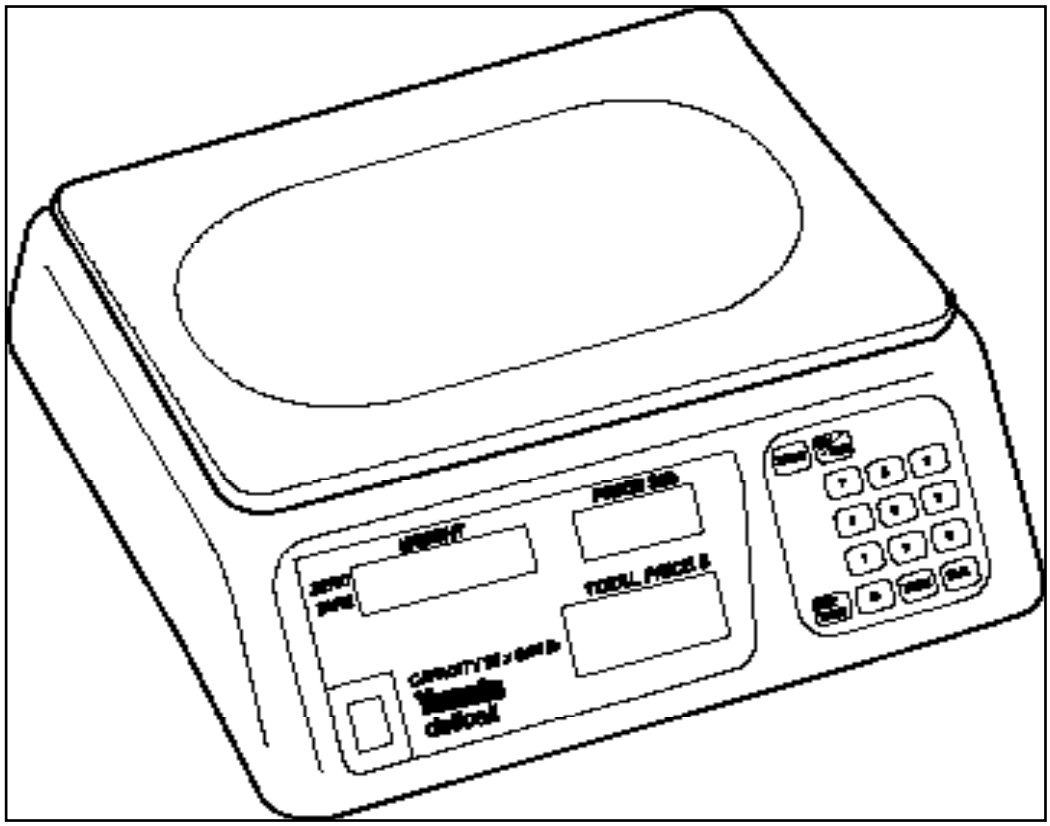
Delicell Technical Manual

Price Computing Scale



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YCO-1038-08-99

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SAFETY INSTRUCTIONS

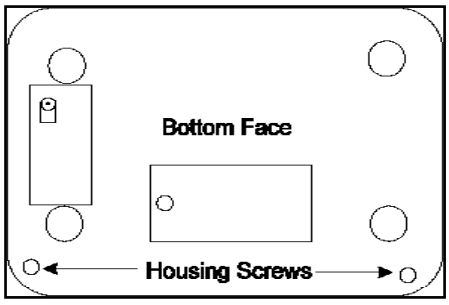
Before using the scale, carefully read, understand, and follow the “Safety Instructions” described in this manual. Observe the advice given in the “Operations” section to ensure proper operation. Keep this operation manual handy for reference.

1) This scale is **not** an explosion-proof model. Do not use the scale in an atmosphere containing flammable gases or explosive fumes. A fire or an explosion can result.
2) Do not operate the scale if there is smoke or a burned smell coming from the scale. Unplug the scale immediately. After making sure that there is no danger, consult your dealer. Never try to repair the scale by yourself.
3) Never step on or sit on the scale. Not only will the scale be damaged, but you may also be injured.
4) Place the item to be weighed in the center of the platform. Items placed on the edge of the platform may fall off and cause injury.
5) When weighing a heavy or large item, or an unbalanced item, make sure the item is stable on the platform, otherwise, an accident may occur.
6) When carrying or moving the scale, be sure to hold it by the bottom of the base with both hands. If you hold it by the platform, the platform or the platform support may become detached and the scale dropped. This will damage the scale. The platform is designed for easy removal and cleanup.
7) Do not insert your finger into the gap or holes in the scale. You may be injured.

