INSTRUCTION MANUAL

UV-22Viewer

UV-22

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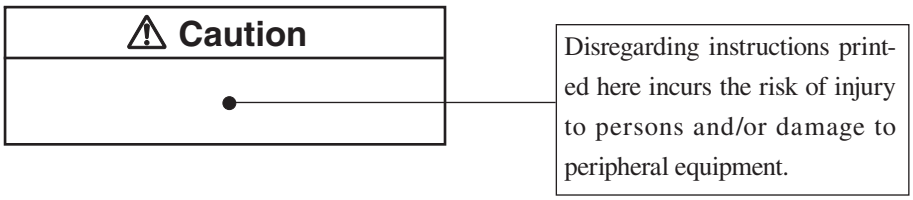
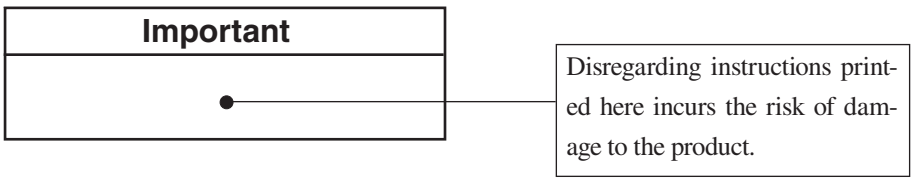
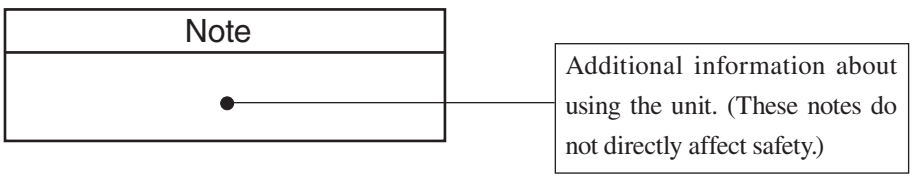
FOR SAFETY

In this manual, important safety instructions are specially marked as shown below. To prevent the risk of injury to persons and severe damage to the unit or peripheral equipment, make sure that all instructions are fully understood and observed.







⚠ Caution

Do not play the disc in a CD player!
The CD-ROM containing this software is not a music CD. Inserting the disc in a CD player poses the risk of excessive volume levels that can cause hearing damage and damage to the CD player.

Important

About the Microsoft Windows operating system
This manual does not provide general information on how to use the Microsoft Windows operating system. For general information about selecting commands and making settings in dialog boxes, refer to the documentation and online help of Microsoft Windows.
Examples for computer screens shown in this manual are for illustration purposes only. The actual appearance of screens may differ, depending on the version of the Microsoft Windows operating system and the computer environment.

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Contents

Software Usage License Agreement iii

Outline 1

Preparations 3

Installation 4

Connections 9

- Connections for USB link 9
- Connections for LAN link 10

Starting the Application 12

- Startup screen 12
- Timeout setting screen 15
- LAN Setting screen 16
- Instantaneous value display and setup screen 18
- Contents of input setting 22
- Input setting category 23
- Measurement setting category 25
- User filter setting category 28
- Making a global setting 29

Outline

The UV-22Viewer Software is supplied with the Interface Unit UV-22 on a single CD-ROM disc and is designed specifically for use with the UV-22. The software supports setup control, measurement value display, and other functions for the Sound Level Meter Unit UN-14 and Vibration Meter Unit UV-15 linked to the UV-22. The connection between UV-22 and a computer can be established via a USB or Ethernet link.

Main functions

Control settings and display instantaneous value (updated every second) for linked UN-14

Control settings and display instantaneous value (updated every second) for linked UV-15

Input user filter values for linked UN-14/UV-15

Operation control: The software supports control of one UV-22 unit. Via the UV-22 unit, the software can control up to 16 UN-14 and UV-15 units.

Precautions

- Suitable ID numbers must have been assigned to UN-14 and UV-15 units linked to the UV-22.
  The ID number serves to uniquely identify a device in the system. Make sure that ID number settings do not conflict. If there is more than one device in the system with the same ID number, correct operation is not possible.
- Use the AC adapter NC-99 series to power the system during communication.

Operating environment

Supported operating systems:

Microsoft Windows 8.1 Pro (32 bit/64 bit)

Microsoft Windows 10 Pro (32 bit/64 bit)

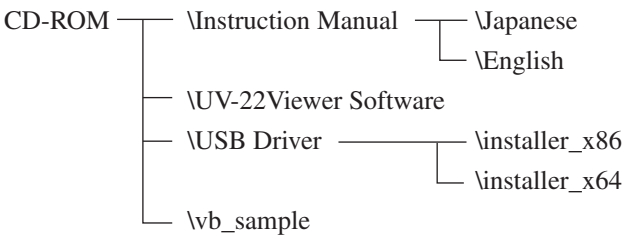
CPU: Intel (R) Celeron (TM) processor 800 MHz or higher

RAM: 256 MB or more

Preparations

It is recommended that you insert the CD-ROM into the disc drive of your computer and copy the entire folder and file structure from the CD-ROM to the hard disk.

CD-ROM folder structure



Instruction Manual folder

Contains the documentation for the UV-22 and the UV-22Viewer in electronic format.

UV-22Viewer Software folder

Contains the UV-22Viewer application software.

USB Driver folder

Contains the USB driver.

installer_x86:

For 32 bit Microsoft Windows 8.1 Pro/10 Pro

installer_x64:

For 64 bit Microsoft Windows 8.1 Pro/10 Pro

vb_sample folder

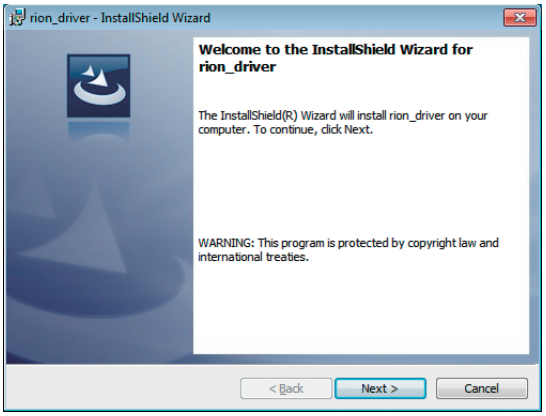
Contains sample software for retrieving data from the UV-22 using the DOD command. The software is written in Visual Basic.

