** (internal value)

- Ensure that there are no objects on the weighing plate.
- Operate menu activation key (See chpt. 4.1); stop check is carried out, then the weight value of the calibrating weight will appear on the weight display

Weight	Basic price	Sales price
3.000 (maximum load)	**Kg** (weighing unit)	**XXXXXX** (internal value)

- Carefully place adjusting weight in the centre of the weighing plate
- Operate menu activation key (See chpt. 4.1)

Weight	Basic price	Sales price
CAL.	**done**	

- While the balance is counting down to zero, remove the adjusting weight.
- The balance returns automatically into weighing mode. An error message will appear on the display should an adjustment error occur or should the adjustment weight be incorrect. Turn balance off, then restart it and repeat the adjustment process.

4.2.5 F6 ⇒ Currency selection

Weight	Basic price	Sales price
F6	Eur N	Con N

Press the 0 key, LCD displays as following:

Weight	Basic price	Sales price
F6	EUr	Con N

Previous value

Press the TARE key to select EUr (Euro).

Press the menu activation key to confirm, the setting procedure is completed.

- To abort the setting, press the 00 key to exit the setting mode.

NOTICE: **Do not change any parameters in menus F2 or F6.**
The default setting **F6= Euro** must be preset.

5 Error messages

E 1	⇒ ZERO (after calibration) is over +10% of TOTAL SPAN
E 2	⇒ ZERO (after calibration) is under -10% of TOTAL SPAN
E 6	⇒ ZERO (before calibration) is higher than 320,000
E 7	⇒ ZERO (before calibration) is lower than 220,000
-OL-	⇒ WEIGHT shown on the display is over the maximum capacity +9d (9 divisions)

- When the display appears E1 or E2, you have to re-enter the specification calibration setting.
- When the display appears E6 or E7, maybe the load cell is out of order. You have to check the load cell. If it is necessary replace it.

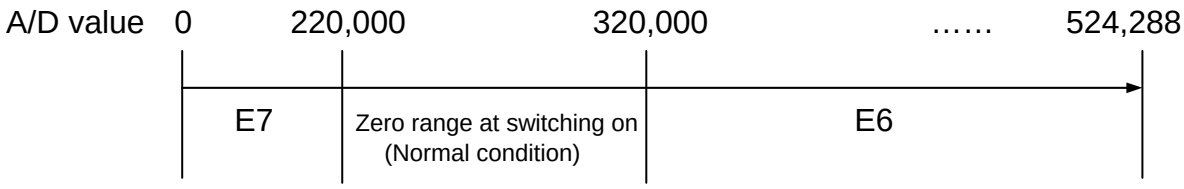
6 To check internal value

❶ Press →0← key

❷ [CEntr] or [-----] appears on the display. During this display press the CE key immediately.

❸ The display will show the internal value.

❹ To exit the internal value mode, press the 0 key.



Suggestion: Internal value should be within 220,000 ~ 320,000 before linearity calibration and weight calibration. Otherwise adjust resistance R30 and R31 until the internal value is within this range, or change the load cell.

7 Troubleshooting

7.1 Scale does not turn on

❶ Check the battery power which must be above 6V. In case the voltage is below 5.7V, charge the scale. If the voltage is less than 4.8V, you have to change the battery.

❷ Check the ON/OFF switch - if it is o.k. or any bad soldering.

7.2 Cannot use full capacity

❶ Check the internal value according chapter 6

❷ Put the maximum weight on the weighing pan. Press on the weighing plate to check if the internal value can be shifting. It makes sure that the load cell is o.k.
If there is no changing, the load cell is damaged and you have to change it.

❸ Check the overload screws. If all are o.k. you have to check/re-enter the specification setting.

7.3 Display “OL” and buzzer “beep” after turn on

❶ Check the wire of the load cell and the connection between load cell and main board.

❷ Check the load cell. If necessary, replace it.

7.4 Missing/unclear segment of the LCD display

❶ Check the pins of CPU, if there are any short circuit, broken or cold soldering or oxidized. If this, clean the pins by cleaning supplies and re-solder the pins.

❷ Check the LCD display, the conductor rubbers and frames if there is a problem of fixing.

❸ Check the LCD display and the rubber itself. If necessary, replace it.

7.5 The span value / internal value is unstable

❶ Check the load cell itself. If necessary, replace it.

❷ Check the main board if there are any oxidation. If necessary, clean the PCB by cleaning supplies.

7.6 Charging control lamp is always red or scale does not charge

❶ Measure the voltage of the battery. If necessary, replace it.

❷ Measure the output voltage of the transformer (AC 10V). If necessary, replace it.

❸ Measure the output voltage of the bridge regulator (DC 10V). If necessary, replace it.

❹ Measure the IC TIP31C at Q1 – 1st and 2nd pin must be at 6-8V. If necessary, replace it.

❺ Check zener diode D2 and resistor R17. If necessary, replace it.

❻ Measure the IC LM723 at U4 – 3rd pin must be at 6.8 - 1.15V, 4th pin must be at 3.2 - 3.4V, 5th pin must be at 3.7 - 4.2V and 6th pin must be at 6.8 - 7.4V. If it is abnormal, replace the IC LM723.

❼ If all points above are o.k. check the IC 975 at Q7. If necessary, replace it.

8 Spare parts

PART NO.	DESCRIPTION
SW0000000020	Switch on/off (2pin)
1170002030	Power socket
ZACC000000009	FD aluminum support
ZACA000000010	FD aluminum bracket
BT0006004500	Rechargeable battery 6V/4.5Ah (acid)
FP11 FD00EX04	Front panel
FP21FD00EX03	Rear panel
ZKBE120000007	Keypad + circuit
LCAM00501201	Load cell (C3)
PCFD02100300	Rear PCB
PC0226000002	Main board
PF0FD0000311	FD plastic pan
PF1FD2300310	FD stainless steel pan
ZPMN100000001	Adjustable feet
PMAA23100000	Level ¢ =approx.15mm,t=8mm
ZPMB100000018	Battery cover
ZPMA100000104	Upper housing
ZPMA100000106	Lower housing
TM0110006014	Transformer (115/230V-10V)
WCC018302220	Power cable