

# **NJW-HGS SERIES**

## **BALANCE**

### **OPERATION MANUAL**

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

AUGUST 1999 REV 2

*Specifications subject to change without prior  
notice*

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## **1. INTRODUCTION**

CONGRATULATIONS ON YOUR PURCHASE OF NJW  
SERIES HIGH-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		150x0.05 g	300x0.01 g
oz	OUNCE	28.349523125 g	5.2910x0.0002 oz	10.5820x0.0005 oz
lb	POUND	453.59237 g	0.33068x0.000021b	0.66135x0.00005 lb
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	TAEL (TWN)	37.5 g	4.0000x0.0002 TLT	8.0000x0.0005 TL.T
TL.t	TROY TAEL	37.4290018 g	4.0074x0.0002 TL.t	8.0150X0.0005 TL.t
TL.c	TAEL (CHINA)	37.799375 g	3.9682x0.0002 TLC	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

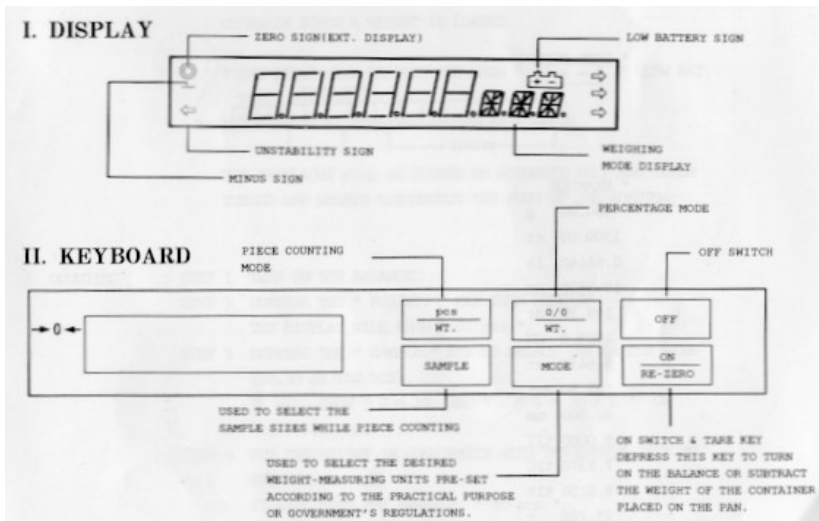
\*WE SUGGEST THAT YOU KEEP THE PACKING MATERIAL FOR FUTURE TRANSPORTATION.

### **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. Best temperature is about 20 C (68<sup>0</sup>C)
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.

#### 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 PRACTICE) & FIXED INITIAL UNIT AFTER SWITCH ON.

**III. OPTION: RS-232 INTERFACE**

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

\*METHOD: HALF-DUPLEX, ASYNCHRONOUS



## TRANSMISSION

\*BIT FORMAT: SELECTABLE BAUD RATE / 12000,

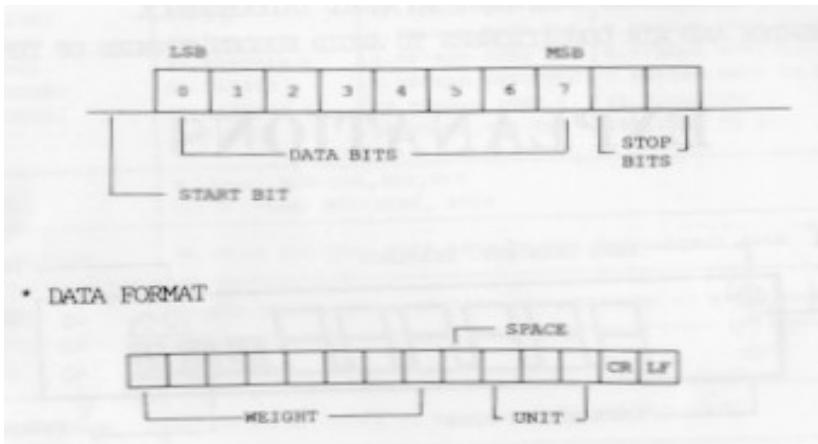
2400, 4800, 9600 bps

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

169.32dr

4629.8GN

1.6450ozt

192.90dwt

80.000 mm

8.0000 t1T

7.9370t1C

8.0150 t1t

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 BATTERIES

-----  
DEPRESS THE "SAMPLE"  
KEY WHILE IN WEIGHT  
MODE TO TURN ON THE  
LIGHT & DEPRESS AGAIN  
TO TURN OFF THE LIGHT  
THE LIGHT WILL BY  
AUTOMATICALLY OFF 20  
SECONDS AFTER THE  
DISPLAY SHOWS ZERO OR  
A MINUS VALUE AND WILL  
AUTOMATICALLY ON AGAIN  
SINCE A WEIGHT IS  
LOADED.

\*THE LIGHT WILL BE

ALSO

OFF WHEN (LOW BATTERY)



APPEARS.

b. THE BALANCE IS  
OPERATED BY THE AC  
ADAPTOR

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-

THE BACKLIGHT WILL  
BY  
TURNED ON  
AUTOMATICALLY AND NEVER  
TURNED OFF UNLESS  
DISCONNECT THE PLUG OF  
THE ADAPTOR.

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 PUT THE WEIGHT IN  
CONFORMITY WITH THE  
SAMPLE SIZE ON 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.

\*MIN. SAMPLE WEIGHT : 1 g (niw-300)

\*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 Z PART OR  
ALL OF THING 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" SOON AFTER  
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 PURITY  
PERCENTAGE OF  
THE OBJECT.

\*MIN. SAMPLE WEIGHT

: 1g

(NJW-300)

4. How to cancel or keep "Weighing Unit":

Step1: Press "%WT." And "ON/RE-zero" keys  
at

the same time, the display reads  
"F.1", please release now.

Step2: Press "%/WT." Two times and the  
display

reads "F. 3".

Step3: Press "PCS/WT." to enter setting  
pattern and the display reads

"U.=on.g"

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: After choosing the key you want, press

"**ON/RE-ZERO**" key, the display reads "END-GO", this means the procedures are completed.

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

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

Step2: Press "**%/WT.**" 3 times, the display reads "**F.4**".

Step3: Press "**PCS/WT.**" To enter setting pattern, the display reads "-4 OFF"



or "-0 OFF".

Step4: When pressing "**ON/RE-ZERO**" key under the situation of "-4 OFF", the display reads "END-GO", 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 "-0 OFF", the display reads "END-GO", this means the balance will always 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 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.