Installation

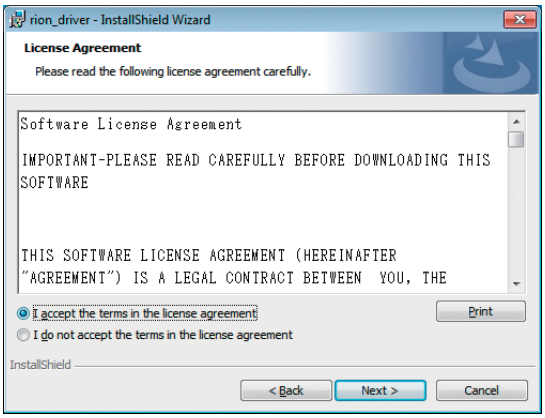
Install the USB driver on the computer as follows.

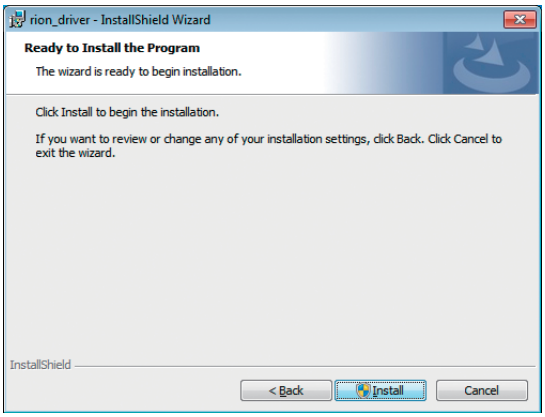
1. Start up the computer. Close any other software that is running.

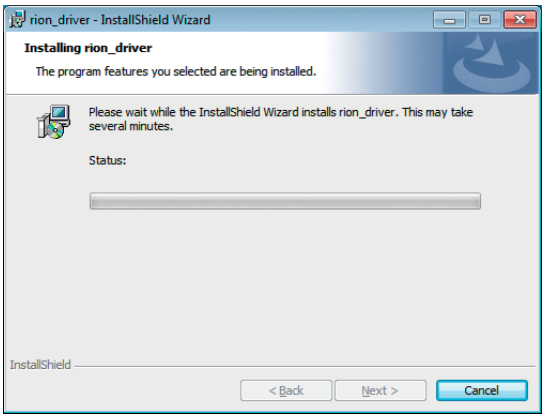
   When using 32 bit OS, execute the file “setup.exe” located in the “installer_x86” folder.
   When using 64 bit OS, execute the file “setup.exe” located in the “installer_x64” folder.
   The installation starts.



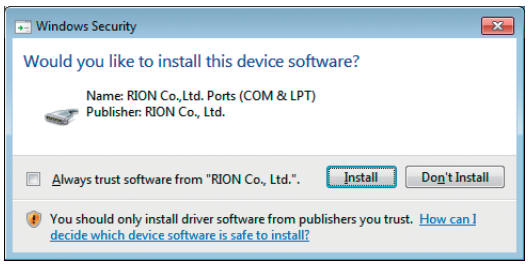
Follow the wizard to complete the installation.
Screens during installation are as follows.

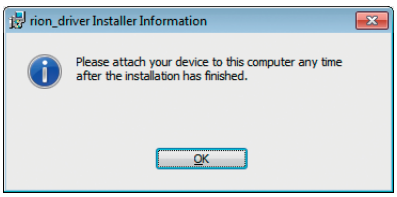


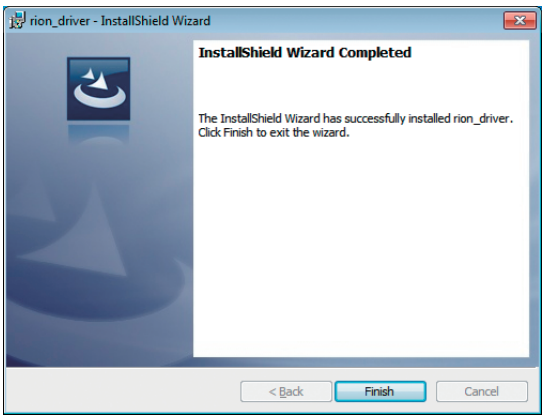




Depending on your environment, [Windows Security] may be displayed. Click on “Install” or “Continue”.