I Set-up Procedure

A. Scale Disassembly

1) Cut the sealing wire on the right side of the scale, and remove both sealing screws.
2) Remove the stainless steel platform.
3) Remove the five upper housing screws: three from the top and two from the bottom (Figure 1).



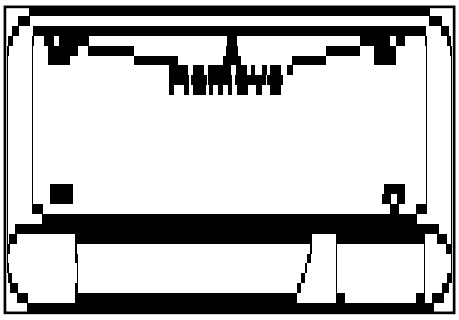


Figure 1

4) Carefully lift up on the upper housing, only raising it enough (2-3") to reveal the test pins on the display board (Figure 2).

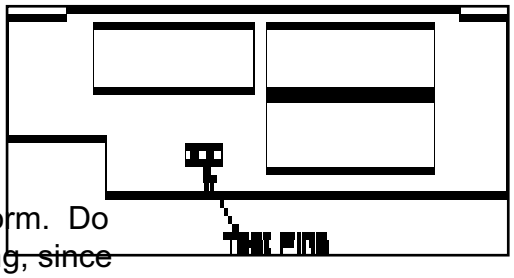
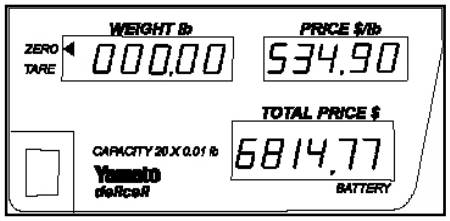


Figure 2

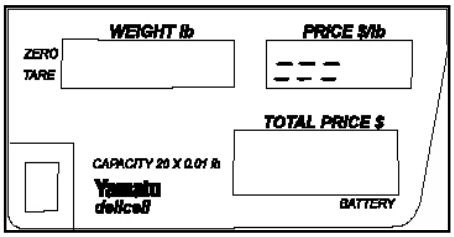
5) A small connector will be hanging from one of the test pins. Short the test pins by placing this connector across both pins.
6) Carefully put the upper housing back to its original position and replace the platform. Do not screw on the upper housing, since access to the inside is still needed.

B. Calibration

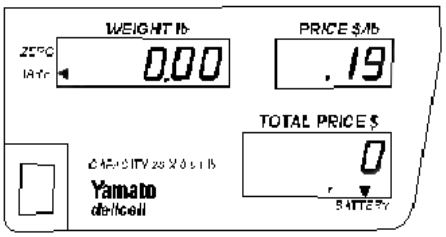
1. Span Adjustment



7) Press ON/OFF to turn on the scale. The scale is now in TEST mode. Allow the scale to "warm up" for 20 minutes.



8) Press ZERO, [ ], [ ], 7, 8, 9 consecutively to enter PROGRAMMING mode.



9) Press 1, 9 to access keyword 19. The parameter value will appear in the TOTAL PRICE display.

The value shown is 2. Press 0 to set the parameter value to zero, as shown in the illustration to the left.

Press TARE to enter the keyword into memory. The keyword will increment by one to 20.

NOTE: If CLR is pressed, the display will clear and look like the display shown in Step 8.

10) Press ON/OFF to go back to TEST mode, as shown in Step 7.

11) Confirm that the WEIGHT display shows zero. If not, press CLR.

12) Place a 20 lb. load on the platform. If the WEIGHT display exceeds 20000 +/- 2, repeatedly press TARE until the display shows a value within the limits.

13) Remove the 20 lb. load and confirm that the WEIGHT display has returned to zero. If not, repeat Steps 11-13.

14) Apply a 10 lb. load to the platform. If the weight value shown in the WEIGHT display is 10000 +/- 2, skip to Step 20. If the weight value is not 10000 +/- 2, continue with Step 15. Write down the weight value for future reference.

2. Non-Linearity Compensation

15) Unload the platform.

