

**INSTRUCTION MANUAL**  
**COMPACT PRINTER**  
**AD-8116**



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## A. INTRODUCTION

AD-8116 COMPACT PRINTER is a technologically advanced product designed to be used with electronic balances, counting balances and with AD-4316 & AD-4321 weighing indicators.

Please note that before this printer can be interfaced to the above instruments, optional RS-232C interface must be installed in the balance or indicator. The printer is supplied with an appropriate cable and connector for connection to RS-232C I/O port.

## AD-8116 FEATURES

1. Portability, this printer is exceptionally compact and light.
2. Statistical calculations as well as normal weight or quantity data printing.
3. Compatible with RS-232C interfacing standards.
4. Alphanumerical print-out.
5. Switch selectable automatic and manual printing.

## B. SPECIFICATIONS

PRINTER TYPE: Thermal dot-matrix

FONT: 5 x 7 dots

CHARACTERS: 2mm (H), 16 characters per line.

SPEED: Approx. 1 line per second.

PAPER TYPE & SIZE: Thermal roll paper; 38mm wide, 65um thick, 10 meters long, max. roll diameter 2.8cm.

MACHINE HEAD LIFE: 500,000 lines.

OPERATING TEMPERATURE RANGE: 0→+40°C (32→104°F)

STORAGE TEMPERATURE RANGE: -10→+60°C (14→140°F)

DIMENSIONS: 94 (W) x 160 (D) x 34 (H) mm / 3.7" x 6.3" x 1.3"

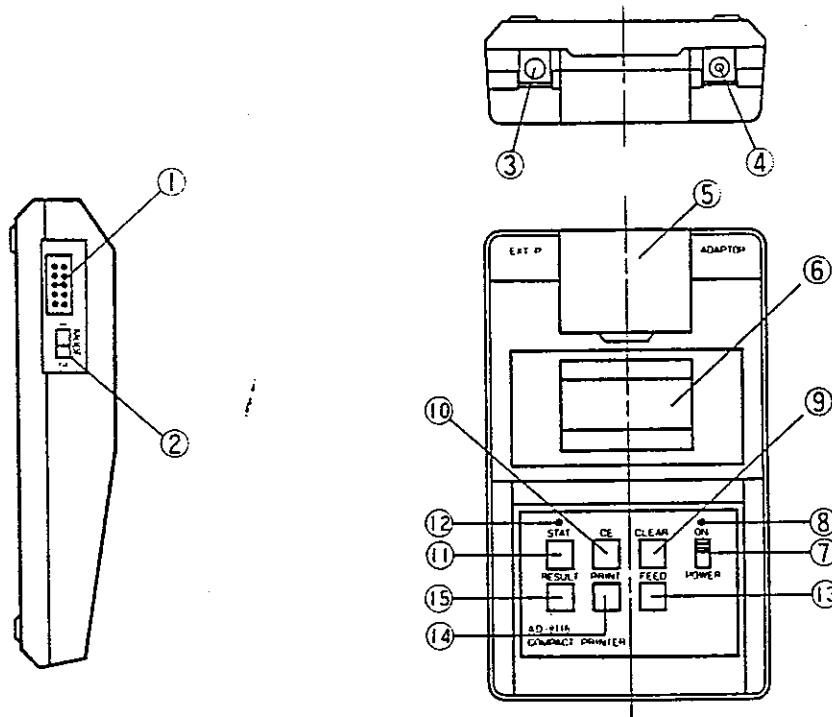
WEIGHT: 250g (8.8oz)

POWER REQUIREMENTS: 100/115/220/240V AC, 50/60Hz, converted to 9V DC @ 800mA.

INTERFACE MODE: RS-232C

STANDARD ACCESSORIES: AC to DC adaptor, printing paper (2 rolls), interface cable (KO:256) and manual.

