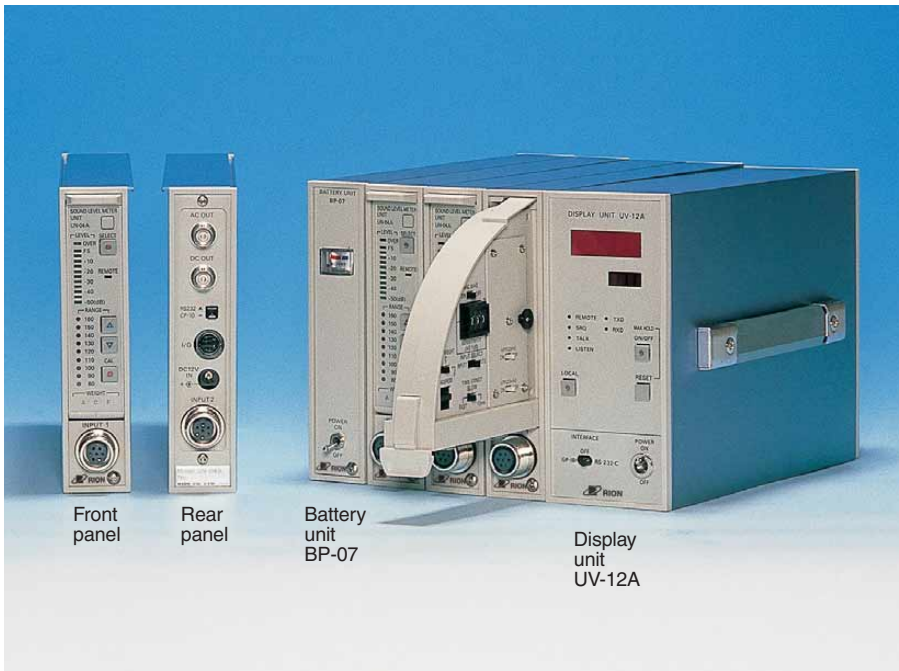


# Multi-channel Sound Level Measurement Sound Level Meter Unit Model **UN-04A**

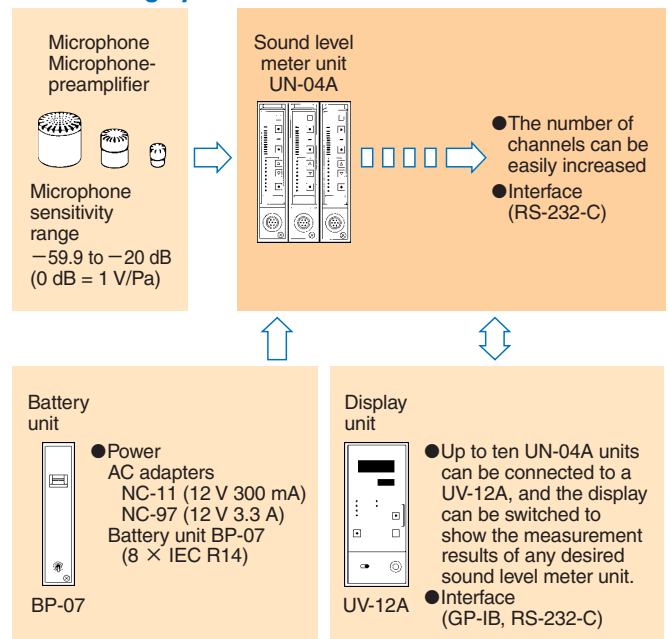


The UN-04A is a sound level meter unit suitable for use with all major measurement microphones and preamplifiers from RION. It has switchable front-panel and rear-panel inputs.

By selecting the appropriate microphone, the UN-04A can be used for general as well as for precision sound level measurements, in compliance with applicable standards. The AC and DC outputs allow the use of equipment such as a data recorder or analyzer, and a separate I/O connector serves for connection to the printer DPU-414 (option) or to a computer for data transfer and external measurement control (RS-232-C interface).

- 30 mm width slim case
- Pulling-down panel making setting of measurement sensitivity easy
- Compact & light weight, no rack required:  
33 (W) × 149 (H) × 210 (D) mm · 850g
- Frequency weighting: A, C, Flat
- Time weighting: FAST, SLOW, 10 ms
- Microphone sensitivity range:  
−59.9 to −20 dB (0 dB=1 V/Pa)
- The number of channels can be easily increased by just sliding in the guides
- Built-in low-pass & high-pass filter
- Option: Display unit (UV-12A), Battery unit (BP-07) & Filter unit (NX-06)

## Measuring system





## Display unit UV-12A

Up to ten UN-04A units can be connected to a UV-12A, and the display can be switched to show the measurement results of any desired sound level meter unit.

The UV-12A incorporates a GP-IB and a RS-232-C interface, allowing the use of a computer to control measurement operation of connected UN-04A units and to gather measurement data.