16) Press ZERO, [ ], [ ], 7, 8, 9 consecutively to enter PROGRAMMING mode.

17) Press 3, 2 to access keyword 32. Write down the original parameter value of keyword 32, shown in the TOTAL PRICE display.

18) If the weight value is greater than 10000, increase the parameter value 5 to 10 counts from the original parameter value. If the weight value is less than 10000, decrease the parameter value 5 to 10 counts from the original parameter value.

Ex. If the weight value is 10008, the parameter value must be increased. If the original parameter value was 370, increase the value to 375. To do this, press 3, 7, [ ], TARE.

19) Return to Step 10 and repeat Steps 10 - 14.

20) Press ZERO, [ ], [ ], 7, 8, 9 consecutively to enter PROGRAMMING mode.

21) Press 1, 9 to access keyword 19. Press 2, TARE to reset the parameter value to 2

C. Scale Reassembly

22) Remove the platform and upper housing.

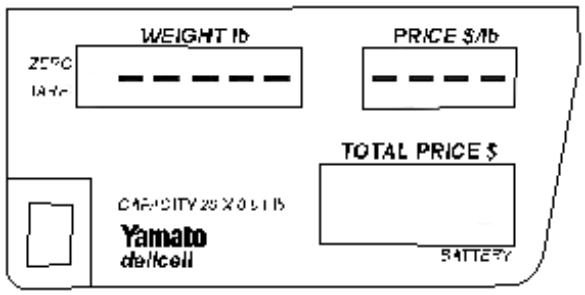
23) Unshort the test pins by removing the connector. Hang the connector from one pin to avoid losing the connector.

24) Put the upper housing back to its original position, then press ON/OFF twice to power off the scale.

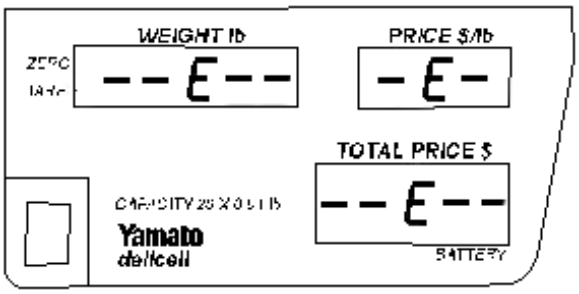
25) Reassemble the scale.

NOTE: The scale must be inspected and resealed by a certified inspector before it can be used for trade.

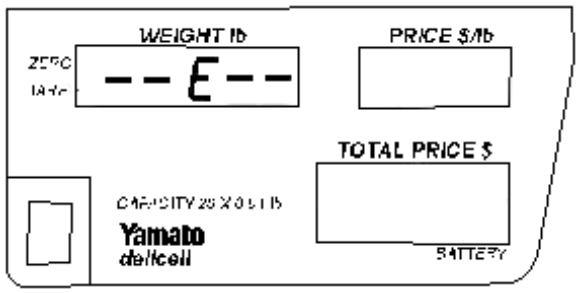
II. Troubleshooting



---- is displayed in the “Weight” and “Unit Price” window when an applied load exceeds full scale capacity by 3 scale intervals or more, or indication falls below gross zero by 20 scale intervals or more.



--E-- is displayed, in the “Weight” , “Price” and “Unit Price” windows. This displays when the battery output has decreased to a level at which the scale cannot function.



--E-- is displayed in the “Weight” window when turned on aor activating the tool-operated “zero” switch if a change of zero exceeds the limits of +/-30 scale intervals relative to zero.

III Parameter Lists

A. User Keyword Parameter Chart

Keyword	Function	Description	Standard
01	Auto Timer	Length of time scale remains on before auto-shutoff. 0: always powered on 1 to 9: 10 minutes of time per increment.	1
03	Display Test Flash after Power On	0: no flash 1: flash	0
17	One Time Tare	0: Consecutive tare 1: One time tare	1
19 2	Zero Resettable Range	0: +/- 1.9% of full scale relative to zero at power on. 1: -1.9% to +17.9% of full scale relative to true zero. 2: -1.9% to 17.9% of full scale relative to true zero at power on. +/- 1.9% of full scale during operation.	
21	Clear Unit Price at Return to Zero	0: Disabled 1: Enabled	1
32	Non-linearity		