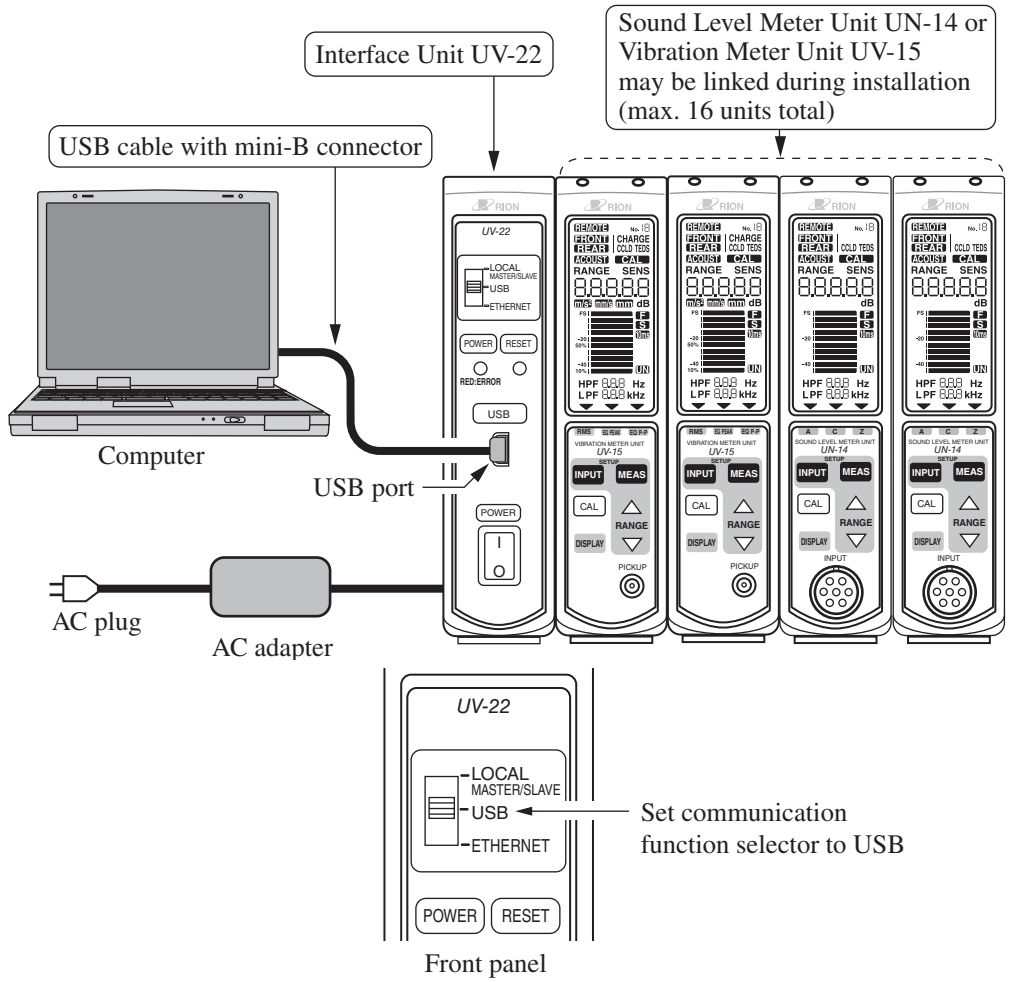






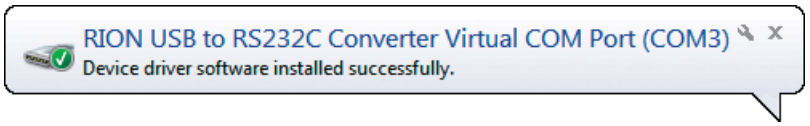
2. Make sure that the POWER switch of the UV-22 is set to OFF and that the communication function selector on the front panel is set to USB.

3. Plug the USB cable into the USB port of the UV-22 and plug the other end of the cable into the USB port of the computer. Then turn on power to the UV-22.



* The USB driver can be installed also while the UV-22 is linked to UN-14 and UV-15 units.

When the computer detects the UV-22, the device driver software installation is started automatically. When the installation has been completed, USB communication is enabled.



Connections

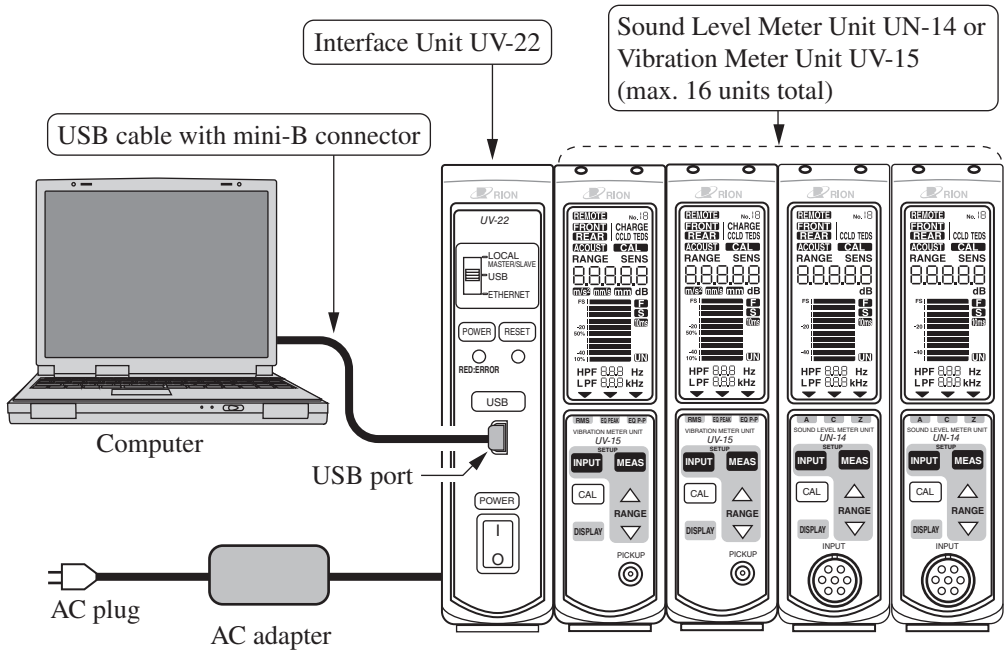
Make connections as required, according to the type of interface to be used.

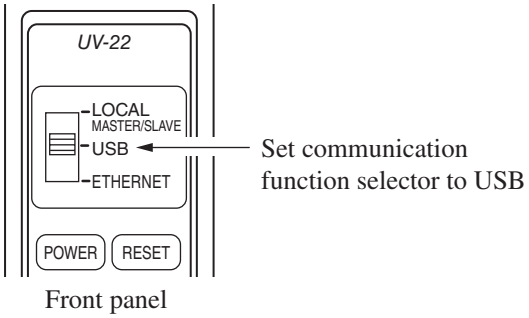
Connections for USB link

To use the UV-22, connect the AC adapter to the UV-22.

If the Battery Unit BP-17 is part of the system, connect the AC adapter to the BP-17.

In this case, leave the POWER switch of the UV-22 constantly set to ON.



