

HGS SERIES

BALANCE

OPERATION MANUAL

PLEASE READ THIS MANUAL VERY CAREFULLY
BEFORE ATTEMPTING TO OPERATE THE SCALE

APRIL 2005

Specifications subject to change without prior notice

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1. INTRODUCTION

CONGRATULATIONS ON YOUR PURCHASE OF HGS SERIES PRECISION BALANCE
 EVERY CARE HAS BEEN TAKEN DURING THE MANUFACTURING PROCESS OF THIS BALANCE TO ENSURE THAT IT WILL PERFORM ACCURATELY AND RELIABLY FOR MANY YEARS.

2. SPECIFICATIONS

UNIT	FULL NAME RATE	CONVERSION	MODEL NO.	
			NJW-150	NJW-300
g	GRAM	28.349523125g	150x0.05 g	300x0.01 g
oz	OUNCE	453.59237 g	5.2910x0.0002 oz	10.5820x0.0005 oz
1b	POUND	453.59237 g	0.33068x0.000021b	0.66135x0.00005 1b
ozt	TROY OUNCE	31.1034768 g	4.8226x0.0002 ozt	9.6450x0.0005 ozt
GN	GRAIN(U.K)	0.06479891 g	2314.8x0.1GN	4629.6x0.2 GN
dwt	PENNYWEIGHT	1.55517384 g	96.450x0.005 dwt	192.90x0.01 dwt
ct	NET. CARAT	0.2 g	750x0.02 ct	1500x0.05 ct
mm	MOMME (JPN)	3.75g	40.000x0.002mm	80.000x0.005 mm
TL.T	T AEL (TWN)	37.5 g	4.0000x0.0002 TL.T	8.0000x0.0005 TL.T
TL.t	TROY T AEL	37.4290018 g	4.0074x0.0002 TL.t	8.0150x0.0005 TL.t
TL.c	T AEL (CHINA)	37.799375 g	3.9682x0.0002 TL.c	7.9365x0.0005 TL.C
t	TOLA (INDIA)	11.6638038 g	12.8600x0.0005 t	25.720x0.001 t
dr	DRAM	1.7718451 g	84.665x0.005 dr	169.31x0.01 dr
PAN SIZE in mm		ø 100mm: NJW- 150, 300, 600 135 X 170mm: NTJ-1500, 3000		
Counting Sample Size		20,50 or 100 pcs. With auto-prompt for correct size		
Min. Unit weight		Equals the basic resolution/min.division in grams mode.		
Min. % Display		0.1%		
Operating Temperature		0°-40°C (32°-104°C), best at 20 C (68 °F) 5°C		
Power Supply		100,115, 230 VAC 50/60 Hz (AC/DC adaptor), DC9V/1k00mA or Dry battery UM -2 (1.5V X 4)		
Remark: *The actual capacity & division of model NJW-600, 1500, 3000 is gained by multiply the value as multiply the value as listed column of at the NJW-300 by factor 2, 5 and 10 for NJW-600, 1500 and 3000 respectively.				

3. INSTALLATION

3.1 UNPACKING

UNPACK THE SCALE CAREFULLY, WITHIN THIS PACKAGE YOU WILL FIND:

1. THIS MANUAL
2. THE BALANCE
3. THE PAN
4. THE ADAPTOR (9V/100~500mA)
5. THE WIND SHIELD (300 g and 600 g capacities only)

*WE SUGGEST THAT YOU KEEP THE PACKING MATERIAL FOR FUTURE TRANSPORTATION.

3.2 OPTIMAL INSTALLATION REQUIREMENTS

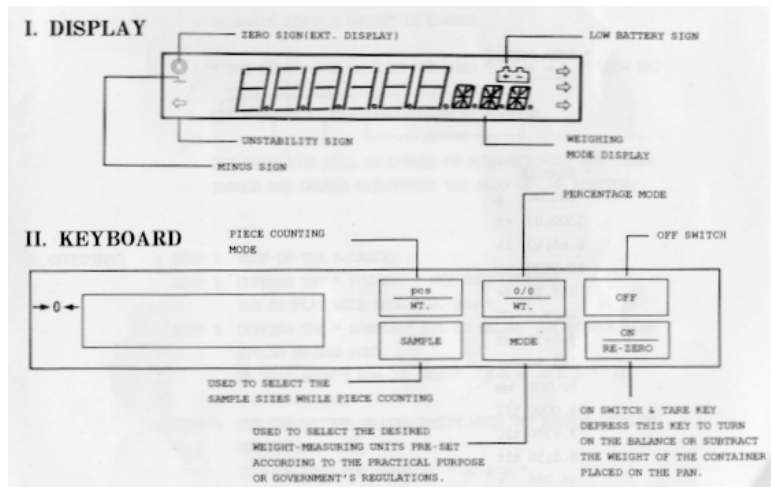
FOR OPTIMAL RESULTS WE RECOMMEND THAT YOU INSTALL THE SCALE AT A LOCATION THAT PROVIDES FOR THE FOLLOWING:

1. A LEVEL SURFACE (check the bubble level on the Balance)
2. STABLE AND/OR NOT SUBJECT TO VIBRATION
3. NOT EXPOSED TO DIRECT SUNLIGHT
4. AWAY FROM AREAS CONTAINING CORROSIVE GAS
5. DUST-FREE

6. IDEAL TEMPERATURE IS AROUND 20 C (68⁰C)
7. HUMIDITY 40 TO 70% RH (DO NOT INSTALL NEAR A HUMIDIFIER)
8. AWAY FROM OTHER ELECTRONIC EQUIPMENT TO AVOID INTERFERENCE.
9. AWAY FROM HEATER AND AIR CONDITIONERS TO AVOID SUDDEN CHANGES OF TEMPERATURE.

PRACTICE) & FIXED INITIAL UNIT AFTER SWITCH ON.

4. EXPLANATIONS



NOTE : IN SOME COUNTRIES, THE BALANCE MAY BE REQUIRED TO DISABLE (BY REGULATIONS) SOME OF THE ALTERNATIVE WEIGHT-MEASURING UNITS. PLEASE ASK YOUR LOCAL DEALER FOR DETAILS ABOUT IT AND TO SET THE REQUIRED UNITS (MOSTLY USED IN

III. OPTIONAL: RS-232 INTERFACE

*TYPE: A-RS-232C SEND DATA ONLY (WHILE STABLE)

*METHOD: HALF-DUPLEX, ASYNCHRONOUS TRANSMISSION

*BIT FORMAT: SELECTABLE BAUD RATE / 12000,

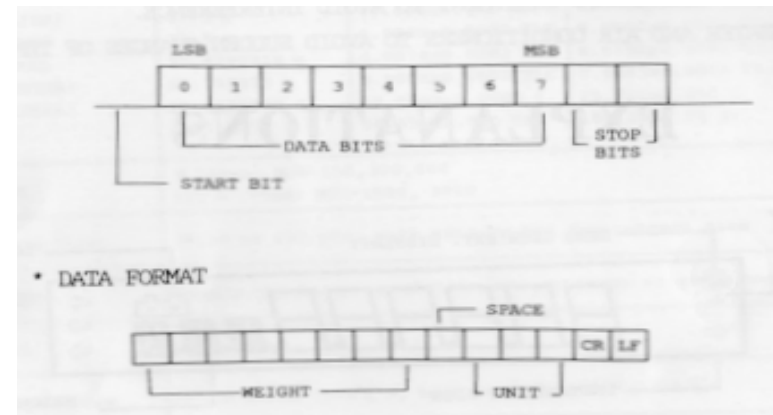
2400, 4800, 9600 bps

DATA BIT: 8

PARITY BIT: N (NONE)

STOP BIT: 2

CODE: ASCII



***EXAMPLE**

300.00 g
1500.00 ct
0.66140 lb
10.5820 oz
169.32 dr
4629.8 GN
1.6450 ozt
192.90 dwt
80.000 mm
8.0000 tIT
7.9370 tIC
8.0150 tIt
25.720 t
OVER WT


***SAMPLE COMPUTER PROGRAMS TO LOAD DATA
(BASICA)**

```
10 OPEN "COM1: 9600,N,8,2,CS,DS,CD" AS #1
20 INPUT #1,A$
30 PRINT A$
40 GO TO 20
```

5. OPERATIONS

1. BACKLIGHTING: a. THE BALANCE IS OPERATED BY A RECHARGEABLE BATTERY

DEPRESS THE "MODE" KEY WHILE IN WEIGHT MODE TO SCROLL THROUGH THE WEIGHING UNITS IN NON BACKLIGHT MODE FOLLOWED BY BACKLIT MODE. THE LIGHT WILL TURN OFF AUTOMATICALLY 20 SECONDS AFTER THE DISPLAY SHOWS ZERO OR A MINUS VALUE AND WILL TURN ON AGAIN ONCE A WEIGHT IS LOADED.