B. Factory Parameter Value

Keyword	Function	Description	Standard
02	Stability	Display update rate 0 to 9: Number of A/D conversions per display update 0,1:1 10 :1	4
04	Display HOLD, Specific function	0: Not Specified 1: Germany Specified	0
05	Scale interval	2: Migros Specified 0: 1 g scale 2: 5 g scale 1: 2 g scale	0
06	Unit price decimal point	0: 0 1: 0.0 2: 0.00 3: 0.000	2
07	Weight decimal point	0: 0 1: 0.0 2: 0.00 3: 0.000	2
08	Price decimal decimal point	0: 0 1: 0.0 2: 0.00 3: 0.00 (same as 2)	2
09	Price round off	Unit Price per 100 g 0: Round off 1: Discarded 2: Round off at 0 or 5 Unit Price per 1kg 3:Round off 4: Discarded 5: Round off at 0 or5	0
10	Function Assigned to up-per left hand corner key on keyboard	0: Zero reset key 1: Test Key	0

B. Factory Parameter Value (con't)

Keyword	Function	Description	Standard
11	HOLD key	0: Display data held 1: No hold	1
12	Hold duration	0,100 : No hold 1 to 99 : Approx. 1.2 seconds per increment Hold duration is initiated again when HOLD key is pressed during the duration. Display returns to weighing mode regardless of remaining time if new commodity is placed on the platform during hold. No hold at weighing below 4 scale intervals.	0
13	Total Price and	0: Enabled through "+" key 1: Disabled	1
14	"PT" (Preset tare)	0: Enabled 1: Disabled	0
15	Accumulated Memories clearing at power off	0: Cleared 1: Not cleared	0
16	Tare Memory Price at power off	0: Not cleared 1: Cleared	1
17	One time tare	0: Consecutive tare 1: One time tare	1
18	Zero setting during taring	0: Enabled 1:Disabled	1
19	Zero resettable limits	0: +- 1.9% of full scale relative to zero at power on 1: -1.9%+17.9% of full scale relative to to true zero. 2: -1.9% =17.9% of full scale relative to zero at power on during weighing mode	2
20	Polarity of compensation temp effect on span	0: Positive compensation 1: Negative compensation	0

B. Factory Parameter Value (con't)

Keyword	Function	Description	Standard
21	Unit Price clearing at returning to zero	0: Diabled 1: Enabled	1
22	Display stabilization band	0 to 9 : +- internal resolution per one increment	8
23	Display stabilization	0 to99: +-internal resolution per one increment	90
24	Zero tracking time delay	0 to 9: Approx. 1/5 second per one increment. 0=1	5
25	No function		0
26	No function		0
27	Tare Limit	0: 4 digits 1: 5 digits, applicable to capcity 10 kg of scale Taring available within max capacity.	0
28	Determination of parity concerning data received in provision of data trans transmission through RS232C	0: No Provision 1: No Parity 2: Even Parity	0
29	Setting timer for receiving control signal CTS(Clear to send) in provision of data transmission	0: Infinite or no provision of data transmission 1 to 9: 1 second per on increment	0
30	Conpensation for Temp effect on zero	P: Parameter P=0&50:No compensation P=(s1-s2) x 10 / (t1-t2) for (z1-z2)>0 P=50 + |(z1-z2) x 10 / (t1-t2)| for (z1-z2)>0 z1: Initial value @ high temp t1 C z2: Initial value @ low temp t2 C	
31	Compensation for temp effect on span	0: No compensation 1 to 9: P: Parameter P=|(s1-s2) x 10 / (t1-t2)| s1: Span value at high temp. t1 C s2: Span value at low temp t2 C (s1-s2)<0, P=0 for keyword 20 (s1-s2)>0, P=1 for keyword 20	3*

(*) assigned in most cases

B. Factory Parameter Value (con't)

Keyword	Function	Description	Standard
32*	Compensation for non-linearity	P: Parameter, usally approx. 370 P= (v-10000) x 10 v: Value in weight display at a test load corresponding to half the max. capcity in test mode.	
33	Constant to be set up model of load cell used	in accordance with	128
34	Constant to be set up in accordance with model of load cell used		36