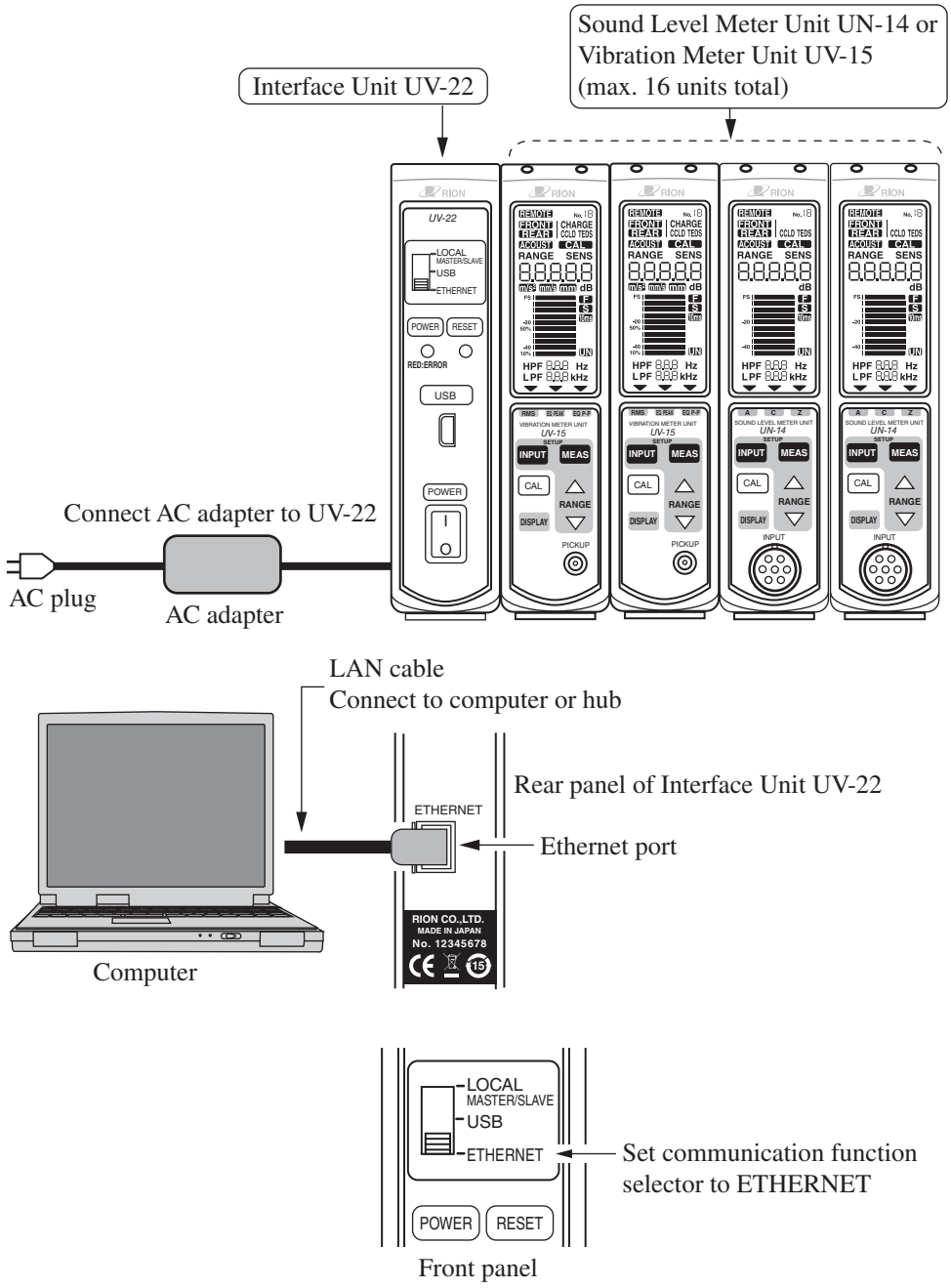


Connections for LAN link

To use the UV-22, connect the AC adapter to the UV-22.

If the Battery Unit BP-17 is part of the system, connect the AC adapter to the BP-17.

In this case, leave the POWER switch of the UV-22 constantly set to ON.



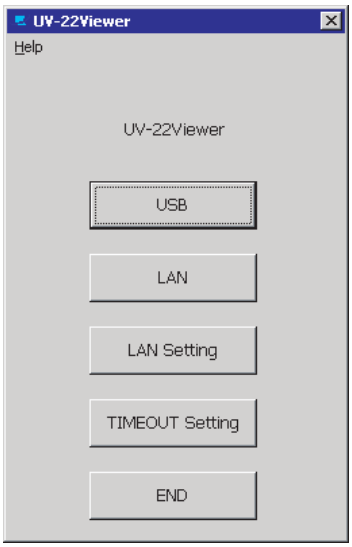
Important
Use only the optional AC adapter NC-99 series. Using any other AC adapter can result in malfunction and damage.

Starting the Application

Select the UV22Viewer.exe icon and double-click on it.

Startup screen

When the UV22Viewer.exe application is started, a startup screen such as shown below appears.



Startup screen

The startup screen has the following buttons.

- USB button
  Use USB link to connect to UV-22 and bring up the input settings screen.
- LAN button
  Use LAN link to connect to UV-22 and bring up the input settings screen. Before using LAN communication for the first time, LAN settings must be made using the LAN Setting screen.
- LAN Setting button
  Use USB link to connect to UV-22 and bring up the LAN Setting screen.

- TIMEOUT Setting button
  Bring up the screen for setting the timeout interval for communication with the UV-22.

- END button
  Terminate the application.

Note
If a communication error occurs, check the various settings and cable connections, and restart the computer and the UV-22.

The startup screen also contains the following menu.

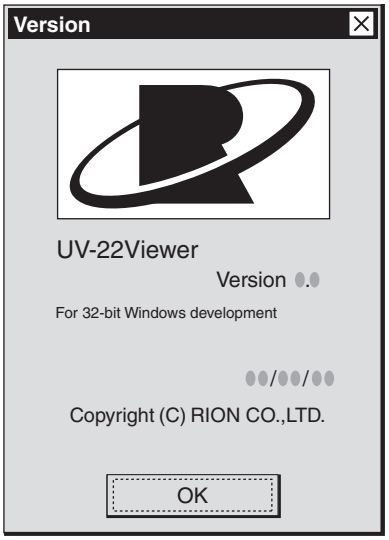
- Help menu

  Selecting the Help menu gives access to the following sub menu.

  Version sub menu: Brings up the version screen.

  From the startup screen or the input setting screen, select [Help > Version] to bring up the version screen. The screen shows the program version and other information.

It also contains the button shown below.



Version screen

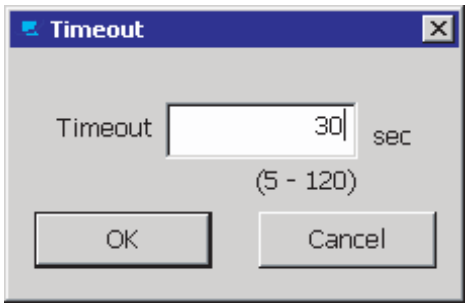
- OK button

  Closes the version screen.

