



A D AD-1688 Weighing Data Logger Instruction Manual

[Home](#) » [A D](#) » A D AD-1688 Weighing Data Logger Instruction Manual 

Contents

- [1 A D AD-1688 Weighing Data Logger](#)
- [2 Using the AD-1688](#)
- [3 Precautions on Usage](#)
- [4 Introduction](#)
- [5 Unpacking](#)
- [6 Features](#)
- [7 Key Operations](#)
- [8 Setting the Date/Time](#)
- [9 Storing the Weighing Data](#)
- [10 Deleting the Weighing Data](#)
- [11 Switching the Displays](#)
- [12 Function Settings](#)
- [13 Interval Mode](#)
- [14 Error Display](#)
- [15 Specifications](#)
- [16 Documents / Resources](#)
- [17 Related Posts](#)



A D AD-1688 Weighing Data Logger



Using the AD-1688

When operating this instrument, be sure to observe the following:

Caution

- Do not open the case to repair the AD-1688. Only qualified personnel can do that. Attempting repairs yourself may cause damage to the AD-1688. Damage caused by attempting to do the repair yourself will void the warranty.

Precautions on Usage

Caution

- With the cap attached over the connectors, the AD-1688 is protected against water splashing (equivalent to IP65). Please note that it will not endure immersion in water or high pressure running water.
- The AD-1688 is supplied power and is turned on only when it is connected to a weighing instrument or the USB of a personal computer.

Introduction

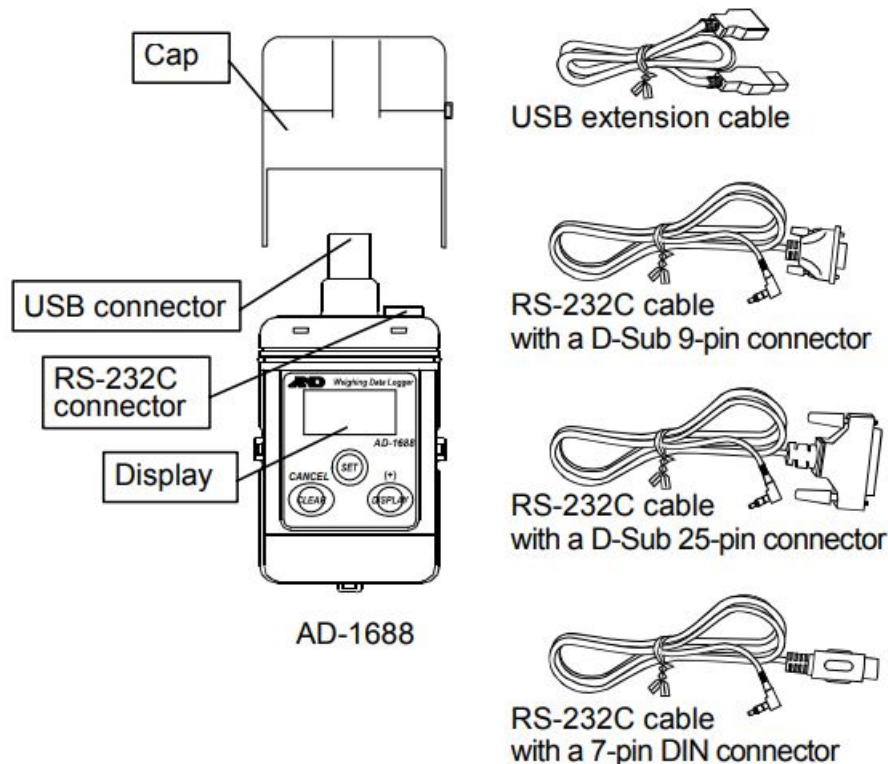
This manual describes how the AD-1688 works and how to get the most out of it in terms of performance. Please read this manual completely before using the AD-1688.

Unpacking

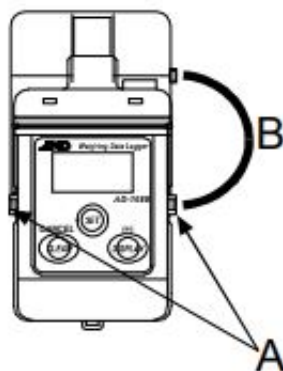
When unpacking, confirm that everything is included.