### Specifications

Display: 5 digits, update cycle 1s  
GP-IB Interface:

Applicable standards: IEEE 488  
Interface cable: GP-IB cable  
RS-232-C Interface:  
Applicable standards: EIA RS-232-C  
Interface cable: CC-87, CC-87E (option)  
Ambient Conditions for Operation:  
-10 to +50 °C,  
90 %RH  
Power:  
DC +9 to +15 V  
AC 85 to 250 V,  
47 to 440 Hz  
Dimensions & Weight: 6 × 15 × 21 cm,  
Approx. 1.3 kg



## Battery unit BP-07

The battery unit BP-07 holds eight size "C" Dry cell (IEC R 14). When using alkaline batteries, the BP-07 can power three UN-04A units for about eight hours.



## AC Adapters NC-11 series NC-97 series

● NC-11 series:  
12 V DC, 300 mA  
NC-11: 100 V AC  
NC-11A: 120 V AC  
NC-11B: 220 V AC  
● NC 97 series:  
12 V DC, 3.3 A  
NC-97: 100 to 120 V AC

## UN-04A Specifications

Applicable standards: JIS C 1505-1988 (electrical characteristics only)  
IEC 60651: 1979 Type 1 (electrical characteristics only)

### Inputs:

Input connectors: Front-panel input and rear-panel input (1 each)  
Input impedance: 100 kΩ  
Maximum input voltage: ±12 V  
Connector type: 7-pin  
Microphone bias output: 30 V, 60 V, 200 V  
Preamplifier power supply output: ±12 V, 5 mA

### Measurement level range (with microphone UC-53A):

A weighting: 27 to 128 dB (JIS), 24 to 128 dB (IEC)  
C weighting: 33 to 128 dB (JIS), 30 to 128 dB (IEC)  
Flat response: 38 to 128 dB (JIS), 35 to 128 dB (IEC) (Frequency range 20 Hz to 20 kHz)

Frequency range: 2 Hz to 100 kHz (±3 dB)

Frequency weighting: A, C, Flat

### Level range selector:

Depending on the microphone, the following range settings are available.

| Microphone sensitivity range (0 dB = 1 V/Pa) | Full-scale level (dB) |
|--|-----------------------|
| -29.9 to -20                                 | 80 to 130             |
| -39.9 to -30                                 | 90 to 140             |
| -49.9 to -40                                 | 100 to 150            |
| -59.9 to -50                                 | 110 to 160            |

### Calibration:

Gain calibration: Calibration possible for microphone sensitivity from -59.9 to -20 dB. For other ranges, conversion is required.

Calibration signal: Generated by internal signal generator (sine wave, 1kHz ±2 %)  
AC output voltage 0.5 Vrms ±2 %  
DC output voltage 3.2 V ±1 %

### RMS detection:

Time weighting: FAST, SLOW, 10 ms  
Display: 11-step LED display of instantaneous value (5 dB steps)

### Overload indication:

Indicator lights when signal waveform saturation occurs (full-scale point +8 dB)

### Inherent noise (with inputs shorted):

2 Hz to 100 kHz: 4 μV rms or less  
20 Hz to 20 kHz: 2 μV rms or less  
A and C weighting: 1.5 μV rms or less  
Internal filter: 20-Hz high-pass filter (-12 dB/oct)  
20-kHz low-pass filter (-12 dB/oct)

### Outputs:

#### AC output (rear panel)

Output connector type: BNC  
Output impedance: Approx. 600 Ω  
Output voltage: 1 V rms ±2 % (at full-scale point)  
Maximum output voltage: ±5 V peak (no overload)  
Dynamic range: 80 dB (2 Hz to 100 kHz), 85 dB (20 Hz to 20 kHz)  
Load impedance: 10 kΩ or more

#### DC output (rear panel)

Output connector type: BNC  
Output impedance: Approx. 50 Ω  
Output voltage: +3.5 V ±1 % (at full-scale point), 0.5 V/10 dB  
Maximum output voltage: +5 V (no overload)  
Dynamic range: 40 dB (2 Hz to 100 kHz), 60 dB (20 Hz to 20 kHz)  
Load impedance: 10 kΩ or more

### Interface:

Function: Data output and remote control  
Standard: EIA RS-232-C standard  
Transmission: Asynchronous, half-duplex

Ambient conditions for operation: -10 to 50 °C, 90 %RH or less

### Power requirements:

Voltage: 9 to 15 V DC (120 mA)  
Suitable AC adapters: NC-11/NC-97 series  
Suitable battery unit: BP-07

### Dimensions:

33 (W) × 149 (H) × 210 (D) mm (without protruding parts)

### Weight:

Approx. 850 g

### Optional Accessories:

Filter unit NX-06  
AC adapter NC-11/NC-97 series  
NC-11: 100 V AC 12 V DC, 300 mA  
NC-11A: 120 V AC 12 V DC, 300 mA  
NC-11B: 220 V AC 12 V DC, 300 mA  
NC-97: 100 - 240 V AC 12 V, 3.3 A

### Battery unit: BP-07

Display unit: UV-12A

Printer: DPU-414

### RS-232-C interface cable CC-87 series

CC-87: 25-pin male connector, for connection to printer DPU-414 and computer serial port  
CC-87E: 9-pin female connector, for connection to computer serial port

Specifications subject to change without notice.

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