Timeout setting screen

Clicking the TIMEOUT Setting button on the startup screen brings up a screen such as shown below.

The Timeout setting screen lets you set the timeout interval for communication with the UV-22.



Timeout setting screen

The following item can be set from this screen.

- Timeout

  Sets the timeout interval for communication with the UV-22. The setting range is 5 to 120 seconds in 1-second intervals.

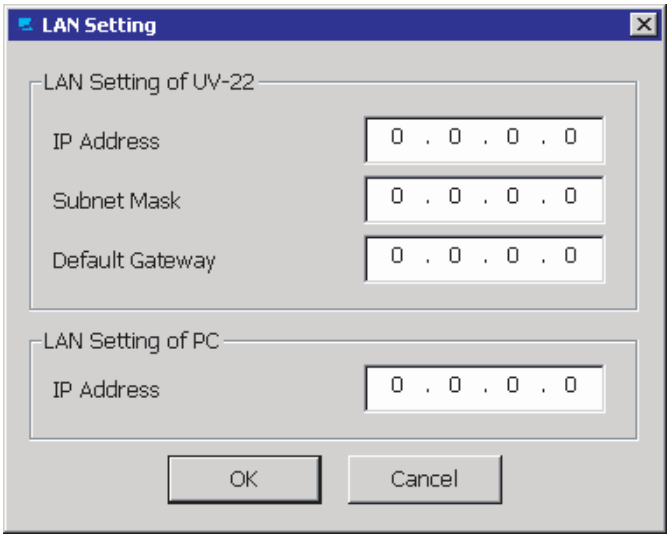
Note
When using a LAN link, network traffic and communication conditions can affect the transmission. A setting of 30 seconds or higher is recommended.

LAN Setting screen

Clicking the LAN Setting button on the startup screen initiates a communication to the UV-22 via the USB link.

If the communication can be established successfully, the LAN Setting screen appears.

The LAN Setting screen serves to make LAN related settings for the UV-22 and for the computer.



LAN Setting screen

The LAN Setting screen gives access to the following items.

- UV-22 LAN settings

  This section comprises the following items. The settings are saved in the UV-22.

  - IP address

    Specifies the IP address of the UV-22.
  - Subnet mask

    Specifies the subnet mask of the UV-22.
  - Default gateway

    Specifies the default gateway of the UV-22.

  The factory default settings of the UV-22 are as shown below.

  IP address: 192.168.100.100

  Subnet mask: 255.255.255.0

  Default gateway: 192.168.100.1

- PC LAN settings

  This section comprises the following item. The setting is saved in the computer.

  ◦ IP address

  Specifies the IP address of the UV-22 that the computer should look for when connected via LAN.

  (Use the same IP address as entered in the UV-22 LAN settings section.)

The LAN Setting screen contains the buttons described below.

- OK button

  Clicking this button after changing the UV-22 LAN settings will send a command string to the UV-22 that updates the setting.

  Clicking this button after changing the PC LAN settings will change the connection target for LAN communication.

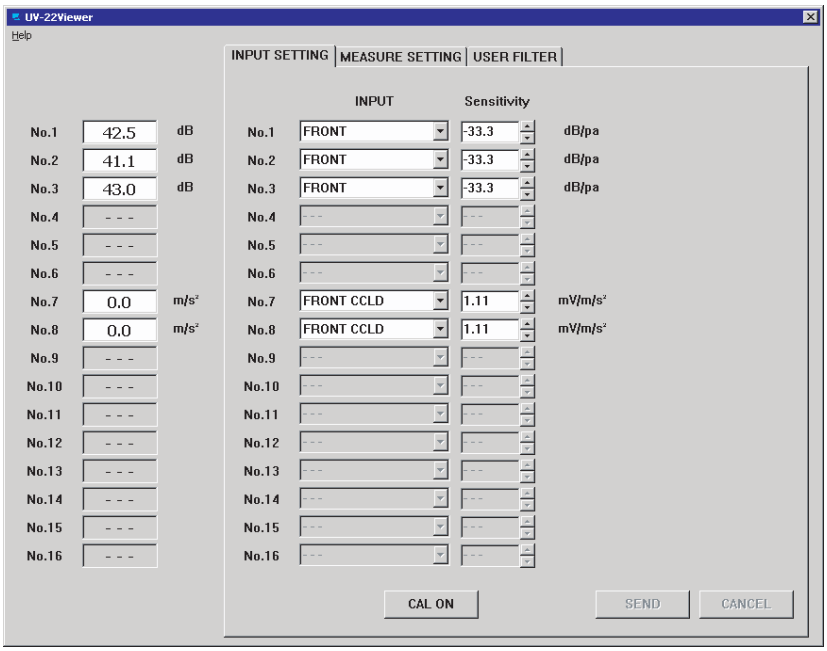
- CANCEL button

  Closes the LAN Setting screen without making any changes.

Important
When the unit is to be connected to a company network or similar, consult the network administrator regarding the appropriate settings for IP address, subnet mask, and default gateway.
On a LAN, the actual communication speed (throughput) will depend on data traffic and communication conditions.
The operation keys on the UN-14/UV-15 remain active also while using the UV-22Viewer software. If settings are changed with the keys while operation is controlled by the UV-22Viewer software on the computer, a mismatch between the settings as managed by the software and the actual UN-14/UV-15 settings may occur.

Instantaneous value display and setup screen

When a connection to the UV-22 has been successfully established by clicking the USB or LAN button on the startup screen, the instantaneous value display and setup screen as shown below appears. The screen shows instantaneous values and also gives control over various setup items.



Instantaneous value display and setup screen

The instantaneous value display and setup screen contains the buttons described below.

- CAL ON / CAL OFF button
  Clicking this button turns calibration mode at UN-14/UV-15 units linked to the UV-22 on and off.
  If the button is clicked while showing “CAL ON”, calibration mode is turned on.
  If the button is clicked while showing “CAL OFF”, calibration mode is turned off.
  If a setting was changed, this button is not available.

