# AD-8920

## Remote Display

INSTRUCTION MANUAL

**A&D**
**A&D MERCURY PTY. LTD.**

## 1. Introduction

The AD-8920 is a remote display that uses vacuum fluorescent display technology. It displays the weighing data transmitted by an A&D manufactured weighing instrument using RS-232C or current loop. Applicable weighing instruments (electronic balances/platform scales) are listed below. When the output connector of the weighing instrument is of the DIN type, an optional DIN conversion cable is required. To extend the communication cable between the weighing instrument and AD-8920, an optional extension cable is available.

■ **What the package contains**

· AD-8920 main unit

· Communication cable (Approx. 1 m)

· AC adapter

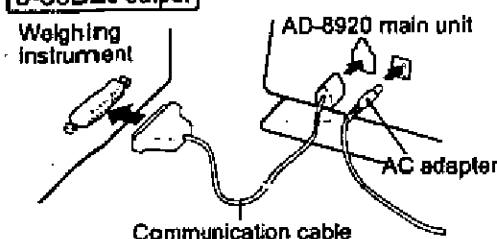⚠ Please confirm that the AC adapter type is correct for your local voltage and receptacle type.

· Instruction manual (this leaflet)

■ **Options** (Sold separately)

· OP-01    DIN conversion cable
　　　　　　(Approx. 25 cm)

· OP-02    Extension cable (Approx. 5 m)

■ **Connection diagram**
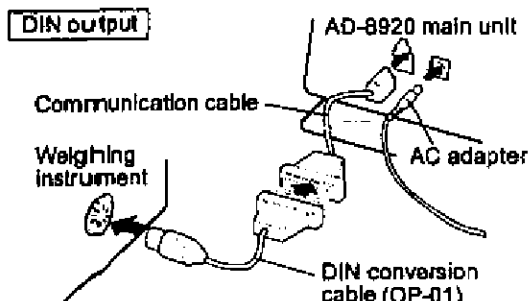
D-SUB25 output



DIN output



Table 1 Applicable instruments and required options (As of July, 2000)

| Weighing instrument | Using RS-232C | | Using current loop | |
|---|---|---|---|---|
| | On instrument | On AD-8920 | On instrument | On AD-8920 |
| EK-G | OP-03(D-SUB25) | None | OP-05(DIN7) | OP-01 |
| EK-H | OP-03H(D-SUB25) | None | OP-05H(DIN7) | OP-01 |
| ET-W | OP-03W(D-SUB25) | None | OP-05W(DIN7) | OP-01 |
| EW-G | OP-03(D-SUB25) | None | OP-05(DIN7) | OP-01 |
| FG | OP-03(DIN7) | OP-01 | OP-05(DIN7) | OP-01 |
| FP | OP-03(D-SUB25) | None | OP-03 or OP-04(DIN7) | OP-01 |
| FS | OP-03(DIN7) | OP-01 | Not applicable | |
| FX | OP-03(D-SUB25) | None | OP-03(DIN7) | OP-01 |
| GR | None (D-SUB25) | None | Not applicable | |
| GX, GF | None (D-SUB25) | None | OP-04 or OP-06(DIN7) | OP-01 |
| HA-M | OP-03(D-SUB25) | None | OP-03(DIN7) | OP-01 |
| HA-A | OP-03(D-SUB25) | None | OP-03 or OP-04(DIN7) | OP-01 |
| HF,HM | OP-03(D-SUB25) | None | OP-03 or OP-05(DIN7) | OP-01 |
| HP | OP-03(D-SUB25) | None | Either one of OP-03,OP-04, OP-05,OP-06, (DIN7) | OP-01 |
| HR | OP-03(D-SUB25) | None | OP-03 or OP-05(DIN7) | OP-01 |
| HV-G HW-G | OP-03(DIN8) | OP-01 | Not applicable | |
| HX | None (D-SUB25) | None | OP-04 or OP-05(DIN7) | OP-01 |

## 2. Preparation

### 2-1. Setting the weighing instrument

Table 2 List of instrument settings

| Item | Setting | Description |
|---|---|---|
| Data output mode | Stream mode | Outputs the weighing data continuously. |
| Baud rate | 2400bps or 600bps | AD-8920 recognizes the baud rate automatically. |
| Length, Parity bit | 7 bits-even, 7 bits-odd, or 8 bits-none | AD-8920 functions correctly with any one of those listed. |
| Stop bits | 1 bit or 2 bits | AD-8920 functions correctly with either one. |
| Terminator | <CR> or <CR><LF> | AD-8920 functions correctly with either one. |
| Data format | A&D standard format | |
| CTS control | No control of CTS, RTS | |
| Output (hardware) | RS-232C or current loop | AD-8920 recognizes the output mode automatically. |

Note) The available items depend on the weighing instrument. (An item is not available when the setting is fixed.)
For a detailed description of the settings, refer to the instruction manual of each weighing instrument.

