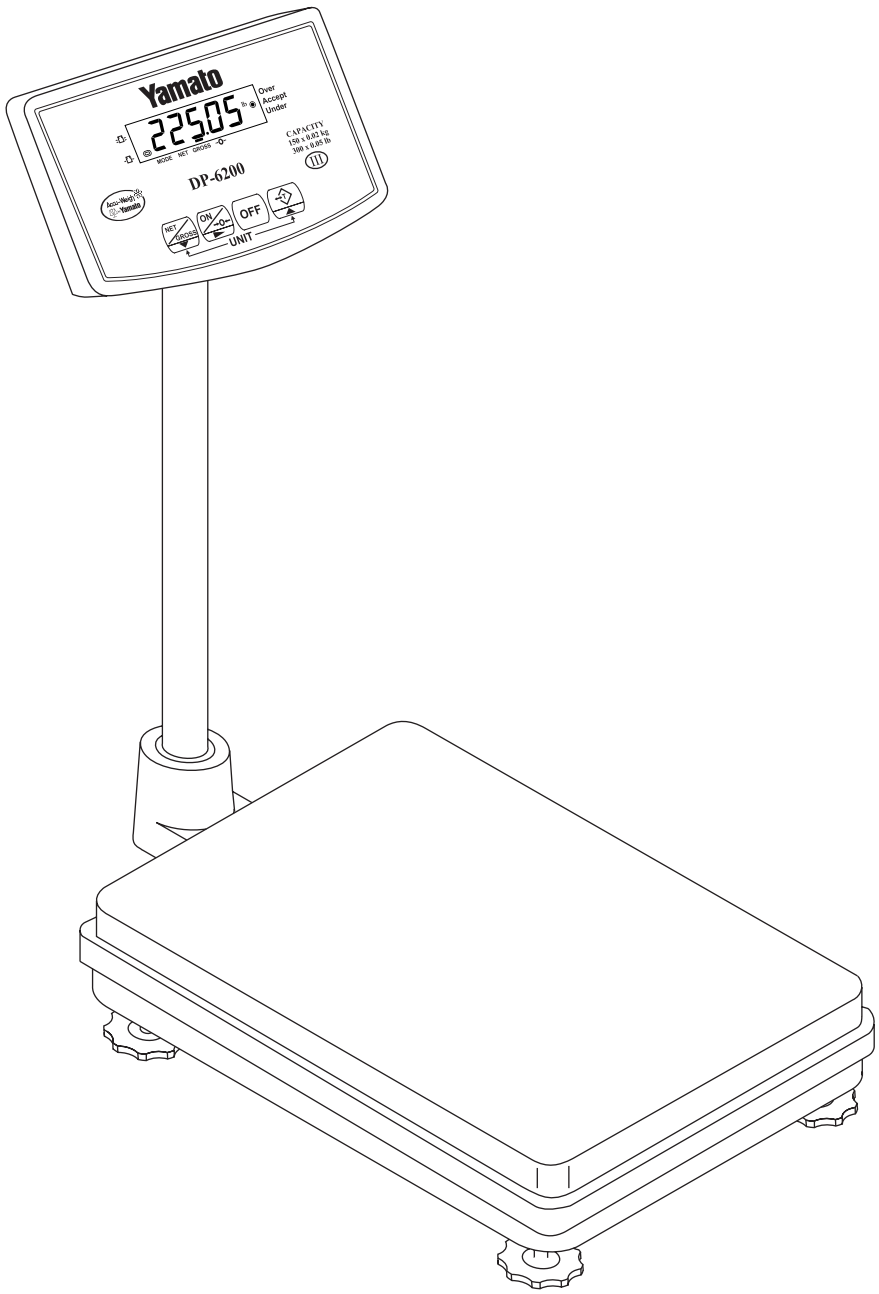
DP-6200 Technical Manual



Yamato

YAMATO CORPORATION
1775 S. Murray Blvd.
Colorado Springs, CO 80916 USA
Tel (719) 591-1500 Fax (719) 591-1045

YAMATO TECH CORPORATION
#112-19425 Langley By-Pass
Surrey, B.C. V3S 6K1 Canada
Tel (604) 533-2338 Fax (604) 533-0827

YCO-1112-09-02

DP-6200 Technical Manual

Table of Contents

I Safety Instructions

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

To prevent injury

1) DO NOT SHOCK LOAD the scale, Never step on or sit on the scale. Not only will the scale be damaged, but you may also be injured.
2) DO NOT APPLY DIRECT WATER SPRAY to the scale if it is powered by an AC adaptor!! You could receive a shock. The scale is not washdown unless the AC jack is plugged with a water-tight seal.
4) Do not operate the scale if there is smoke or a burnt smell coming from the scale. Remove the batteries or unplug the AC adaptor immediately. After making sure that there is no danger, consult your dealer. **Never try to repair the scale by yourself.**
5) 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.
6) 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.
7) When weighing a heavy, large or unbalanced item, make sure the item is stable on the platform, otherwise an accident may occur.
8) When carrying or moving the scale, be sure to hold it by the bottom of the weighing platform with both hands. If you hold it by the column, the column may become detached causing the scale to fall. This will damage the scale and could cause injury.
9) Do not insert your finger into the gap or holes in the scale. You may be injured.
10) The DP-6200 uses a liquid crystal display. If the LCD breaks and the liquid leaks from the LCD, do not touch it with your fingers. The liquid is toxic if ingested. Be especially careful around small children.

To prevent damage to the scale

1) Do not push the indicator or keys with sharp objects. They may break or puncture the switch membrane panel.
2) Use the specified power supply and choose a suitable environment. If you do not, the weight readings may be inaccurate and the scale may be damaged.
3) The scale is a sensitive weighing instrument, avoid physical shocks. If you drop something on the scale, overload the scale, step on the platform, or drop the scale, the scale may be damaged and lose accuracy.
4) If the scale becomes dirty, wipe it with a soft cloth. For stubborn stains, apply a little neutral detergent and then wipe the scale with a dry cloth. Do not use thinner, benzene, hot water, or chemical agents, all of which can cause deformation, discoloration, or deterioration of the scale.
5) Never remove the case. The fine adjustment section may be damaged and you may be injured by sharp edges on the internal parts.
6) Do not place the scale upside down.
7) When the low battery indicator appears, replace all six of the batteries. When installing the batteries, install them according to the polarity markings in the case (+, -). If the scale will not be used for a long period, remove the batteries.
8) The DP-6200 is not washdown unless the AC adaptor jack is sealed.

To keep the scale working efficiently

1) Place the scale on a flat stable surface that will support the scale and the load.
2) Do not place the scale in an area exposed to direct sunlight or to wind currents from an air conditioner, otherwise, the measurements will not be accurate.
3) Do not place the scale near machines that create vibrations or electromagnetic disturbance, such as microwave ovens, portable phones, or large motors. This will affect the accuracy.
4) The operating temperature range is from –5°C to +35°C (23°F to 95°F). Do not subject the scale to sudden temperature changes; allow the scale to adjust to the new temperature before use.
5) If the scale is sealed, do not break the seal. If you break the seal, the scale will not be considered legal for trade. In this case, contact your dealer.
6) Do not disassemble or modify the scale, you will void the warranty. Modified scales will not be legal for trade.