(*) assigned in most cases

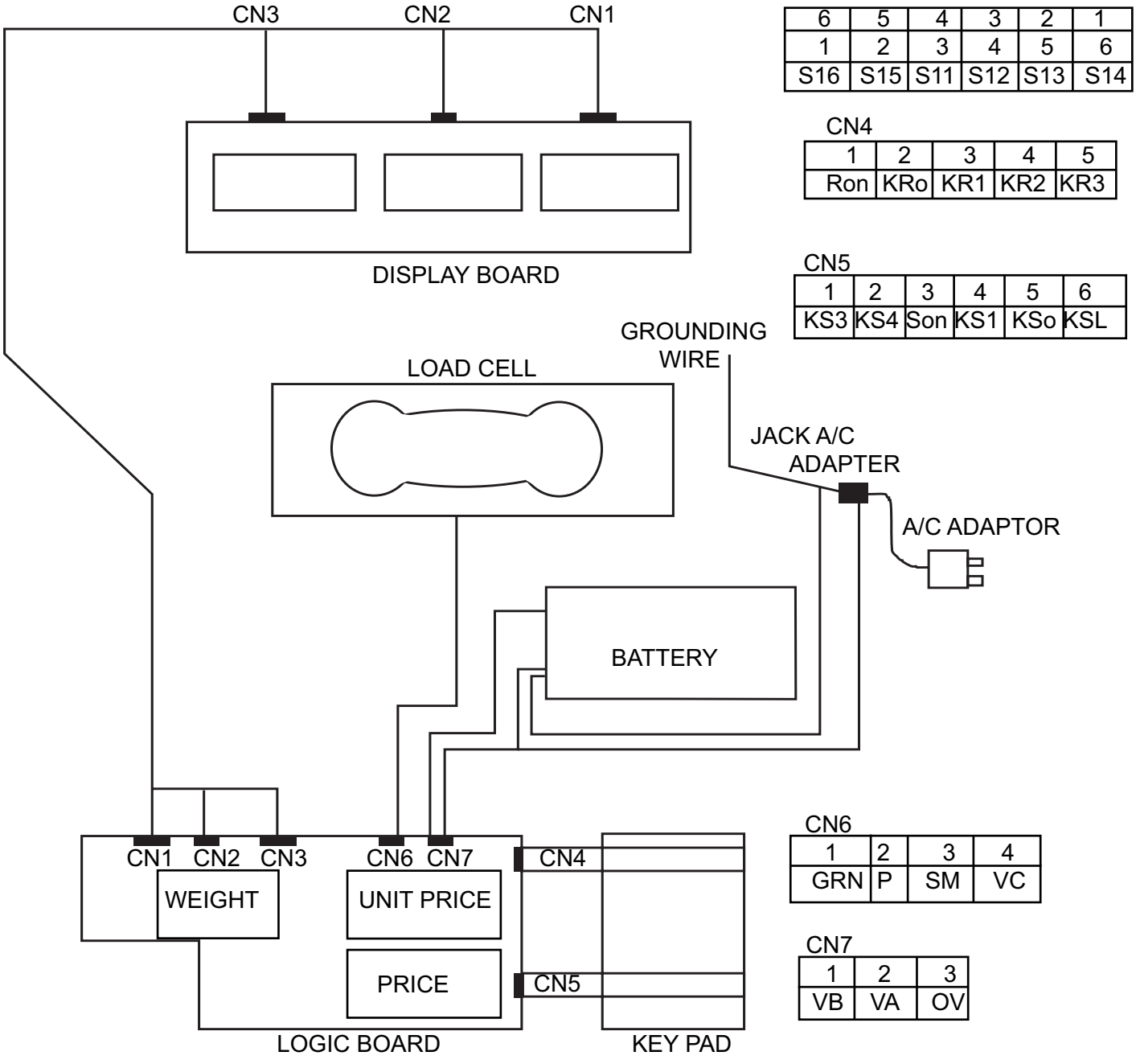
IV. Wiring

CN1

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
S10	S9	S8	S7	S6	S5	S4	S3	S2	S1	S0	com4	com3	com2	com 1

CN3

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
S31	S30	S29	S28	S27	S26	S25	S24	S23	S22	S21	S20	S19	S18	S17