- AD-1688 Weighing Data Logger

- USB extension cable (0.5 m)
- RS-232C cable with a D-Sub 9-pin connector (1 m) : AX-KO3571-100
- RS-232C cable with a D-Sub 25-pin connector (1 m) : AX-KO3572-100
- RS-232C cable with a 7-pin DIN connector (1 m)
- Instruction manual (this document)



When the AD-1688 is in use, the cap can be attached on the bottom. Each side has an opening. Use the openings as follows.



- Attach a strap to carry.
- Connect the cap and the main unit so that the cap will not be lost.

Features

- When connected to the RS-232C interface of a weighing instrument, the AD-1688 can store the data that the weighing instrument outputs. Thus, storing weighing data is possible in an environment where a personal computer cannot be used.
- The AD-1688 has an internal clock. This allows the date and time to be stored, along with the weighing data.

- The maximum data to be stored is approximately 5000, using the A&D standard format (15 characters in 1 data set).
- The stored data can be read to a personal computer using USB. As the AD-1688 is recognized as USB memory, special software is not required to read the data.
- The data is stored in CSV format and can be used easily by software such as EXCEL.
- As power is supplied to the AD-1688 from the weighing instrument or USB, no special power source is required.

Note: The AD-1688 is supplied power and is turned on only when it is connected to a weighing instrument or the USB of a personal computer.

Key Operations

Key	When pressed (To press and release immediately)	When pressed and held (To keep pressing for 2 seconds or more)
SET	Displays the date and time.	Displays the function setting menus.
DISPLAY (+)	Switches between the display of data number and memory utilization rate.	Starts or stops data storage at a set interval · (Only in the interval mode)
CLEAR (CANCEL)	None	Enters the data deletion mode.

Setting the Date/Time

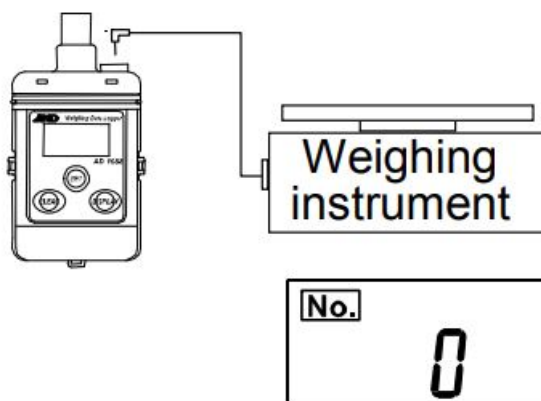
Note: The date and time were set to the Japanese standard time at the factory when shipped. Before use, set the date and time to your local time.

1. Connect the AD-1688 to a weighing instrument using the RS-232C cable.
Insert the type L connector to the AD-1688 firmly until it clicks.
2. Refer to "8.2. Date/Time Display" to display the date and time. When the year, date or time is displayed, press and hold the SET key for 2 seconds or more. The display flashes and the AD-1688 enters the setting mode.
Using the following keys to set the date and time. DISPLAY (+) key: Increases the value by one CLEAR (CANCEL) key: Decreases the value by one When the above keys are pressed and held, the value increases or decreases continuously. SET key: Confirms the setting and goes to the next item.
3. After setting the year, month, day, hour and minute, press the SET key to return to the data number display.

Storing the Weighing Data

Basic Operation

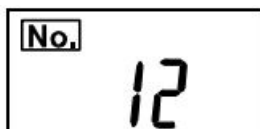
1. Connect the AD-1688 to a weighing instrument using the RS-232C cable.
When the cable is connected, power is supplied to the AD-1688 and the weighing data number appears.



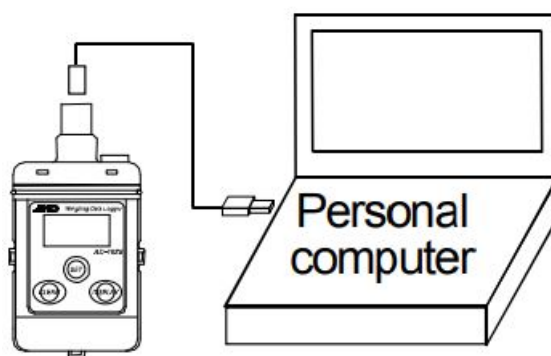
2. Press the PRINT key of the weighing instrument to transmit the data to the AD-1688. When the data is stored in the AD-1688, a buzzer sounds and the data number increases.