II Description

Name and Function of Parts

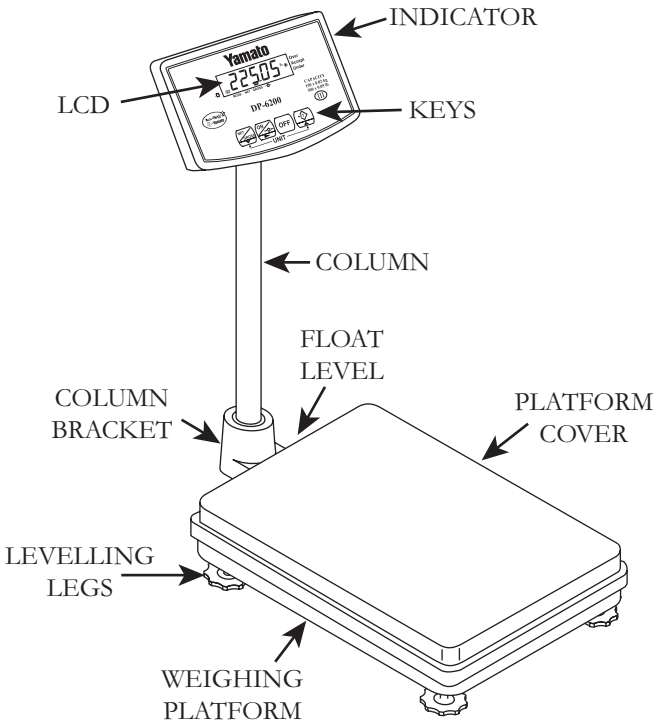


FIG. 1

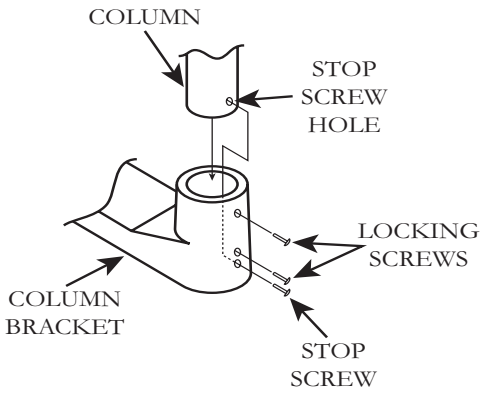


FIG. 2

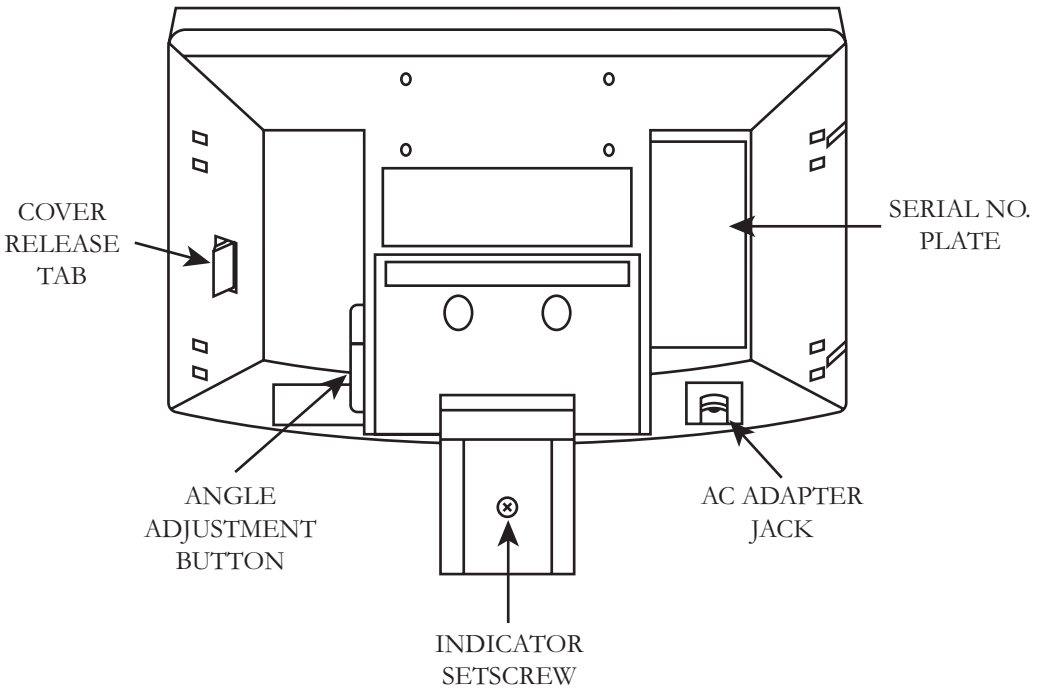


FIG. 3

II Description

Name and Function of Parts

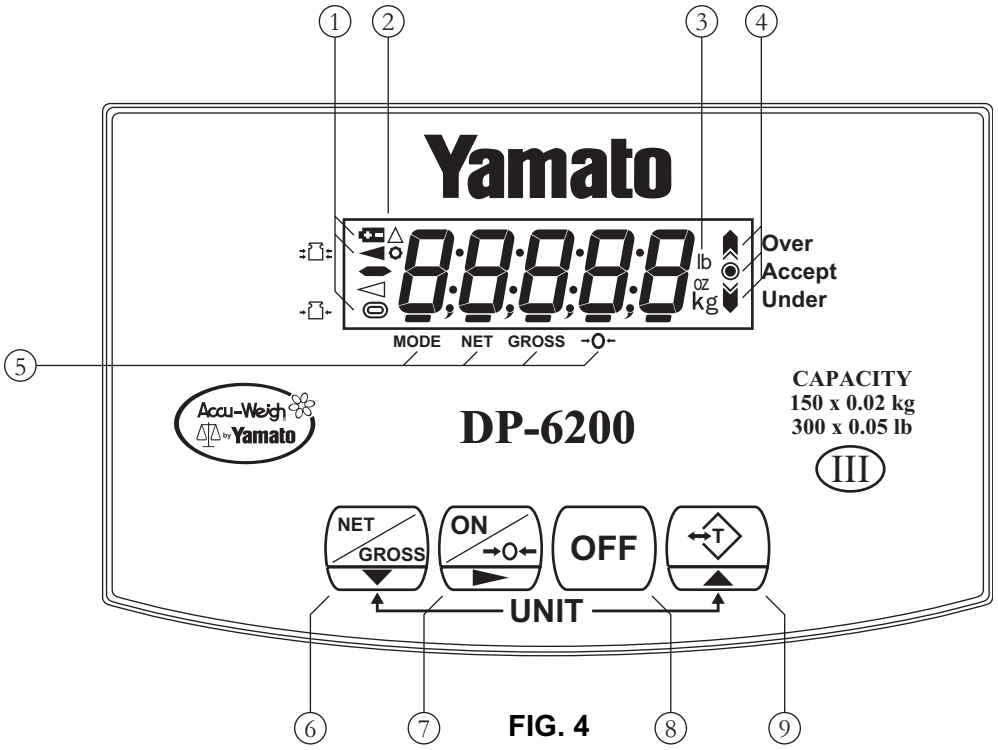


FIG. 4

1)		Low Battery Indicator	Time to replace the batteries.
	◄	Hold Indicator	The scale is in Hold mode (not legal-for-trade).
	○	Test Mode Indicator	The scale is in Test Mode.
	⬭	Stable Indicator	Indicates the weight indication is stabilized.
2)		LCD Display	Shows all scale indications and weight readings.
3)		Unit Indication	KG, LB, OZ and LB-OZ (not legal-for-trade).
4)		Over Indicator	The current weight is over the user's maximum setpoint.
		Accept Indicator	The current weight is within the user's setpoints.
		Under Indicator	The current weight is below the user's minimum setpoint.
5)	MODE	Mode Indicator	The scale is in setup mode.
	NET	Net Indicator	The scale is indicating net weight.
	GROSS	Gross Indicator	The scale is indicating gross weight.
	-0-	Center of Zero Indicator	The scale is at gross zero.
6)		Net/Gross Key	Toggles between gross and net weight readings.
		Decrease Key	Decreases setpoints.
		Unit Selection Key	Press both keys simultaneously to toggle between kilogram and either pound, ounce or pound-ounce units.
7)		On/Zero Key	Turns the power on, and zeroes the display.
		Next Key	Moves to the next setpoint.
8)		Off Key	Turns the power off.
9)		Tare Key	Tares off the current weight.
		Increase Key	Increases setpoints.
		Unit Selection Key	Press both keys simultaneously to toggle between kilogram and either pound, ounce or pound-ounce units.