CN2

6	5	4	3	2	1
1	2	3	4	5	6
S16	S15	S11	S12	S13	S14

CN4

1	2	3	4	5
Ron	KRo	KR1	KR2	KR3

CN5

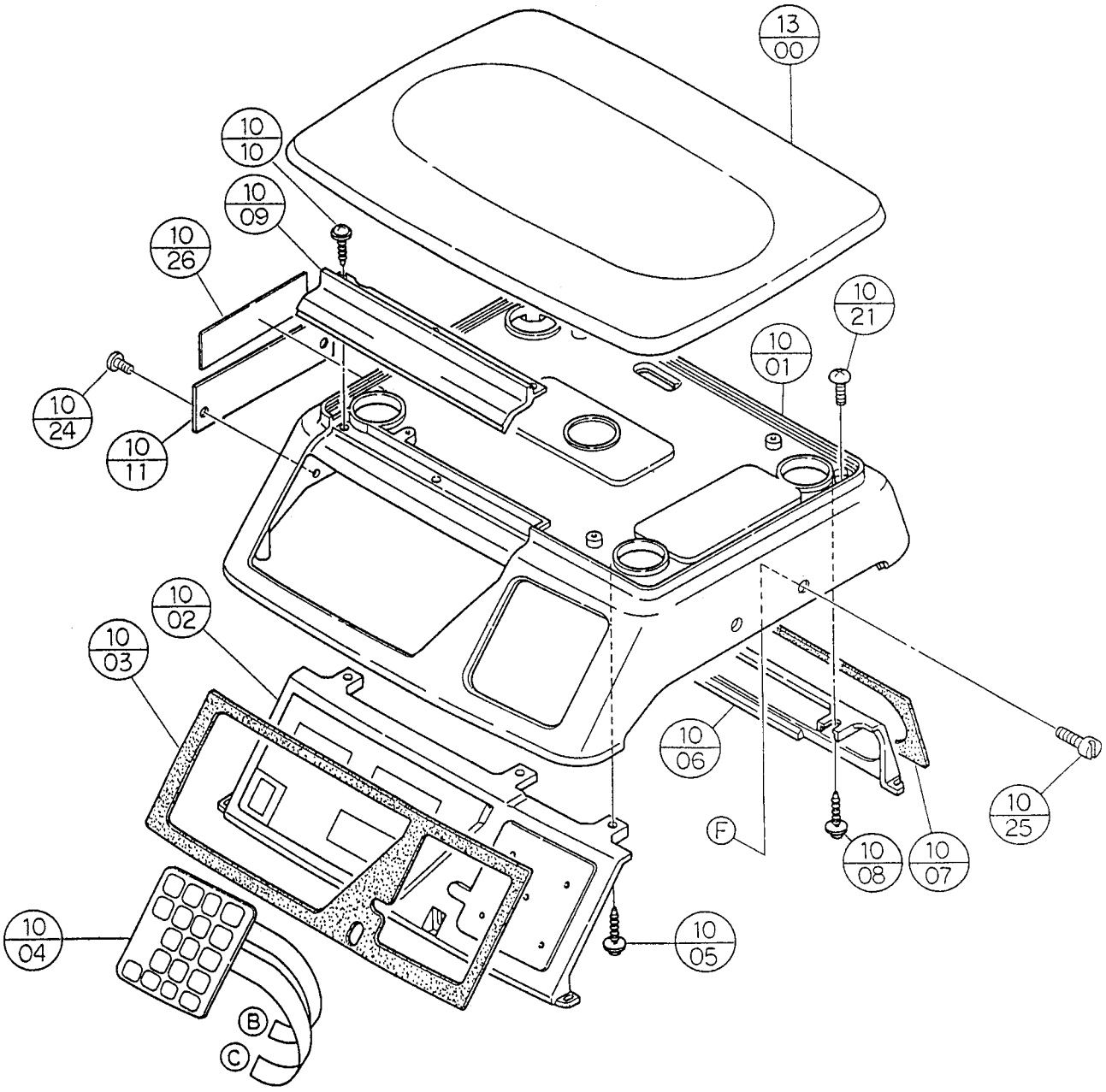
1	2	3	4	5	6
KS3	KS4	Son	KS1	KSo	KSL

CN6

1	2	3	4
GRN	P	SM	VC

CN7

1	2	3