- SEND button
  Click this button to send any changed settings to the UV-22.
  The button becomes available when a setting was changed.

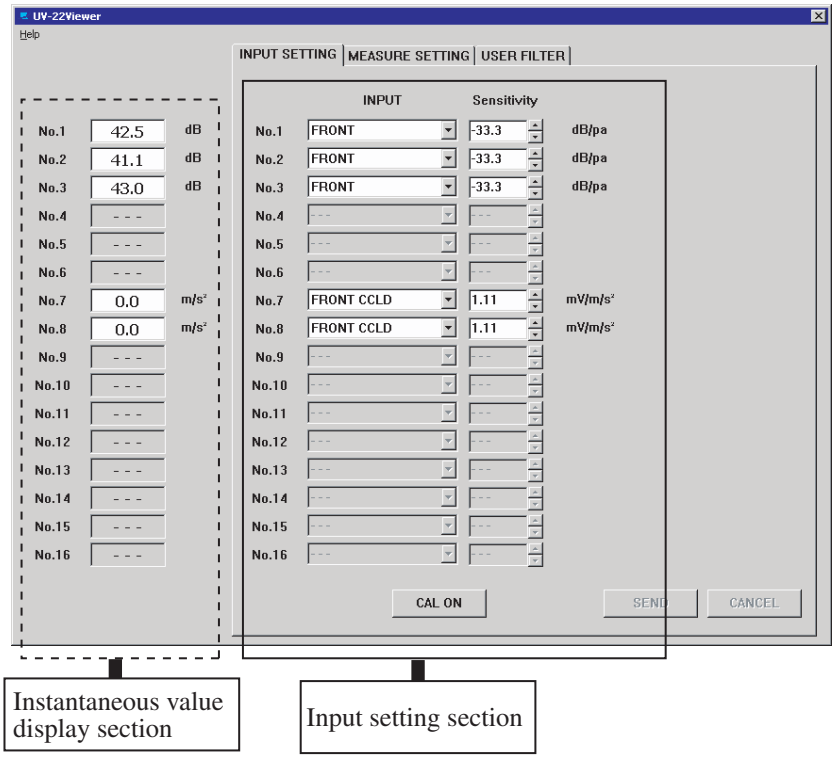
- CANCEL button
  Click this button to cancel any changed settings.

The instantaneous value display and setup screen also contains the following menu.

- Help menu
  Selecting the Help menu gives access to the following sub menu.
  - Version sub menu: Brings up the version screen.

To close the instantaneous value display and setup screen, click the ☒ button at the right end of the window title bar.

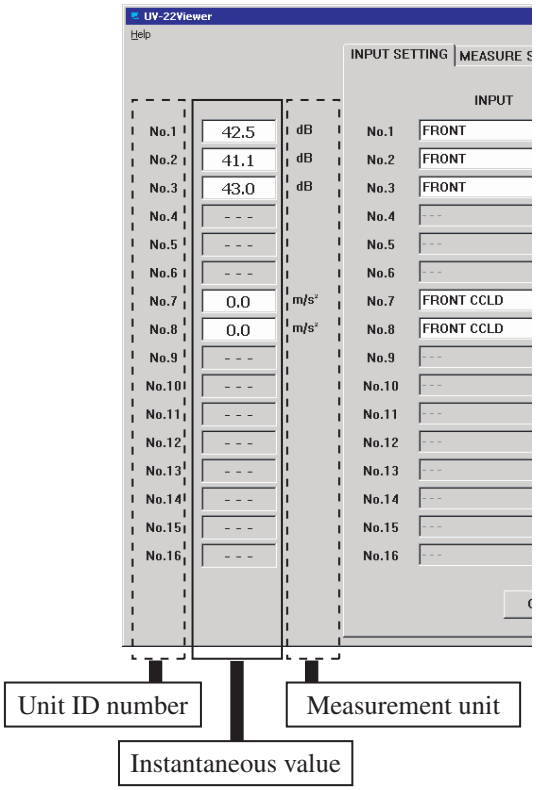
The instantaneous value display and setup screen is divided into the instantaneous value display section and the input setting section.



Layout of instantaneous value display and setup screen

Contents of instantaneous value display section

The instantaneous values of units linked to the UV-22 are shown here.
The indication is updated every second.
The display supports up to 16 units.



Instantaneous value display section (detail)

Note
Depending on communication conditions, updating may not always occur at 1-second intervals.

The “No.” field corresponds to the ID number assigned to the linked unit. The indication field shows the instantaneous value of the unit (UN-14/UV-15) linked to the UV-22. The background color of the field indicates the current status.

- Normal status: Background is white.
- OVER (overload) status: Background is red.

If there is no unit at a specific ID number, the field only shows “---”.

The measurement unit field shows which unit applies to the value shown in the indication field. The following indications are possible.

- No equipment connected:
  Unit field is blank.
- UN-14 connected:
  Unit field shows “dB”.
- UV-15 connected:
  Unit field shows “m/s^2”, “mm/s”, or “mm” depending on setting.

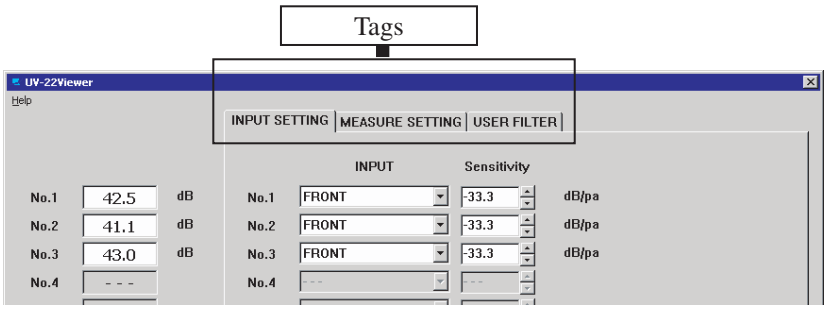
Contents of input setting

This section allows making input settings, measurement settings, and user filter settings for equipment connected to the UV-22.

The section has three categories. Select the respective category by clicking the appropriate tag at the top.

- To select the input setting category, click the INPUT SETTING tag.
- To select the measurement setting category, click the MEASURE SETTING tag.
- To select the user filter setting category, click the USER FILTER tag.