II Description

Specifications

Weighing system:	Strain-gauge load cell
Platform:	13.8” x 19.7” (350 x 500 mm), stainless steel
Weight display:	Single face display
Type:	7 segment LCD
Character size, etc.:	0.5” (12 mm) (W) x 0.9” (23 mm) (H), 5 digits
Optional equipment:	Batteries, AC adaptor, RS-232C communication board
Power supply:	9V DC - six “D” size batteries or AC adaptor (the scale is not washdown unless the AC jack is plugged with a water-tight seal).
Consumption:	0.12 W (max.)
Battery life:	600 hours of continuous use (when using alkaline batteries.)
Operating temperature:	23°F to 95°F (-5°C to 35°C)
Operating humidity:	25% to 85% RH
Waterproof classification:	Complies with NEMA 4 (washdown) when the AC jack is plugged with a water-tight seal.

Capacities and divisions:

Kilogram	Pound	Ounce	Pound-Ounce*
30 kg x 0.01 kg	60 lb x 0.02	960 oz x 0.5 oz	60 lb x 0.5 oz
60 kg x 0.02 kg	150 lb x 0.05 lb	2400 oz x 1 oz	150 lb x 1 oz
150 kg x 0.05 kg	300 lb x 0.1 lb	4800 oz x 2 oz	300 lb x 2 oz

* Combined units, such as pound-ounce, are not legal-for-trade.

The DP-6200 is available in four capacities. It displays units of kilograms and one of the following three: decimal pounds, continuous ounces, or pounds and ounces. It is important to note that various parameter settings depend upon the mode (decimal pound, continuous ounce, or pound and ounce) option selected when the scale was purchased. See section IV - Changing the Scale Setup for the standard settings for each mode.

The DP-6200 is not washdown unless the AC adaptor jack is sealed. Remove the batteries when operating the scale with the AC adaptor. Use only the AC adaptor supplied or an adaptor of the same output characteristics.

III Calibration

The DP-6200 can be setup to be calibrated with pound weights or with kilogram weights. Check the setting of system parameter 78 (see section IV - Changing the Scale Setup). 000 sets the scale to be calibrated with kilogram weights, 001 sets the 60 lb and 300 lb scales to be calibrated with pound weights, and 002 sets the 150 lb scale to be calibrated with pound weights.

1) Open the indicator housing by pulling the release tab forward and swinging the front panel of the housing forward. Short the two test pins to the right of the CPU on the main board. The Test Mode ennunciator and internal counts will display.

Test Mode

2) Press and hold the ON/→0← key and press the NET/GROSS key. If the scale indicates two point calibration mode, change it to three point calibration mode by pressing the NET/GROSS key.

Two Point Mode

If it becomes necessary to abort the calibration procedure before completing it, press the ON/→0← key to return to the test mode.

Three Point Mode
Zero Calibration

3) Remove all items from the scale platform, wait for the stable indicator to display and press the →T← key.

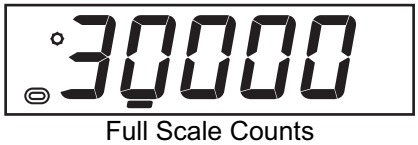
4) Place 1/2 the full capacity of the scale on the platform, wait for the stable indicator to display and press the →T← key.

1/2 Capacity Calibration

5) Place the full capacity of the scale on the platform, wait for the stable indicator to display and press the →T← key.

Full Capacity Calibration

6) The scale will return to Test Mode and indicate full scale counts of 30000 for all kg, 27215 for 60 lb and 300 lb, and 34025 for 150 lb calibration. The full scale counts should be within +/- 3 counts of the appropriate target. Press the OFF key to exit Test Mode.



Full Scale Counts

If the scale indicates error 103, then reconfirm that system parameter 78 is set correctly for the weights being used and the capacity of the scale. Verify that the correct weights, 1/2 capacity and full capacity, are being used. Make sure that nothing is restricting the motion of the platform, pressing against the platform or wedged between the upper and lower platform. Remove any sources of vibration or electromagnetic radiation (i.e. - cell phones, power cables, motors, compressors, etc.) Repeat the calibration procedure. If the error repeats, see section V - Troubleshooting.

Error 103

IV Changing the Scale Setup

Changing Parameters

The scale setup is controlled by three groups of parameters that determine how the scale operates. These three groups are User Parameters, System Parameters and Factory Parameters.

User Parameters (00 - 09) can be changed in both User Mode and System Mode. They are easily accessed, without breaking the seal or opening the indicator housing, and control functions such as the auto-off, RS-232 communications and whether the scale starts in metric or standard units. The User Parameters are included in System Mode for the convenience of the technician.

System Parameters (30 - 40) can be changed in System Mode. They control functions that the technician may need to change under unusual circumstances. Since these functions can alter the accuracy of the scale, the seal has to be broken to access System Mode through Test Mode.

Factory Parameters (51 - 99) can be change in Factory Mode. They control functions that directly relate to the accuracy, capacity and divisions of the scale and are rarely changed outside of the factory. Factory Parameters are usually only changed if a different standard mode (pound, ounce or pound-ounce) is needed or if a different capacity load cell is installed. Since these functions can alter the accuracy of the scale, the seal has to be broken to access Factory Mode through Test Mode.

Each parameter has two components, the parameter keyword and the parameter value. The first two digits are the keyword and determine which parameter is being changed. The last three digits are the value and determine what the selected parameter is being changed to.

Keyword **Value**

While each mode is accessed differently, all modes use the same keys to select and change the parameter settings.

To select the desired keyword, use the keys as follows:

ON →0← - increase the keyword by one

ON →0← + NET GROSS - decrease the keyword by one

To change a parameter value, use the keys as follows:

←T - increase the value by one

←T + NET GROSS - increase the value by ten

NET GROSS - decrease the value by one

NET GROSS + ←T - decrease the value by ten

<u>To save the last value changed it is necessary to advance to the next keyword before exiting the setup mode.</u> Press and hold the ON →0← key and press the NET GROSS key to exit System Mode or Factory Mode and return to Test Mode. Press the OFF key to exit any setup or test mode.

IV Changing the Scale Setup

User Mode

With the scale on, press the ON →0← and →T← keys to enter the user setup mode. Press the OFF key to exit the user setup mode.

Test Mode

Open the indicator housing by pulling the release tab forward and swinging the front panel of the housing forward. Short the two test pins to the right of the CPU on the main board. The Test Mode ennunciator and internal counts will display. Pressing the →T← key will cause the scale to cycle through the following displays: internal counts, initial counts, direct raw counts, average raw counts, battery check/A to D conversion value (should be around 220), ROM version and a display segment check. Press the OFF key to exit Test Mode.

Test Mode

System Mode

Enter Test Mode and then press the ON →0← key and the →T← key. The display will show system parameter 30. Use the ON →0← key to cycle through the system parameters (30 - 40) and then the user parameters (01 - 09). See the previous page for instructions on changing the parameters. Press the ON →0← key and the →T← key to return to Test Mode or press the OFF key to exit setup.

System Mode

Factory Mode

Enter Test Mode, press the ON →0← key and the NET GROSS key to enter Calibration Mode, and then press the →T← key and the ON →0← key to enter Factory Mode. The display will show factory parameter 99. Use the ON →0← key to cycle through the factory parameters (50 - 99). See the previous page for instructions on changing the parameters. Press the ON →0← key and the →T← key to return to Test Mode or press the OFF key to exit setup.