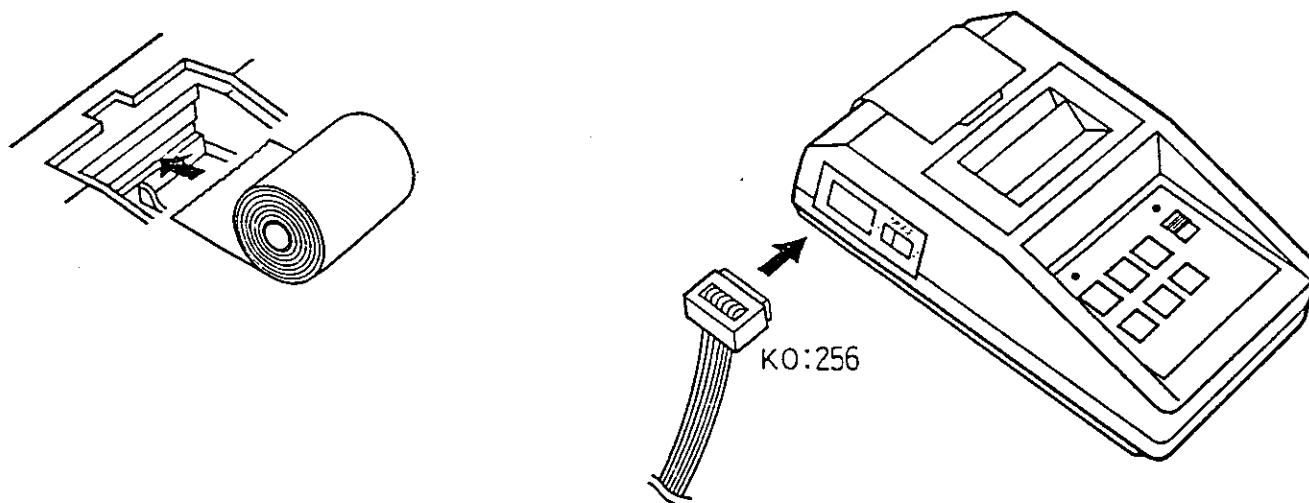
## C. DESCRIPTION



- 1) DATA INPUT SOCKET (for KO:256)
- 2) MODE SWITCH
- 3) EXT. P. (remote control socket for external print commands)
- 4) ADAPTOR. (DC input socket)
- 5) PAPER HOLDER COVER
- 6) PAPER CUTTER
- 7) POWER SWITCH
- 8) POWER ON PILOT LAMP
- 9) CLEAR KEY (clear statistics from memory)
- 10) CE KEY (cancel last entry)
- 11) STAT KEY (statistics mode selection---weight or quantity)
- 12) STATISTICS PILOT LAMP (green=weight data and red=quantity data)
- 13) FEED KEY (paper feed)
- 14) PRINT KEY
- 15) RESULT KEY (for statistical calculations; press once for number & total and press twice for max. , min. , data average and standard deviation data).

## D. INSTALLATION

- 1) Plug in the AC to DC adaptor and plug the DC output into the printer socket.
- 2) Switch on and make sure that the red power lamp is on.
- 3) To load the printer with paper, first make sure that the end to be fed into the printer has a straight cut at right angles to the edge.
- 4) Gently insert the end of the roll of paper into the paper input slot while pressing the paper feed key.
- 5) After the printer has taken up the paper, place the roll in the paper holder and close the paper holder cover.
- 6) Switch off power.
- 7) Make sure that the RS-232C interface card is set to 2,400 baud and (depending upon which balance or indicator you are operating) stream mode or keyboard print control mode.
- 8) Connect the KO:256 cable between the RS-232C interface I/O port and printer.



- 9) Selection of Mode 1: Printer will print all data but if the weighing system is in motion it will only print "\*".  
STREAM/KEYBOARD PRINT MODE: EXY-N series, ET-300A, EY-300A/3000A  
STREAM MODE: EX-A, EY-A, ER-A model ranges (in order to print final data rather than continuous data, the balance should be in auto-print mode).
- 10) Selection of Mode 2: Printer will print only when the AD-8116 print key is pressed but if the weighing system is in motion it will print "\*".  
STREAM MODE: EW-A, EV-A, EZ-A, EZ-N series, AD-4316, AD-4321.  
STREAM MODE/BALANCE MODE SW. =NORMAL: EX-A, EY-A, ER-A series.

## E. STATISTICS

### PRINTING ABBREVIATIONS

WT = Weight data  
 NT = Net weight data  
 GS = Gross weight data  
 TR = Tare weight data  
 QT = Quantity data for counting balances  
 UW = Unit weight data for counting balances  
 AQ = Accumulated quantity for counting balances

### PRINTING ABBREVIATIONS FOR STATISTICS

N = Number of data (999 samples max.)  
 TOTAL = Accumulated data total (10 digits max.)  
 MAX = Maximum data sample (7 digits max.)  
 MIN = Minimum data sample (7 digits max.)  
 $\bar{X}$  = Average data sample (7 digits max.)  
 $\sigma$  = Standard deviation  
 R = Range

No.995	.
WT +1600.178	9
No.996	
WT +1599.760	9
No.997	
WT +1600.490	9
No.998	
WT +1600.050	9
No.999	
WT +1599.720	9
N	999
TOTAL	
1598414.380	9
MAX 1600.500	9
MIN 1599.500	9
$\bar{X}$ 1600.014	9
$\sigma$ 0.2840	9
R 1.000	9
No.001	
WT +1600.000	9