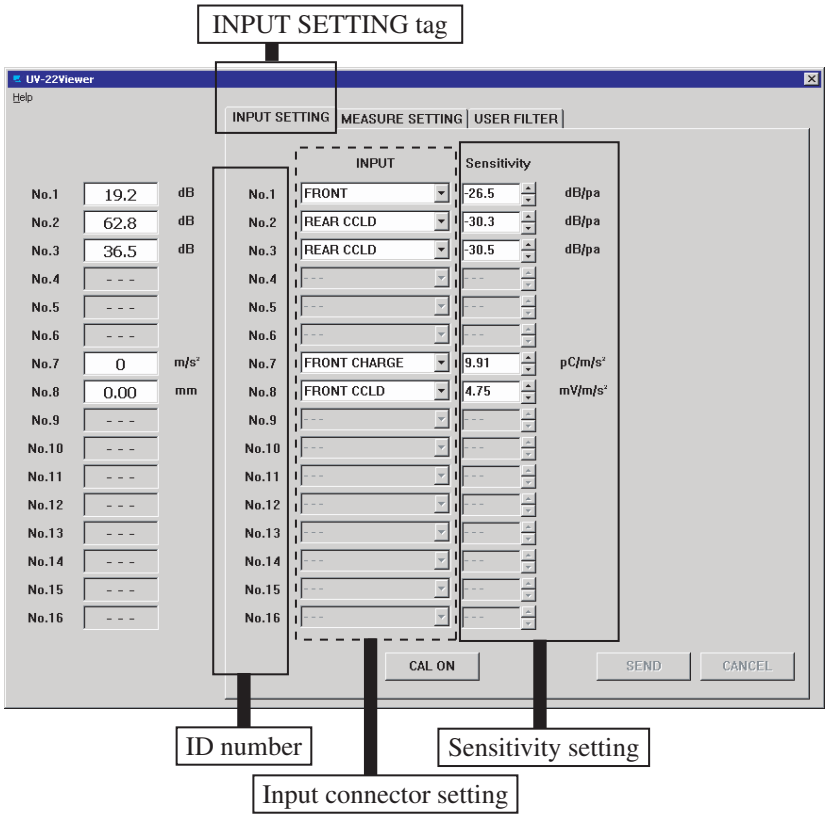
If any setting has been changed, the tags for the other categories will not be available.



Input setting section

Input setting category

Clicking the INPUT SETTING tag brings up the input setting category. Here you can make input related settings.



Input setting category

The “No.” field corresponds to the ID number assigned to the unit linked to the UV-22.

The INPUT field lets you specify input connector related settings of the UN-14/UV-15 unit linked to the UV-22.

If there is no unit at a specific ID number, the INPUT field only shows “---”.

If there is a unit at a specific ID number, but the obtained input value is not within specifications, the unit indication will be blank.

Depending on the selected INPUT setting, TEDS communication mode is enabled in the following cases.

- Connected unit is UN-14 and REAR CCLD TEDS is selected
- Connected unit is UV-15 and FRONT CCLD TEDS is selected

When the INPUT setting is changed to TEDS communication mode, changing the Sensitivity value is not possible, and the field becomes blank (because the Sensitivity value is not yet determined at that point). When you subsequently click the SEND button, TEDS communication starts. When TEDS communication is completed, the Sensitivity value will be obtained and will be shown in the Sensitivity field.

If TEDS communication has failed, the message “TEDS communication failed” along with the ID number of the device is shown.

To use the TEDS sensor for setting the sensitivity value to a specific value, select the following setting:

- UN-14: REAR CCLD
- UV-15: FRONT CCLD

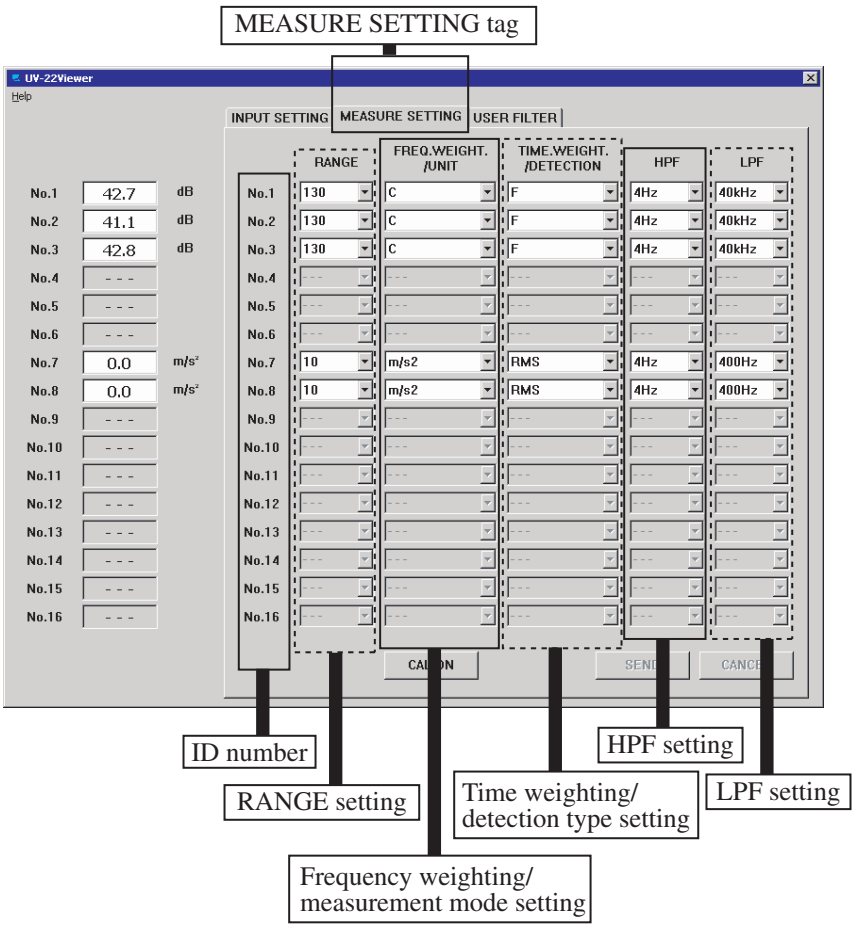
The Sensitivity field shows the respective sensitivity setting of the UN-14 or UV-15 unit. If there is no unit at a specific ID number, the field only shows “---” and cannot be changed. The unit indication is also blank.