Factory Mode

IV Changing the Scale Setup

Standard Parameter Settings - User Parameters

Key Word	User Parameter	All Cap.
01	Auto-off timer	015
02	Display hold timer	000
03	Communication	001
04	Communication data	000
05	Communication speed	000
06	Character length	000
07	Parity	000
08	Stop bit length	001
09	Default mode	001

Standard Parameter Settings - System Parameters

Key Word	System Parameter	All Cap.
30	System ID	018
31	Gravity compensation	010
32	Linearity compensation	000
33	Steady-state sampling count	004
34	Steady-state count	012
35	Polarity steady-state count	008
36	Steady-state collapse count	020
37	Steady-state average count	004
38	Zero tracking timing	004
39	Neglectable change count	001
40	Simple test mode	003

IV Changing the Scale Setup

Standard Parameter Settings - Factory Parameters, Decimal Pounds

Key Word	Factory Parameter	30 kg 60 lb	60 kg 150 lb	150 kg 300 lb
51	Scale Mode	004	004	004
52	Multi-increments	000	000	000
53	Weighing capacity base value	003	006	015
54	Weighing capacity index value	003	003	003
55	Increment for lighter range	000	001	002
56	Location of decimal point	002	002	002
57	Type of decimal point	000	000	000
58	Weighing unit	002	002	002
59	Display of weighing unit	001	001	001
60	Weighing capacity base value (lb)	006	015	003
61	Weighing capacity index value (lb)	003	003	003
62	Location of decimal point	002	002	001
63	Pound increment	002	005	001
64	Pound conversion coefficient	003	002	003
65	Zero point range	019	019	019
66	Zero point range on plus side	012	012	012
67	Over scale	003	003	003
68	Display hold function	000	000	000
69	Hold release against increased wght.	000	000	000
70	Stable mark	000	000	000
71	Tare function	002	002	002
72	Zero reset under tare operation	001	001	001
73	Power off with ON key	000	000	000
74	Special function for stability	000	000	000
75	Over - under function	001	001	001
76	Tare cancel by Zero key toggle	000	000	000
77	-bat- display toggle	000	000	000
78	Conversion coefficient for lb cal.	001	002	001
79	Center-of-zero ennunciator position	001	001	001
80	Internal resolution	010	010	010
81	1 timer (ms)	060	060	060
82	3 timer (ms)	045	045	045
91	Mechanical zero 1	auto	auto	auto
92	Mechanical zero 2	auto	auto	auto
93	Span coefficient 1 (small)	auto	auto	auto
94	Span coefficient 2 (small)	auto	auto	auto
95	Span coefficient 1 (large)	auto	auto	auto
96	Span coefficient 2 (large)	auto	auto	auto
97	Regional # and gravity for span adj.	auto	auto	auto
99	Factory setting - Do not change	000	000	000

IV Changing the Scale Setup

Standard Parameter Settings - Factory Parameters, Continuous Ounce

Key Word	Factory Parameter	30 kg 960 oz	60 kg 2400 oz	150 kg 4800 oz
51	Scale Mode	007	007	007
52	Multi-increments	000	000	000
53	Weighing capacity base value	003	006	015
54	Weighing capacity index value	003	003	003
55	Increment for lighter range	000	001	002
56	Location of decimal point	002	002	002
57	Type of decimal point	000	000	000
58	Weighing unit	002	002	002
59	Display of weighing unit	001	001	001
60	Weighing capacity base value (lb)	006	015	003
61	Weighing capacity index value (lb)	002	001	002
62	Location of decimal point	001	000	000
63	Pound increment	005	001	002
64	Pound conversion coefficient	001	001	002
65	Zero point range	019	019	019
66	Zero point range on plus side	012	012	012
67	Over scale	003	003	003
68	Display hold function	000	000	000
69	Hold release against increased wght.	000	000	000
70	Stable mark	000	000	000
71	Tare function	002	002	002
72	Zero reset under tare operation	001	001	001
73	Power off with ON key	000	000	000
74	Special function for stability	000	000	000
75	Over - under function	001	001	001
76	Tare cancel by Zero key toggle	000	000	000
77	-bat- display toggle	000	000	000
78	Conversion coefficient for lb cal.	001	002	001
79	Center-of-zero ennunciator position	001	001	001
80	Internal resolution	010	010	010
81	1 timer (ms)	060	060	060
82	3 timer (ms)	045	045	045
91	Mechanical zero 1	auto	auto	auto
92	Mechanical zero 2	auto	auto	auto
93	Span coefficient 1 (small)	auto	auto	auto
94	Span coefficient 2 (small)	auto	auto	auto
95	Span coefficient 1 (large)	auto	auto	auto
96	Span coefficient 2 (large)	auto	auto	auto
97	Regional # and gravity for span adj.	auto	auto	auto
99	Factory setting - Do not change	000	000	000

IV Changing the Scale Setup

Standard Parameter Settings - Factory Parameters, Pound and Ounce

Key Word	Factory Parameter	30 kg 60 lb	60 kg 150 lb	150 kg 300 lb
51	Scale Mode	005	005	005
52	Multi-increments	000	000	000
53	Weighing capacity base value	003	006	015
54	Weighing capacity index value	003	003	003
55	Increment for lighter range	000	001	002
56	Location of decimal point	002	002	002
57	Type of decimal point	000	000	000
58	Weighing unit	002	002	002
59	Display of weighing unit	001	001	001
60	Weighing capacity base value (lb)	006	015	003
61	Weighing capacity index value (lb)	002	001	002
62	Location of decimal point	001	002	002
63	Pound increment	005	001	002
64	Pound conversion coefficient	001	001	002
65	Zero point range	019	019	019
66	Zero point range on plus side	012	012	012
67	Over scale	003	003	003
68	Display hold function	000	000	000
69	Hold release against increased wght.	000	000	000
70	Stable mark	000	000	000
71	Tare function	002	002	002
72	Zero reset under tare operation	001	001	001
73	Power off with ON key	000	000	000
74	Special function for stability	000	000	000
75	Over - under function	001	001	001
76	Tare cancel by Zero key toggle	000	000	000
77	-bat- display toggle	000	000	000
78	Conversion coefficient for lb cal.	001	002	001
79	Center-of-zero ennunciator position	001	001	001
80	Internal resolution	010	010	010
81	1 timer (ms)	060	060	060
82	3 timer (ms)	045	045	045
91	Mechanical zero 1	auto	auto	auto
92	Mechanical zero 2	auto	auto	auto
93	Span coefficient 1 (small)	auto	auto	auto
94	Span coefficient 2 (small)	auto	auto	auto
95	Span coefficient 1 (large)	auto	auto	auto
96	Span coefficient 2 (large)	auto	auto	auto
97	Regional # and gravity for span adj.	auto	auto	auto
99	Factory setting - Do not change	000	000	000

IV Changing the Scale Setup

Parameter Descriptions - User Parameters

Key Word	Std Value	Function	Description
01	015	Auto-off timer	000 Disables auto-off. 001~240 Number of minutes unused to activate auto-off.
02	000	Display hold timer	000 No display hold for changes less than four divisions. 001~030 Display hold duration, in seconds, for changes less than four divisions. 031 No display hold.
03	001	Communication	000 No serial interface. 001 Specified commands acceptable. 002 Sends zero detection. 003 Sends motion detection. 004 Sends continuously.
04	000	Communication data	000 Net weight (1 batch) 001 Net weight, tare weight, gross weight (1 batch) 002 Net weight, tare weight, gross weight (3 batches) 003 Display content (1 batch) 004 Serial printer format (1 batch)
05	000	Communication speed	000 9600 bps 001 600 bps 002 1200 bps 003 2400 bps 004 4800 bps 005 9600 bps 006 19200 bps 007 38400 bps
06	000	Character length	000 8 bits 001 7 bits
07	002	Parity	000 Non 001 Odd 002 Even
08	001	Stop bit length	000 1 bit 001 2 bits
09	001	Default mode	000 kg 001 lb/oz