3. Repeat step 2 as necessary.



4. When the number of data necessary is stored, disconnect the AD-1688 from the weighing instrument. The display of the AD-1688 turns off.
5. Connect the AD-1688 to the USB port of a personal computer. Use the USB extension cable as necessary. When connected for the first time, a driver is installed automatically. The AD-1688 is recognized as a removable disk. No special software is required.



6. Open the removable disk using Windows explorer. The data is stored in a file named "AD-1688.csv". Copy this file into the personal computer to use.



An example of the data opened using EXCEL is shown below.

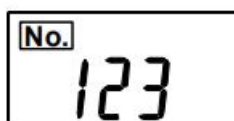
	A	B	C	D	E	F
1	1	6/10/2009	10:41:24	ST	3.076	g
2	2	6/10/2009	10:41:36	ST	3.082	g
3	3	6/10/2009	10:42:06	ST	3.102	g
4	4	6/10/2009	10:42:38	ST	3.058	g
5	5	6/10/2009	10:42:55	ST	3.091	g
6	6	6/10/2009	10:43:01	ST	3.089	g
7						

7. After copied, delete the “AD-1688.csv” file from the AD-1688 if necessary. Deleting unnecessary data individually is also possible.

Deleting the Weighing Data

Note: The AD-1688 performs as follows only when connected to a weighing instrument.

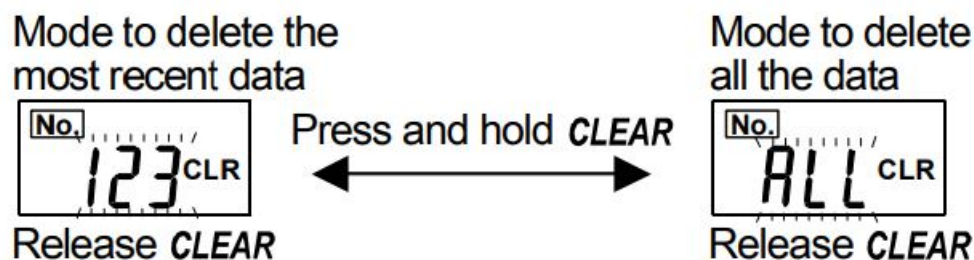
Two ways of deleting data are available; deleting the most recent data (or data with the most recent number) or all the data. Use this to delete the incorrect data.



Press and hold **CLEAR**

1. Data number display Connect the AD-1688 to a weighing instrument using the RS-232C cable. When the data number appears, press and hold the CLEAR key for 2 seconds or more.
2. Selecting a deletion mode. The “CLR” segment turns on and the most recent data number flashes. Under the

above condition: Release the CLEAR key to enter the mode to delete the most recent data. Keep pressing the CLEAR key to display “ALL”. Release the CLEAR key here to enter the mode to delete all the data. If the CLEAR key is pressed and held, the display indicates the most recent data number and “ALL” alternately.

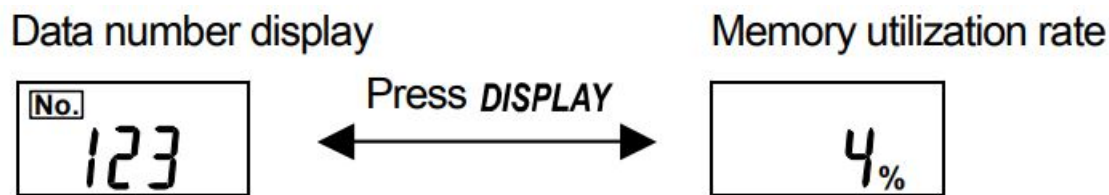


3. Deleting the data Press the SET key to delete the designated data. The display indicates the reduced data number. If the SET key is not pressed within 5 seconds, the AD-1688 returns to the data number display without deleting the data.



Switching the Displays

Memory Utilization Rate When the data number is displayed, press the DISPLAY key to display the memory utilization rate. Press the DISPLAY key again to display the data number.

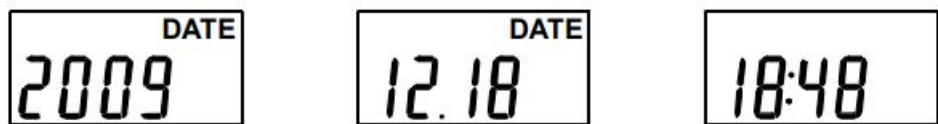


Date/Time Display When the data number is displayed, press the SET key to display the year, date and time.