VB	VA	OV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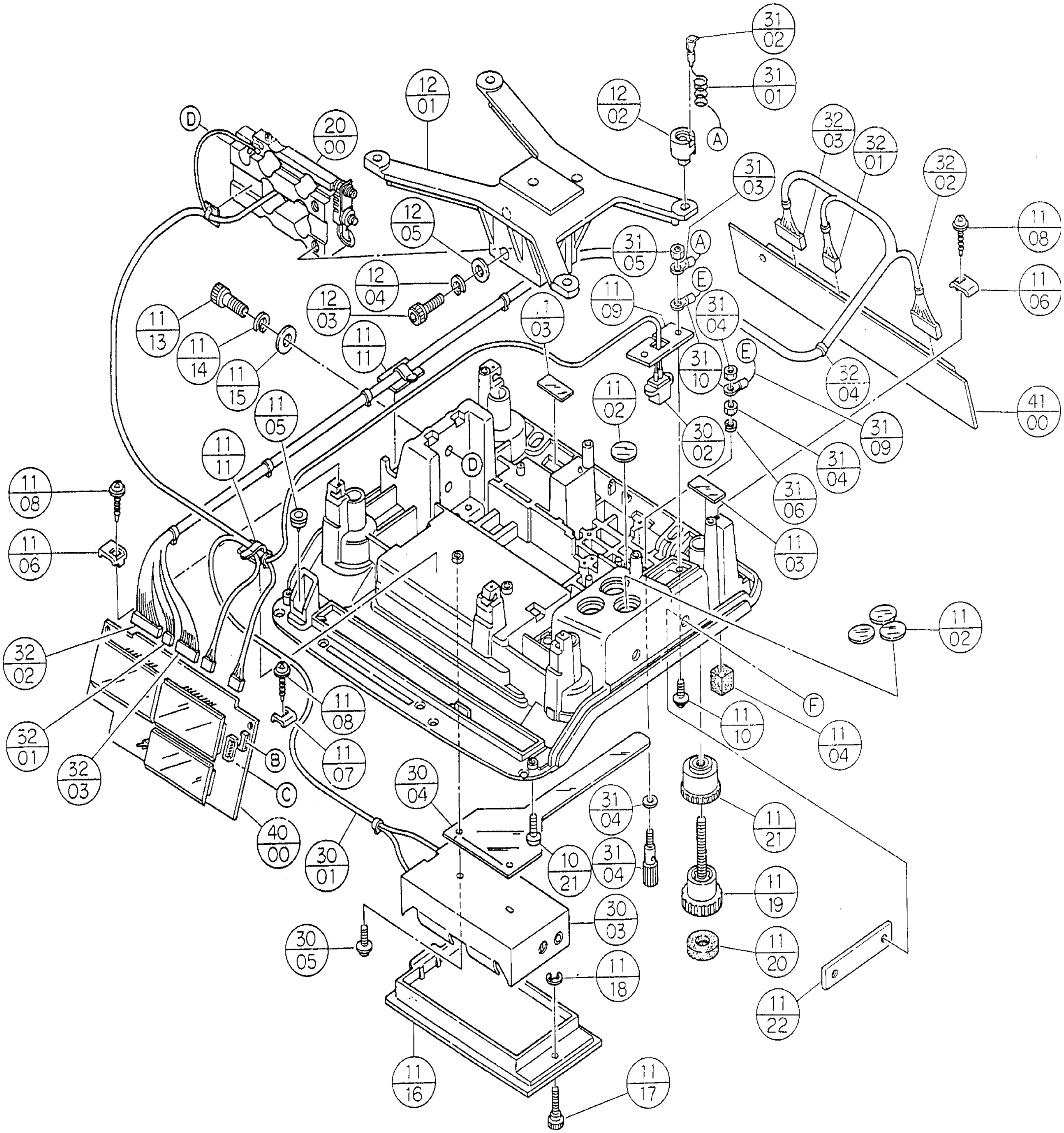
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11/18
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11/17