If TEDS communication mode has been enabled by the INPUT setting, the sensitivity value cannot be changed.

Measurement setting category

Clicking the MEASURE SETTING tag brings up the measurement setting category. Here you can select or display the following measurement related settings.

- UN-14: Range, frequency weighting characteristics, time weighting characteristics, HPF, LPF
- UV-15: Range, measurement mode (acceleration/velocity/displacement), detection type, HPF, LPF



Measurement setting category

The “No.” field corresponds to the ID number assigned to the unit linked to the UV-22.

The RANGE field lets you select or display the range setting of the UN-14 or UV-15 unit linked to the UV-22. If there is no unit at a specific ID number, the RANGE field only shows “---” and cannot be changed.

The setting range depends on the device type.

- UN-14
  Range is determined by sensitivity setting.
- UV-15
  Range is determined by sensitivity setting and measurement mode.

If the frequency weighting/measurement mode setting was changed, the range is affected and the RANGE field therefore becomes blank. Set the RANGE value again.

The settings available for the frequency weighting/measurement mode (FREQ. WEIGHT./UNIT) field depend on the device type.

- UN-14
  Frequency weighting characteristics (A, C, Z) of UN-14 connected to UV-22 can be set.
- UV-15
  Measurement mode (m/s^2, mm/s, mm) of UV-15 connected to UV-22 can be set.
  If the measurement mode setting was changed, the range is affected and the RANGE field therefore becomes blank. Set the RANGE value again.

If there is no unit at a specific ID number, the FREQ. WEIGHT./UNIT field only shows “---” and cannot be changed.

The settings available for the time weighting/detection type (TIME. WEIGHT./DETECTION) field depend on the device type.

- UN-14
  Time weighting characteristics (F, S, 10 ms) of UN-14 connected to UV-22 can be set.
- UV-15
  Detection type (RMS, EQPEAK, EQP-P) of UV-15 connected to UV-22 can be set.

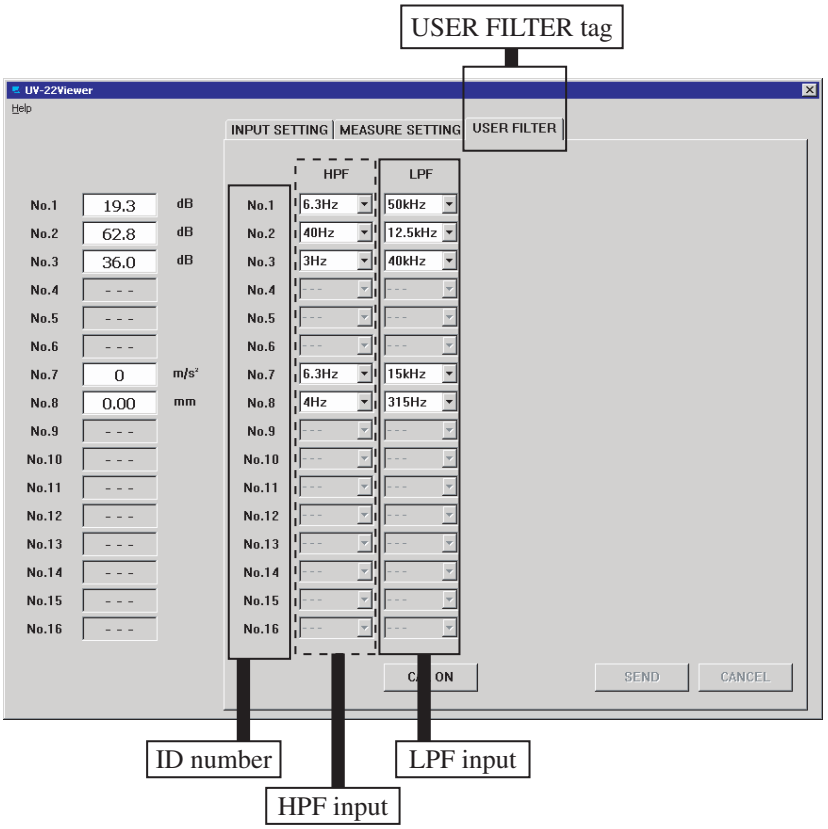
If there is no unit at a specific ID number, the TIME. WEIGHT./DETECTION field only shows "---" and cannot be changed.

The HPF field allows setting a high-pass filter value for the unit connected to the UV-22. If there is no unit at a specific ID number, the HPF field only shows "---" and cannot be changed.
When a user filter value is entered, it will be added to the bottom of the list of choices.

The LPF field allows setting a low-pass filter value for the unit connected to the UV-22. If there is no unit at a specific ID number, the LPF field only shows "---" and cannot be changed.
When a user filter value is entered, it will be added to the bottom of the list of choices.

User filter setting category

Clicking the USER FILTER tag brings up the user filter setting category. Here you can make settings for the user filter function.



User filter entry section

The “No.” field corresponds to the ID number assigned to the unit linked to the UV-22.

The HPF field allows specifying a high-pass filter value for the unit connected to the UV-22. If there is no unit at a specific ID number, the HPF setting cannot be changed.

The LPF field allows specifying a low-pass filter value for the unit connected to the UV-22. If there is no unit at a specific ID number, the LPF setting cannot be changed.

Important
To enable the user filter settings made here, the respective HPF or LPF setting must be selected in the HPF or LPF field under the MEASURE SETTING tag.

Making a global setting

By holding down the Shift key while changing the setting of an item, the setting can be made globally for all units of the same type.

When a global setting is made for a UN-14 unit, all other UN-14 units in the system will change to the same setting.

When a global setting is made for a UV-15 unit, all other UV-15 units in the system will change to the same setting.

Note
The following items cannot be set globally: • Sensitivity field under INPUT tag • RANGE field under MEASURE SETTING tag When a global setting is made for HPF or LPF under the MEASURE SETTING tag, the setting affects only units of the same type for which the user filter function is enabled. The setting of units of the same type for which the user filter function is not enabled does not change.

No. 53014 21-11