IV Changing the Scale Setup

Parameter Descriptions - System Parameters

Key Word	Std Value	Function	Description
30	018	System ID	018 Do not change.
31	010	Gravity compensation	000 No compensation. 001~016 Compensation for a specified area (Japan only.) 017~150 Acceleration due to gravity formula, (mm/s2)-9700.
32	000	Linearity compensation	000 No compensation. 001~127 Positive compensation. 128~255 Negative compensation.
33	004	Steady-state sampling count	000~255
34	012	Steady-state count	000~255
35	008	Polarity steady-state count	000~255
36	020	Steady-state collapse count	000~255
37	004	Steady-state average count	000~255
38	010	Zero tracking timing	000 Disable zero tracking 001~255 Zero tracking at specified counts
39	001	Neglectable change count	000~010 Number of counts
40	000	Simple test mode	000 User parameter valid 001 User parameter invalid 002 User parameter and simple test mode valid

IV Changing the Scale Setup

Parameter Descriptions - Factory Parameters

Key Word	Function	Description
51	Scale mode	000 Fixed single increment. 001 Multi-increments. 002 Do not use. 003 Do not use. 004 Change-over / gram mode - decimal pound mode. 005 Change-over / gram mode - lb/oz mode. 006 lb/oz mode. 007 Change-over / gram mode - continuous ounce mode.
52	Multi-increments, complex increment mode	000 Fixed single increment. 001 Fixed accuracy, 3 increments. 002 Fixed accuracy, 2 increments. 003 Increment change at 50% full scale, 2 increments. 004 Increment change at 80% full scale, 2 increments. 005 Increment change at 64% full scale, 2 increments. 006 Increment change at 40% full scale, 2 increments.
53	Weighing capacity base value	000~099
54	Weighing capacity index value	001~004
55	Increment for lighter range	000 1 001 2 002 5 003 10 004 20 005 50 006 100 007 200
56	Location of decimal point	000 0 (No decimal point.) 001 0.0 002 0.00 003 0.000 004 0.0000
57	Type of decimal point	000 Period (.) 001 Comma (,)
58	Weighing unit	000 No unit. 001 g 002 kg 003 lb. 004 oz.
59	Weighing unit display	000 No display. 001 Specified unit displayed.
60	Weighing capacity base value (pound mode)	000 Not used in pound mode. 001~099
61	Weighing capacity index value (pound mode)	000~004

IV Changing the Scale Setup

Parameter Descriptions - Factory Parameters (continued)

Key Word	Function	Description
62	Location of decimal point (lb , oz or lb/oz mode)	<Decimal pound and decimal ounce modes> 000 0 (No decimal point) 001 0.0 002 0.00 003 0.000 004 0.0000 <Pound/ounce mode> 000 0 : 0.00 001 0 : 0.0 002 0 : 0 003~004 Not used.
63	Pound increment	000~008
64	Pound conversion coefficient	000 Conversion coefficient = 1.00000 001 Conversion coefficient = 0.705479 002 Conversion coefficient = 0.881849 003 Conversion coefficient = 1.10231
65	Zero point range	000~100
66	Zero point range on plus side	000~100
67	Over scale	000~010
68	Display hold function	000 No hold 001 Hold for weight more than net + 10 divisions. 002 Hold for weight more than net + 10 divisions, hold key invalid. 003 Hold for weight more than net + 20 divisions. 004 Hold for weight more than net + 20 divisions, #10 invalid. 005 Hold for weight more than net + 20 divisions, hold key invalid, #10 invalid.
69	Hold release against increased weight	000 Hold against any increased weight. 001~005 Hold release against a specified increase.
70	Stable mark	000 Display the stable mark. 001 Stable mark not displayed.
71	Tare function	000 No tare function. 001 One-time tare. 002 Consecutive tare.
72	Zero reset under tare operation	000 Zero reset enabled. 001 Zero reset disabled.
73	Power off with ON key	000 ON key disabled for power off. 001 Power off after pressing ON key for two seconds.
74	Special function for stability	000 No function. 001 Enforcement. 002 EU mode.
75	Over - under feature	000 Disabled. 001 Enabled.
76	Tare cancel by zero key toggle	000 Disabled. 001 Enabled.
77	-bat- display toggle	000 Enabled. 001 Disabled.

IV Changing the Scale Setup

Parameter Descriptions - Factory Parameters (continued)

Key Word	Function	Description
78	Conversion coefficient for pound calibration	000 Kilogram calibration for all capacities. 001 Pound calibration for 60 lb and 300 lb capacity scales. 002 Pound calibration for 150 lb capacity scales.
79	Center-of-zero ennunciator position toggle	000 Alternate. 001 NTEP.
80	Internal resolution	000 Do not use. 001~255
81	1 timer (ms)	000 Do not use. 001~255
82	3 timer (ms)	000 Do not use. 001~255
91	Mechanical zero 1	000~255 Automatically set at span adjustment.
92	Mechanical zero 2	000~255 Automatically set at span adjustment.
93	Span coefficient 1 (small)	000~255 Automatically set at span adjustment.
94	Span coefficient 2 (small)	000~255 Automatically set at span adjustment.
95	Span coefficient 1 (large)	000~255 Automatically set at span adjustment.
96	Span Coefficient 2 (large)	000~255 Automatically set at span adjustment.
97	Regional number and gravity for span adjustment	000~155 Automatically set at span adjustment.
99	Factory setting	000 Always displayed. * Do Not Change *

V Troubleshooting

The scale can check various functions automatically. When a problem is detected, the following messages will be displayed. Solutions are listed in order of decreasing probability and increasing complexity.

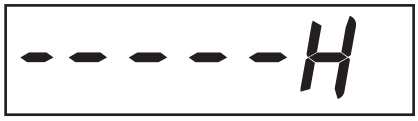
The batteries are running low. When the batteries are running low, this indicator will come on. Replace all of the batteries with new ones.

The batteries are low. When the batteries are too low for accurate operation, this indication will be displayed and the scale may automatically power off. The batteries must be replaced to use the scale.

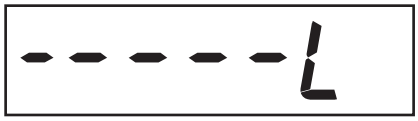
Weight out of range high. When the weighed value is 6 or more divisions heavier than the scale's capacity this message will be displayed. Remove any excess weight from the scale platform. Calibrate the scale. Replace the logic board and/or load cell.

Weight out of range low. When the weighed value is a few divisions below calibrated zero, this message will be displayed. It is usually displayed when the platform is removed or has something wedged under it. Place the platform on the platform support or remove any objects wedged under the platform. Calibrate the scale. Replace the logic board and/or load cell.

Initial error on startup, high. When the initial weight is heavier than the permissible zeroing range and the ON/→0← key is pressed, this message will be displayed. Remove whatever is on the platform and press the ON/→0← key again. Calibrate the scale. Replace the logic board and/or load cell.

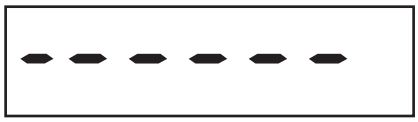


Initial error on startup, low. When the initial weight is lighter than the permissible zeroing range and the ON/→0← key is pressed, this message will be displayed. It is usually displayed when the platform is removed or has something wedged under it. Place the platform on the platform support or remove any objects wedged under the platform, and press the ON/→0← key again. Calibrate the scale. Replace the logic board and/or load cell.