1. Data number display



2. The display indicates the year and date for 2 seconds each, and then indicates the time.



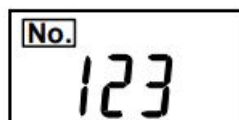
3. Press any key to return to the data number display.

Function Settings

In the function setting mode, the settings of the AD-1688 performance and communication can be changed. Each function has parameters. By changing the parameter, specify the performance of the function. The set parameters are maintained in memory even if the AD-1688 is disconnected from the weighing instrument or personal computer.

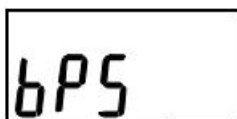
Setting Procedure

1. Connect the AD-1688 to a weighing instrument using the RS-232C cable.



Press and hold **SET**

2. When the data number appears, press and hold the SET key for 2 seconds or more.
3. The function display appears. (Refer to "9.2. Function List".) Press the DISPLAY key to select a function, and press the SET key to display the parameters. When the CLEAR key is pressed, or after 10 seconds of non-operation, the AD-1688 returns to the data number display.



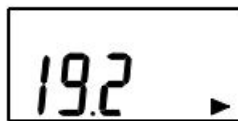
Press **SET**

4. The parameter of the selected function appears. The current setting has the mark at the lower right. The flashing parameter can be changed.

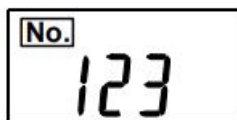
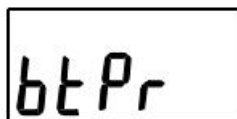


Current setting





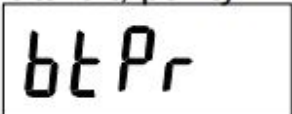
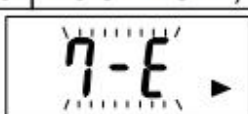
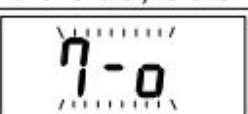

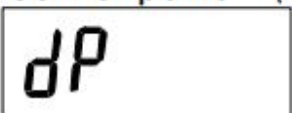

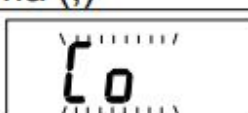
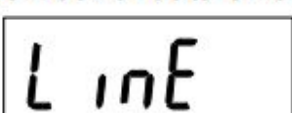
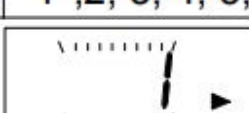
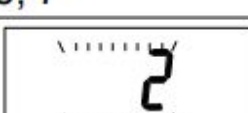
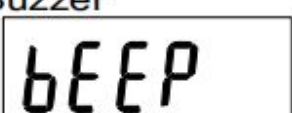

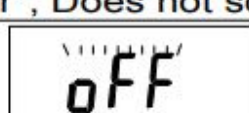
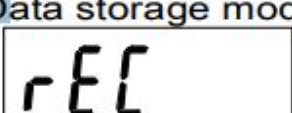


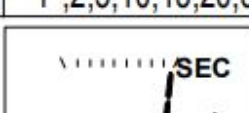
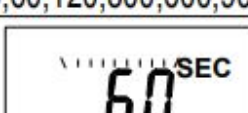
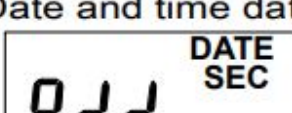
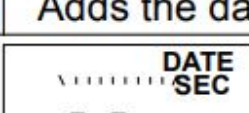
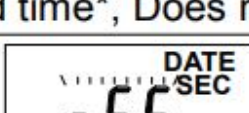
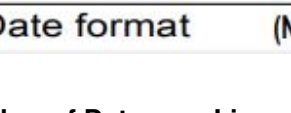
5. Using the following keys to change the parameter. DISPLAY (+) key: Displays the parameters one by one.
CLEAR (CANCEL) key: Goes to the next function without changes. After changes, the parameter and the mark appear for 1 second, and then the next function appears.