*THE LIGHT WILL ALSO TURN OFF WHEN (LOW BATTERY)  APPEARS.

2. COUNTING: STEP1 TURN ON THE BALANCE.
- STEP2 DEPRESS THE "PCS/WT.
"KEY THEN RELEASE.
THE DISPLAY WILL SHOW
"0pcs".
- STEP3 DEPRESS THE "SAMPLE
"KEY
TO SELECT THE SAMPLE
SIZE
(20,50 OR 100 PCS).
IT WILL SHOW "S =20 ADD
", "S= 50 ADD" OR"S = 100
ADD".
- STEP4 ADD THE SAMPLE TO THE
PAN .
- STEP5 KEEP ADDING THE
WEIGHT ON THE PAN AND
THE PIECE NUMBER WILL
SHOW ON THE DISPLAY.
DEPRESS THE "PCS/WT
" KEY TO VIEW THE
WEIGHT.

*REVERSE COUNTING: a. FOLLOW THE ABOVE
STEP
1 TO STEP 5 TO OBTAIN

THE TOTAL
PIECES ON THE PAN.

- b. DEPRESS THE
"ON/RE-ZERO" KEY.
IT WILL SHOW " 0. Pcs".
- c. REMOVE PART OR ALL
OF ITEMS ON THE PAN,
THE PIECE QUANTITY
REMOVED WILL BY
OBTAINED FROM THE
DISPLAY.

3. PERCENTAGE MODE:

- STEP1 DEPRESS
THE " %/ WT." KEY
THEN RELEASE.
THE DISPLAY WILL
SHOW "0.0 pct".
- STEP2 DEPRESS THE
"SAMPLE" KEY AND
RELEASE.
THE DISPLAY WILL
SHOW "P=100.0
ADD".
- STEP3 PUT THE SAMPLE
(100%) ON THE PAN.

THE DISPLAY WILL SHOW "100.0 pct" FOLLOWED BY A BEEP.

STEP4 REMOVE THE SAMPLE FROM THE PAN. THE BALANCE IS PREPARED FOR PERCENTAGE COUNTING.

STEP5 PUT AN OBJECT ON THE PAN. THE DISPLAY READING IS THE EXACT PERCENTAGE OF THE OBJECT.

4. How to enable or disable "Weighing Units":

Step1: With the balance off, press "%WT." And then "**ON/RE-zero**", the display reads "F.1", please release now.

Step2: Press "%WT." Two times and the display reads "F. 3".

Step3: Press "MODE." Twice to enter setting

pattern and the display reads "U.=on.g" Press PCS/WT to move between "off" or "on" (enable or disable)

Step4: If you press "**MODE**" key, the weighing units will appear at the right side on by one. If you press '**PCS/WT.**' Key, that weighing unit will be cancelled ("U.=OFF") or kept ("U.=on"). If you press "**SAMPLE**" key that weighing unit will be the initial weighing unit when powering on.

Step5: Confirm the settings by pressing the "OFF" button.

5. How to cancel or keep the "4-Minute Auto-Off" function:

Step1: Press "%WT" and "**ON/RE-ZERO**", the display reads "F. 1". Please release now.

Step2: Press "%WT." 3 times, the display reads "**F4**".

Step3: Press "MODE." To enter setting pattern, the display reads "-4 OFF" or "-O OFF".

Step4: When pressing '**ON/RE-ZERO**' key under the situation of "-4 OFF", this means the balance will power off automatically after 4 minutes if no further operation. When pressing "**ON/RE-ZERO**" key under the situation of "-O OFF", this means the balance will always

have power-on.

6. CARE AND MAINTENANCE

PRECAUTIONS

1. DO NOT ATTEMPT TO DISASSEMBLE THE BALANCE TO CLEAN IT.
2. DO NOT SUBMERGE THE BALANCE IN WATER, AND DO NOT POUR OR SPRAY WATER ON BALANCE DIRECTLY.
3. NEVER USE ACETONE OR OTHER VOLATILE SOLVENTS SUCH AS PAINT THINNER, ALCOHOL, etc. TO CLEAN YOUR BALANCE.

DAILY CARE

*CLEAN THE DUST COVER AND THE PAN WITH A SOFT DAMP CLOTH AND/OR MILD DETERGENT.