V Troubleshooting

Weighing sensor error. When the weight detecting circuitry registers an error, this message will be displayed. Turn the power off and then on again. Calibrate the scale. Replace the load cell.

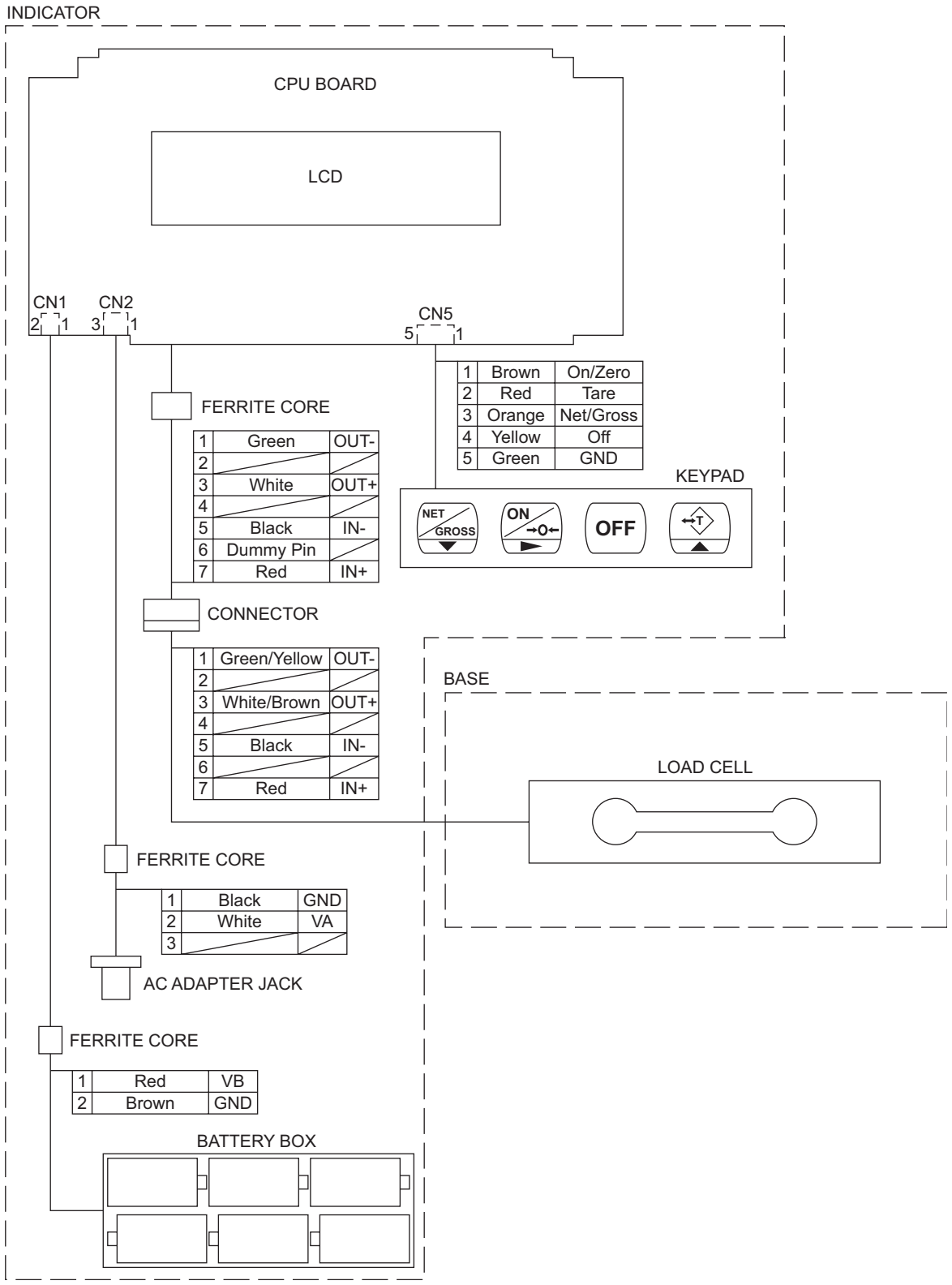


Electronic circuitry error. When the operating circuitry registers an error, this message may be displayed. Turn the power off and then on again. Replace the logic board.

Calibration points out of range error. Occurs after the scale is calibrated, but the value of the calibration points are outside the range of the software. Confirm that system parameter 78 is set correctly for the weights being used and the capacity of the scale. Verify that the correct weights, 1/2 capacity and full capacity, are being used. Make sure that nothing is restricting the motion of the platform, pressing against the platform or wedged between the upper and lower platform. Remove any sources of vibration or electromagnetic radiation (i.e. - cell phones, power cables, motors, compressors, etc.) Repeat the calibration procedure. Replace the logic board and/or load cell.

Electromagnetic disturbance error. This indication is occasionally displayed due to strong static electricity and/or electromagnetic disturbance. Move the scale away from any sources of electromagnetic radiation (motors, generators, power cables, transmitters, etc.) Turn the power off and then on again. If an AC adapter is being used, try using a different power circuit or AC adapter. Replace the logic board.

VI Wiring Diagram



1	Brown	On/Zero
2	Red	Tare
3	Orange	Net/Gross
4	Yellow	Off
5	Green	GND

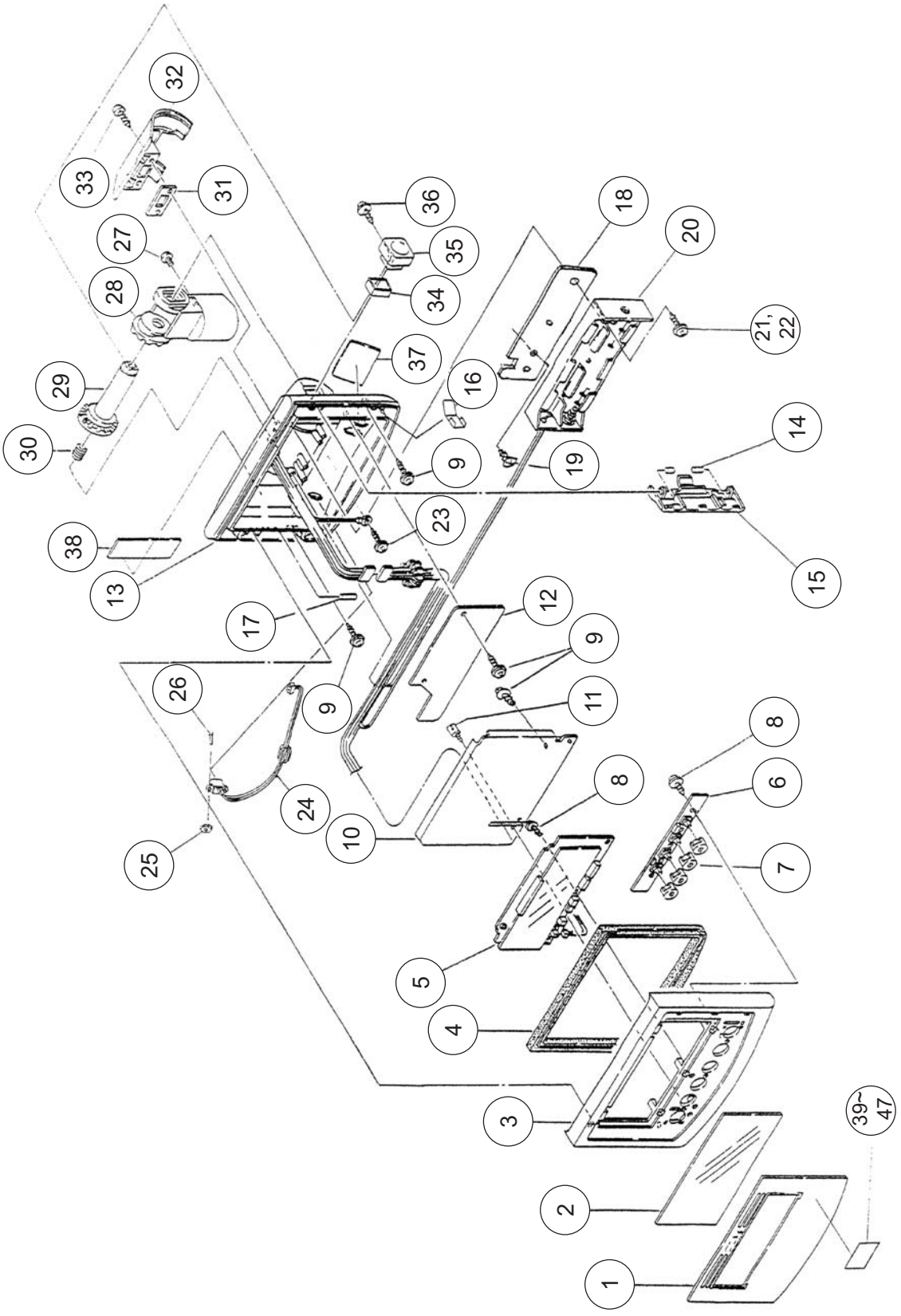
1	Green	OUT-
2		
3	White	OUT+
4		
5	Black	IN-
6	Dummy Pin	
7	Red	IN+