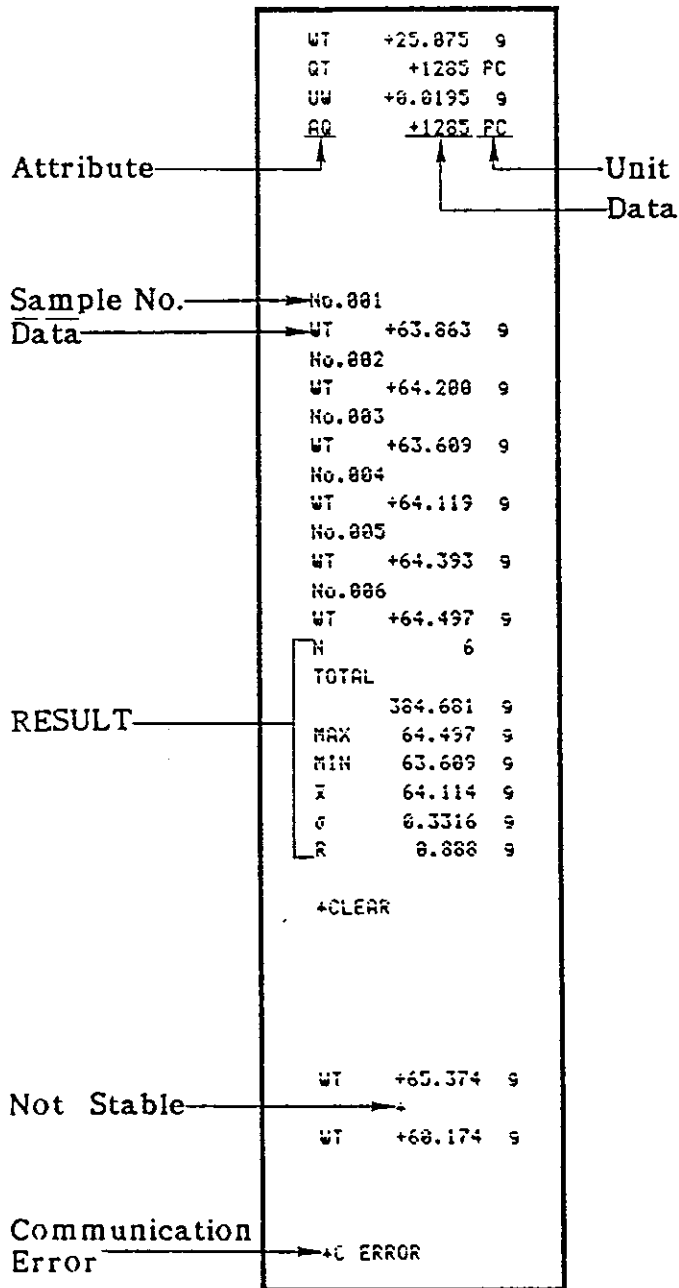
### OPERATION OF STATISTICS FUNCTION

- 1) Press CLEAR and if data was in the memory the printer will print \*CLEAR, otherwise it will not print anything.
- 2) Press STAT (statistics data selection key) once for weight data mode (lamp will be green) or twice for quantity data mode (lamp will be red).
- 3) Input data for printing. Quantity or weight data will be printed along with an automatically incrementing reference number. If an error is made the entry may be deleted by pressing the CE (cancel last entry) key ---- \*CANCEL will be printed.
- 4) To obtain a statistical result for all the data entered since the last CLEAR, press the RESULT key. Press once for a print-out of number and total and press twice for a print-out of all the statistical information --- Max. , Min. , Data average and Standard deviation.
- 5) To continue input the next data entry.
- 6) If the position of the decimal point changes or if there is a change in the weight unit (e. g. lb→kg), such data will be rejected from statistical calculations.
- 7) The maximum number of data entries possible is 999. If 1000 data entries are made the printer will automatically make a full print-out of all the statistical information for the preceding 999 entries, clear it's memory and then start again by printing the 1000th entry as entry number one.

PRINTING EXAMPLE

NORMAL PRINT-OUT

STATISTICS PRINT-OUT



OTHER PRINT-OUTS

If \*C ERROR (Communication Error) is printed then check the baud rate settings and cable connections.

## **F. PRECAUTIONS**

- 1) Never print without paper!
- 2) Only use the correct grade of thermal paper.
- 3) Only use the supplied AC to DC adaptor.
- 4) Please ensure that the AC electricity supply is clean, free from interference.
- 5) Please make sure that the power switch is off before connecting or disconnecting any lead.
- 6) Please only use this printer in a friendly environment free from:- High temperatures, direct sunshine, dirt, vibrations, oil, solvents and water.
- 7) Thermal paper is sensitive. Please protect from moisture, chemicals, solvents, oil, sweat, vinyl tape, wet-type photocopy paper, heat & light.

### **GENERAL POINTS TO REMEMBER**

- 1) Turn off the power and unplug the adaptor after use.
- 2) Do not use detergents or chemical cleaners to clean the printer case, only use a damp cloth.
- 3) If you encounter a problem in operation check that the power supply lamp is on, that the cable connections are secure and check this manual (plus the weighing instrument's manual) for the correct dip-switch/jumper-pin and Mode switch settings.