### 2-2. Connecting the AD-8920

Confirm that the AC adapter is of the correct type. Refer to the connection diagram shown above to connect the AD-8920 to the weighing instrument. Use the OP-01 DIN conversion cable when the output connector on the weighing instrument is of the DIN type.

## 3. Display

3-1. When the power is turned on, using the AC adapter, all the display segments illuminate, and then the weighing data transmitted from the weighing instrument appears. The status of the data is indicated by a triangle ( ▼ ).
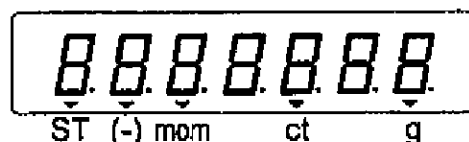


ST   (-) mom   ct   g

Table 3 Symbols and data status

| Symbol | Status of weighing data |
|---|---|
| ST | The weighing data is stable. |
| (-) | The weighing data is negative. This symbol appears for a 7-digit negative value. Usually the minus sign is placed before a numeric value. |
| mom | The weighing unit is momme. |
| ct | The weighing unit is carat. |
| g | The weighing unit is gram. |

Note) The unit indicating ▼ does not illuminate for weighing units other than described above.

3-2. If the weighing data is in overload, | E | or | -E | appears.

3-3. If the data receiving procedure is interrupted, the display becomes blank.

3-4. If the power is turned on without a weighing instrument connected, all the display segments will remain illuminated.

## 4. Maintenance / Troubleshooting

4-1. Cleaning

For cleaning, wipe the AD-8920 with a soft cloth. Do not use solvents such as thinner.

4-2. If the display brightness is not even:

Turn the AD-8920 on with the weighing instrument disconnected. All of the display segments will illuminate. Leave the AD-8920 this way for a few hours.

4-3. If the AD-8920 does not function properly: (Before asking for repair, check the following.)

• Is the AC adapter type correct?

• Is the cable connected firmly?

• Are the weighing instrument settings correct?

(Particularly, has the data output mode been set to stream mode?)

• Is data other than the weighing data, such as time or ID number, being output?

## 5. Specifications

Table 5-1 Specifications

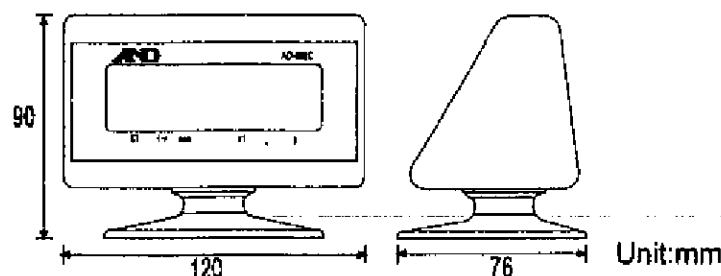| Power consumption | Approx. 5VA supplied to the AC adapter (Approx. 8VDC, approx. 0.2ADC supplied to the AD-8920) |
|---|---|
| Display | 7-digit VFD, Character height 13mm |
| Signal | RS-232C / Current loop (ACTIVE) |
| Baud rate | 600bps / 2400bps |
| Length, Parity bit | 7 bits-even, 7 bits-odd, 8 bits-none |
| Stop bits | 1 bit or 2 bits |
| Terminator | <CR> or <CR><LF> |
| Display refresh rate | Approx. 10 times/second (when baud rate is 2400bps)*1 |
| Input connector | Modular jack |
| Dimensions | 120(W)×90(H)×76(D)    Unit: mm |
| Net weight | Approx. 220g *2 |



Modular jack terminal No.

Pin 4      Pin 1
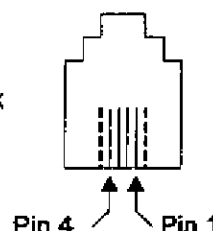
Table 5-2 Pin assignment

| Pin No. | RS-232C | Current loop |
|---|---|---|
| 2 | RXD (Connects to the TXD output of the weighing instrument) | Current loop (+) |
| 3 | SG (Connects to SG) | Current loop (-) |
| 1, 4 | Used internally | |

*1 With the condition that the weighing instrument transmits data 10 times per second.

*2 AC adapter and communication cable are not included.

## 6. External dimensions



90

120      76      Unit:mm

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