6. Press the CLEAR key to return to the data number display.



Function List

Function	Description		
Baud rate 	Parameter	600, 1200, 2400*, 4800, 9600, 19200 bps	
			
			
Data bit, parity 	Parameter	7bit-Even*, 7bit-Odd, 8bit-None	
			
			
Decimal point (Note1) 	Parameter	Dot (.)*, Comma (,)	
			
Number of data on a line 	Parameter	1*,2, 3, 4, 5, 6, 7	
			
Buzzer 	Parameter	Sounds the buzzer*, Does not sound	
			
Data storage mode 	Parameter	Standard mode (All data)*, Interval mode	
			
		When the interval mode is selected	
		Interval time	
	Parameter	1*,2,5,10,15,20,30,60,120,300,600,900,1200,1800,3600	
			
Date and time data 	Parameter	Adds the date and time*, Does not add	
			
Date format (Note1) 	Parameter	YMD*, MDY, DMY	

Number of Data on a Line

This function is useful for storing data with different contents or items at the same time, for example, ID and number of samples in a counting scale. When the number is set, <CR>s of up to the setting are converted into commas. Once the number of <CR>s is reached the setting, a new line starts. For example, the ID, number of samples and weight are sent individually. Using this function, these three data items can be placed on one line as shown in (B). Example data received to transmit to Excel

- When the number of data on a line is 1, the ID, number of samples and weight are stored on separate lines.

	A	B	C	D	E	F	G	H	I	J	K
1	1	6/10/2009	10:41:24	ID	123						
2	2	6/10/2009	10:41:24	QT	56	PC					
3	3	6/10/2009	10:41:24	ST	3.102	g					

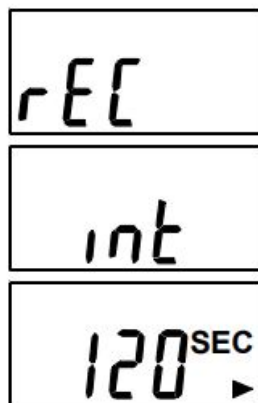
- When the number of data on a line is 3, the ID, number of samples and weight are stored on one line.

	A	B	C	D	E	F	G	H	I	J	K
1	1	6/10/2009	10:41:24	ID	123	QT	56	PC	ST	3.102	g
2											
3											

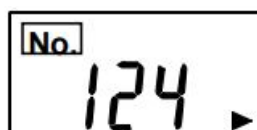
Samples
ID
Number
Weight

Interval Mode

- Connect the AD-1688 to a weighing instrument using the RS-232C cable.
- Select the interval mode (int) for the data storage mode (reC) of the function setting and set the interval time (120 seconds in the example). Press the CLEAR key to display the data number. In the interval mode, the mark turns on at the lower right.



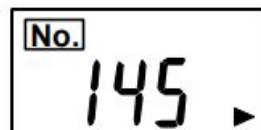
- Set the data output mode of the weighing instrument to the stream mode. For details on the setting procedure, refer to the instruction manual of the weighing instrument.



- Press and hold the DISPLAY key for 2 seconds or more. The AD-1688 starts to store the data at a set interval. The mark flashes while the data is being stored.




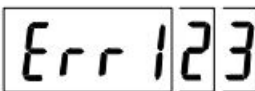


5. To stop storing the data, press and hold the DISPLAY key. The turns on.



6. Remove the AD-1688 from the weighing instrument.

7. Connect the AD-1688 to a personal computer and read the stored data.

Error Display

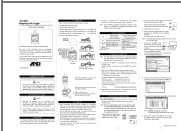
Error	Description	Remedy
	Data full. No more storage is available.	Delete the data.
 Errors 1 to 3	The voltage that is supplied from the weighing instrument is low.	Use a longer interval time to store the data.
 Error 7	The RS-232C cable is not connected correctly.	Insert the type L connector to the AD-1688 firmly until it clicks
	The baud rate and parity of the received data is different from the set values.	Set the same values for both the AD-1688 and the weighing instrument.
 Error 9	Internal clock error such as low backup battery	Ask for repair.

Specifications

- Devices Balances and scales with an RS-232C connector manufactured by A&D (Visit our website to determine which devices are applicable.)
- A number of data Approximately 5000 data in the standard format (15 characters in 1 data set).
- Clock error +1 minute / month
- Applicable OS Windows 2000 / XP / Vista / 7 / 8 / 10

- A dedicated power supply Not required Power is supplied from a weighing instrument or a personal computer.
- Operating temperature 5°C to 40°C
- Operating humidity 85%RH or less, no condensation
- Dimensions 55x103x16.5 mm
- Mass Approximately 60 g

Documents / Resources



[A D AD-1688 Weighing Data Logger](#) [pdf] Instruction Manual
AD-1688, Weighing Data Logger, AD-1688 Weighing Data Logger