V. Parts List

ITEM	PART NUMBER	DESCRIPTION	QTY.	PRICE/UNIT
10-01	YAM-1505-001006	Upper Housing	1	
10-02	YAM-1505-001002	Front Glass: vender side	1	
10-03	YAM-1505-001004	Front Glass Packing: vender side, stickable	1	
10-04	YAM-1505-001001	Membrane Switch	1	
10-05	YAM-1505-001011	Cross-Recessed Flanged Head Tapping Screw, M3x8	6	
10-06	YAM-1505-001003	Front Glass: customer side	1	
10-07	YAM-1505-001012	Front Glass Packing: customer side, stickable	1	
10-08	YAM-1505-001013	Cross-Recessed Flanged Head Tapping Screw, M3x8	5	
10-09	YAM-1505-001014	Rim, Upper Housing	1	
10-10	YAM-1505-001015	Cross-Recessed Flanged Head Tapping Screw, M3x8	3	
10-11	YAM-1505-001016	Serial Number Plate, stickable	1	
10-21	YAM-1505-001017	Cross-Recessed Truss Head Screw, M4x10	5	
10-24	YAM-1505-001018	Rivet	2	
10-25	YAM-1505-001019	Sealing Screw	2	
10-26	YAM-1505-001020	FCC Sticker	1	
11-01	YAM-1505-001007	Lower Housing	1	
11-02	YAM-1505-001021	Blind Lid A	4	
11-03	YAM-1505-001022	Blind Lid B	2	
11-04	YAM-1505-001023	Dust Guard	4	
11-05	YAM-1505-001024	Leveling Indicator	1	
11-06	YAM-1505-001025	Board Holder A	3	
11-07	YAM-1505-001026	Board Holder B	1	
11-08	YAM-1505-001027	Cross-Recessed Flanged Head Tapping Screw, M3x6	4	
11-09	YAM-1505-001028	Jack Mounting Plate	1	
11-10	YAM-1505-001029	Cross-Recessed Pan Head Screw, M3x12	2	
11-11	YAM-1505-001030	Wire Binder, stickable (E-20)	2	
11-13	YAM-1505-001031	Hex Socket Head Cap Screw, M8x25	2	
11-14	YAM-1505-001032	Lock Washer, M8	2	
11-15	YAM-1505-001033	Flat Washer, M8	2	
11-16	YAM-1505-001034	Lid, Battery Box	1	
11-17	YAM-1505-001035	Thumb Screw, M4x14	1	
11-18	YAM-1505-001036	Retaining Ring, type E (E-3)	1	
11-19	YAM-1505-001037	Leveling Leg	4	
11-20	YAM-1505-001038	Leveling Leg Rubber Cap	4	
11-21	YAM-1505-001039	Locking Cap	4	
11-22	YAM-1505-001040	Sealing Screw Mounting Plate	1	
12-01	YAM-1505-001009	Spider	1	
12-02	YAM-1505-001090	Shock-Absorbing Rubber F (for 10 kg cap.)	4	
12-03	YAM-1505-001042	Hex Socket Head Cap Screw, M8x25	2	
12-04	YAM-1505-001043	Lock Washer, M8	2	
12-05	YAM-1505-001044	Flat Washer, M8	2	
13-00	YAM-1505-001005	Platform, Concave	(1)	
		Platform Assemby	1	
20-00	YAM-1505-001008	Vibrating Wire Load Cell Assembly (Model VP 331)	1	
	Capacity: 12 kg			
20-07	YAM-1505-001052	Vibrating Wire Kit (Model VP 331)*Not pictured	1	

V. Parts List

ITEM	PART NUMBER	DESCRIPTION	QTY.	PRICE/UNIT
30-01	YAM-1505-001067	Wiring Harness, Jack to Battery Box, 370mm	1	
30-02	YAM-1505-001068	Jack, AC Power	1	
30-03	YAM-1505-001069	Battery Box	1	
30-04	YAM-1505-001070	Battery Remover, stickable	1	
30-05	YAM-1505-001071	Cross-Recessed Flanged Binding Head Screw, M3x8	2	
31-01	YAM-1505-001072	Grounding Wire, 100mm	1	
31-02	YAM-1505-001073	Grounding Plate	1	
31-03	YAM-1505-001074	Terminal Tab	1	
11-04	YAM-1505-001075	Grounding Terminal with 2 x Hex Nut (M3) and	1	
		1 x Flat Washer (M3)		
31-05	YAM-1505-001076	Hex Nut, M3	1	
31-06	YAM-1505-001077	Lock Washer, M3	1	
31-09	YAM-1505-001078	Ground Wire, 60mm	1	
31-10	YAM-1505-001079	Terminal Tab	2	
32-01	YAM-1505-001080	Harness	1	
32-02	YAM-1505-001081	Harness	1	
32-03	YAM-1505-001082	Harness	1	
40-00	YAM-1505-001000	Logic Board Assembly	1	
41-00	YAM-1505-001010	Display Board Assembly	1	
45-00	YAM-1505-001084	Sensor Board Assembly	1	
90-01	YAM-1505-001085	Hood	1	
90-04	YAM-1350-000101	AC Adaptor, optional	(1)	
90-05	YAM-1505-001088	Dust Seal Ring	4	