1	Green/Yellow	OUT-
2		
3	White/Brown	OUT+
4		
5	Black	IN-
6		
7	Red	IN+

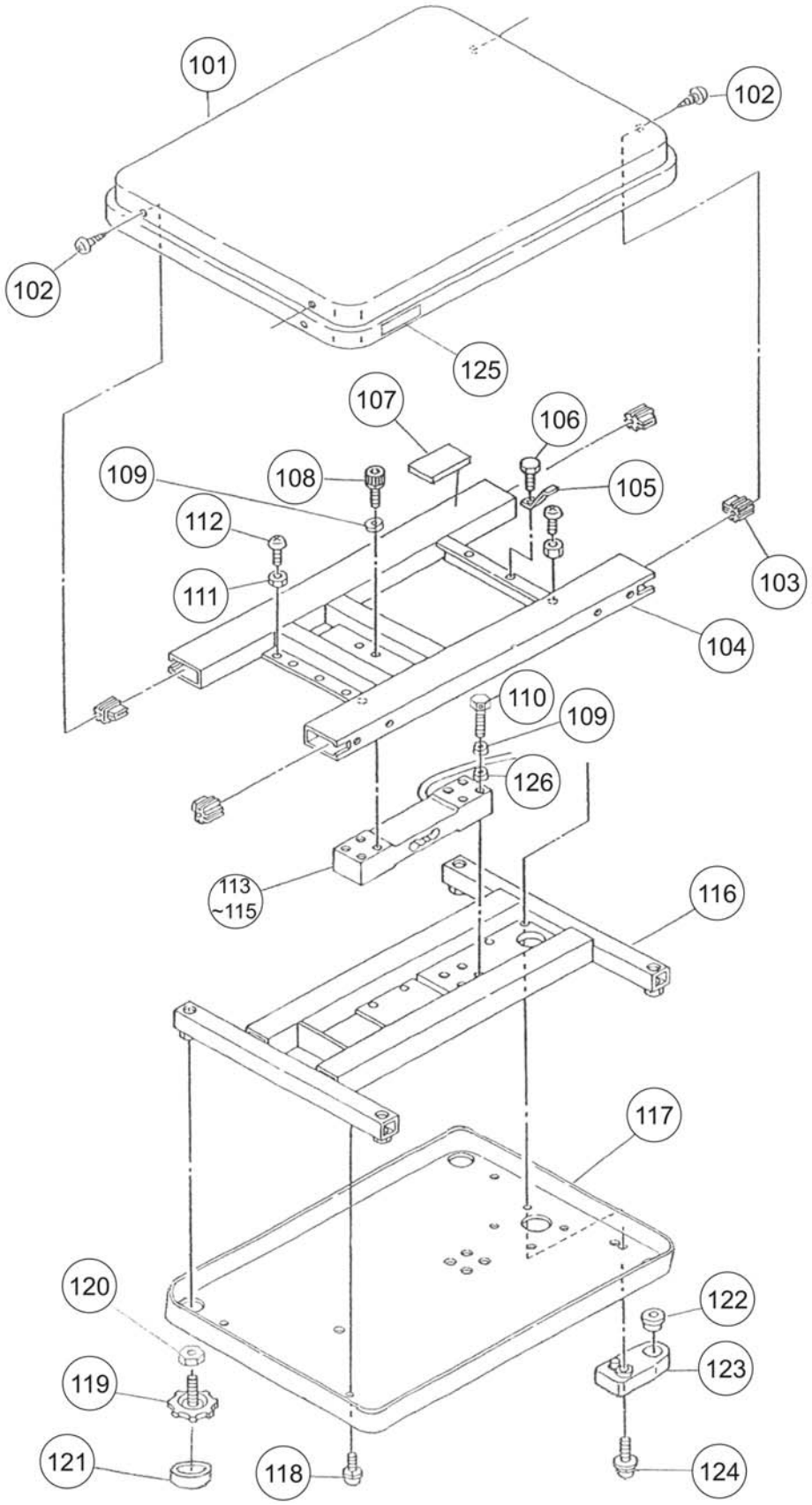
1	Black	GND
2	White	VA
3		

1	Red	VB
2	Brown	GND

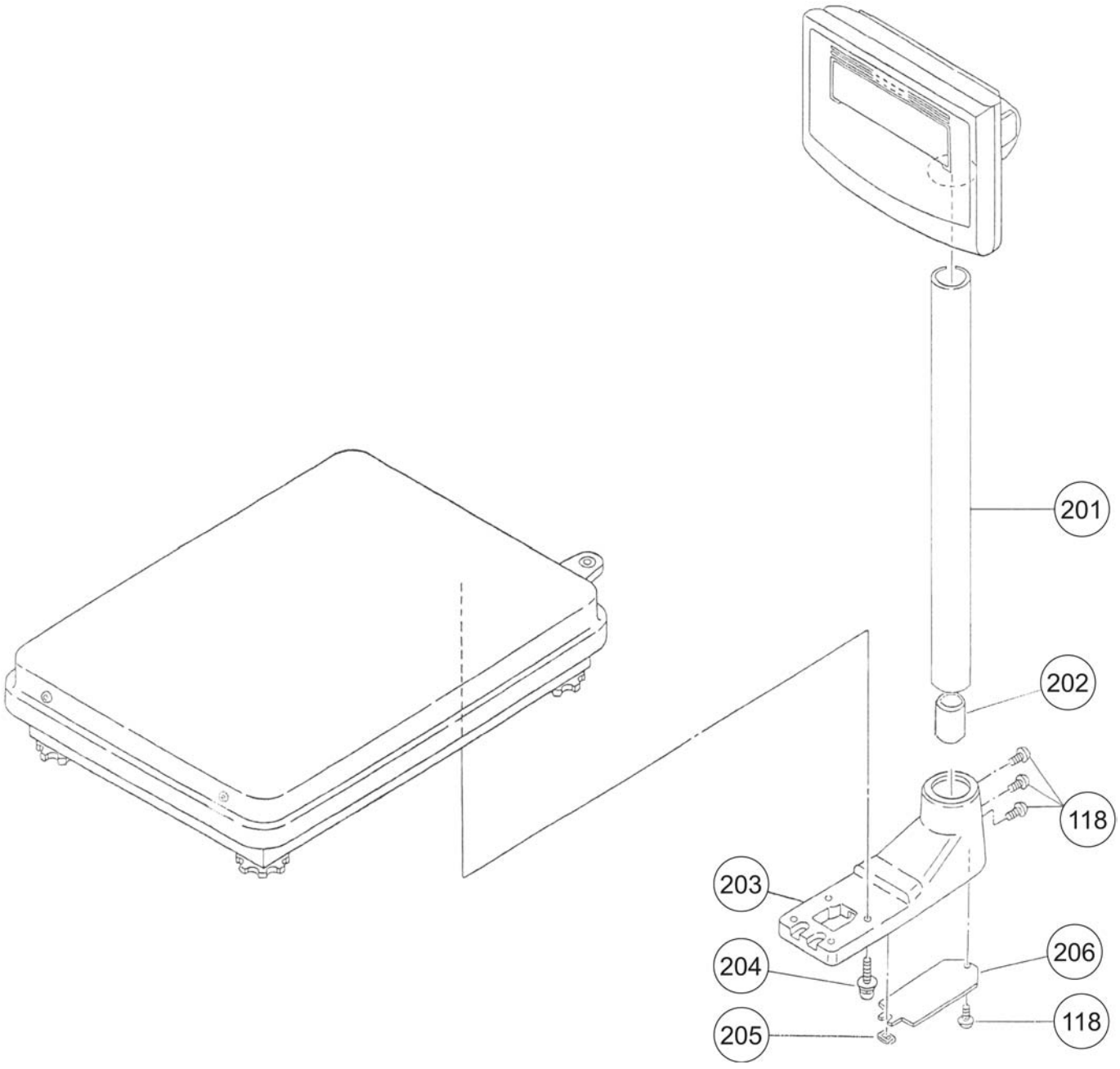
VIIParts List



VII Parts List



VII Parts List



VII Parts List

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	YAM-1235-620001	Front Mask	1
2	YAM-1235-620002	Front Glass	1
3	YAM-1235-620003	Housing, Indicator, Front	1
4	YAM-1235-620004	Gasket, Front, Indicator	1
5	YAM-1235-620005	Logic Board Assembly	1
6	YAM-1235-620006	Keyboard Assembly	1
7	YAM-1235-620007	Key Top, Plastic	1
8	YAM-1235-620008	Screw, Tapping, M3x8 with Felt Washer	4
9	YAM-1235-620009	Screw, Tapping, M3x8	7
10	YAM-1235-620010	Logic Board Cover Plate	1
11	YAM-1235-620011	Screw, Sealing, M3x10	2
12	YAM-1235-620012	Plate, Cable Cover	1
13	YAM-1235-620013	Housing, Indicator, Rear	1
14	YAM-1235-620014	Fulcrum Shaft, Latch Assembly	2
15	YAM-1235-620015	Bracket, Indicator, Latch	1
16	YAM-1235-620016	Indicator Latch Spring Bracket	2
17	YAM-1235-620017	Fulcrum Shaft, Hinge Side	2
18	YAM-1235-620018	Battery Box Mounting Plate	1
19	YAM-1235-620019	Screw, Phillips, Pan, M3x10	1
20	YAM-1235-620020	Battery Holder	1
21	YAM-1235-620021	Screw, Tapping, M3x6, Washer	1
22	YAM-1235-620022	Screw, Tapping, M3x13, Washer	2
23	YAM-1235-620023	Screw, Tapping, M4x10	1
24	YAM-1235-620024	Cable, AC Adapter Jack	1
25	YAM-1235-620025	Nut, Hex, M2, SS	2
26	YAM-1235-620026	Screw, Phillips, Round, M2x10, SS	2
27	YAM-1235-620027	Screw, Phillips, Round, M4x10, SS	1
28	YAM-1235-620028	Bracket, Pole, Adjustable	1
29	YAM-1235-620029	Angle Adjuster	1
30	YAM-1235-620030	Spring, Angle Adjuster	1
31	YAM-1235-620031	Gasket, Pole, Cover	1
32	YAM-1235-620032	Cover, Pole	1
33	YAM-1235-620033	Screw, Tapping, M4x16, SS	2
34	YAM-1235-620034	Bracket, Button Support	1
35	YAM-1235-620035	Button, Square, Angle Adjust	1
36	YAM-1235-620036	Screw, Tapping, M3.5x12	1
37	YAM-1235-620037	Sticker, Cover, Ports	1
38	YAM-1235-620038	Serial Plate	1
39	YAM-1235-620039	Sticker, Capacity, 60 lb x 0.02 lb	1
40	YAM-1235-620040	Sticker, Capacity, 60 lb x 0.5 oz	1
41	YAM-1235-620041	Sticker, Capacity, 960 oz x 0.5 oz	1
42	YAM-1235-620042	Sticker, Capacity, 150 lb x 0.05 lb	1
43	YAM-1235-620043	Sticker, Capacity, 150 lb x 1 oz	1
44	YAM-1235-620044	Sticker, Capacity, 2400 oz x 1 oz	1
45	YAM-1235-620045	Sticker, Capacity, 300 lb x 0.1 lb	1
46	YAM-1235-620046	Sticker, Capacity, 300 lb x 2 oz	1
47	YAM-1235-620047	Sticker, Capacity, 4800 oz x 2 oz	1

VII Parts List

ITEM	PART NUMBER	DESCRIPTION	QTY.
101	YAM-1235-620101	Cover, Top, SS	1
102	YAM-1235-620102	Screw, Tapping, M4x12, SS	4
103	YAM-1235-620103	Plug, Spider, End Cap	4
104	YAM-1235-620104	Spider, Top	1
105	YAM-1235-620105	Plate, Grounding, Spring	1
106	YAM-1235-620106	Bolt, Hex, M6x12	1
107	YAM-1235-620107	Cushion, Rubber, Top Spider	9
108	YAM-1235-620108	Screw, Hex, Socket, Load Cell, M10x25	4
109	YAM-1235-620109	Washer, Lock, Load Cell, M10	8
110	YAM-1235-620110	Screw, Hex, Socket, Load Cell, M10x45	4
111	YAM-1235-620111	Nut, Hex, M6	4
112	YAM-1235-620112	Screw, Phillips, Round, M6x25	4
113	YAM-1235-620113	Load Cell, 75 kg for 60 lb	1
114	YAM-1235-620114	Load Cell, 150 kg for 150 lb	1
115	YAM-1235-620115	Load Cell, 300 kg for 300 lb	1
116	YAM-1235-620116	Spider, Bottom	1
117	YAM-1235-620117	Cover, Bottom, SS	1
118	YAM-1235-620118	Screw, Phillips, Round, M4x10, SS	7
119	YAM-1235-620119	Leg, Level	4
120	YAM-1235-620120	Nut, Hex, M10, SS	4
121	YAM-1235-620121	Cap, Rubber for Level Leg	4
122	YAM-1235-620122	Bubble Level	1
123	YAM-1235-620123	Bracket, Level, Bubble	1
124	YAM-1235-620124	Screw, Phillips, Round, M4x15, SS	1
125	YAM-1235-620125	Sticker, Warning, Cover, Top	1
126	YAM-1235-620126	Washer, Flat, M10	4
201	YAM-1235-620201	Pole	1
202	YAM-1235-620202	Collar, Pole, Internal	1
203	YAM-1235-620203	Bracket, Pole	1
204	YAM-1235-620204	Screw, Hex, Socket Head, M6x25	4
205	YAM-1235-620205	Clip, Cover, Bracket Pole	1
206	YAM-1235-620206	Cover, Bracket, Pole	1