

# User's Manual

## Notice of Alterations



**Model LL100**  
PC-based Parameters Setting Tool

**Model LL200**  
PC-based Custom Computation Building Tool

- The media for LL100/LL200 were changed into CD from the 3.5-inch floppy disk. For the confirmation of the package contents and the setup method, see this Notice of Alterations.
- The user's manuals of LL100/LL200 on CD describe the usage with RS-232C serial communication. For the LL100/LL200 supporting USB, see this Notice of Alterations for the following contents which are related to USB.
  - Contents related USB:
    - Confirmation of the Package Contents
    - Operating Environment and Wiring Specifications
    - Setup
      - Installing USB Converter Driver Software
      - Installing LL100/LL200
    - Connecting Controller to Personal Computer

For the start-up of LL100/LL200 and the operation method, see the user's manual.  
User's Manual (Reference) (CD version): IM 05D01A02-01



IM 05G01B12-01E-S03  
1st Edition: Oct. 2006

## Confirmation of the Package Contents

### Model and Suffix Codes (for serial interface and USB interface)

Model code	Suffix code	Description
LL100		PC-based Parameters Setting Tool
LL200		PC-based Custom Computation Building Tool
	-E10	Model for use with IBM PC/AT compatible machine (English version), serial interface
	-U10	Model for use with IBM PC/AT compatible machine (common to English and Japanese version), USB interface

### Package Contents (for serial interface and USB interface)

- E10 CD (2 disks):
  - LL100 or LL200 (1 disk)
  - User's Manual (Reference) (CD version) (1 disk)
  - Dedicated adapter (for serial interface, with two AAA-size batteries) and dedicated cable (for serial interface):
    - For connecting a personal computer to optical communication interface on the front of controller (1 set)
- U10 CD (2 disks):
  - LL100 or LL200/USB converter driver software (1 disk)
  - User's Manual (Reference) (CD version) (1 disk)
  - Dedicated adapter (for USB interface) and dedicated cable (for USB interface):
    - For connecting a personal computer to optical communication interface on the front of controller (1 set)

## Operating Environment and Wiring Specifications

### System Requirements (for USB interface)

- Personal computer: Windows 2000/XP-enabled IBM PC/AT compatible machine
- Operating system: Windows 2000 (Professional)/XP (Home Edition/Professional)

- CPU: 300-MHz Pentium processor or superior is recommended.
- Main memory: 128 MB minimum is recommended.
- Hard disk: Memory space required to store the tool's programs; 10 MB for LL100 and 15 MB for LL200  
Memory space required to store the parameter data; 2 MB minimum  
Memory space required to store the driver for USB-Serial converter; 1 MB
- CRT display: 800 x 600 pixels or superior  
Smaller fonts should be used.  
Should be capable of handling at least 256 colors.
- USB communication port: One channel (COM1 to COM16), with SeriesA connector, compliant with USB Specification Rev1.1.
- Network: 10BASE-T/100BASE-TX (required for Ethernet communication)
- CD-ROM drive: Required for installation.
- Printer: Required for printing. Windows 2000/XP-compatible A4-size printer

### Dedicated Adapter (for USB interface)

- Communication method: Controller; optical, contactless, bidirectional serial communication  
Personal computer; compliant with USB Specification Rev1.1
- Power supply: Supplied from USB bus power (no internal battery)  
Input rating: 4.4 to 5.25 V DC, 100 mA (including a dedicated cable)
  - \* No plug for external power supply, no power switch
- Ambient temperature range: 0 to 50°C
- Ambient humidity range: 20 to 90% RH (no condensation)
- Transport and storage conditions: -20 to 65°C, 10 to 90%RH (no condensation)
- Dust- and water-proof construction: Not applied.
- Standard: CE Marking (EMC only) to be approved

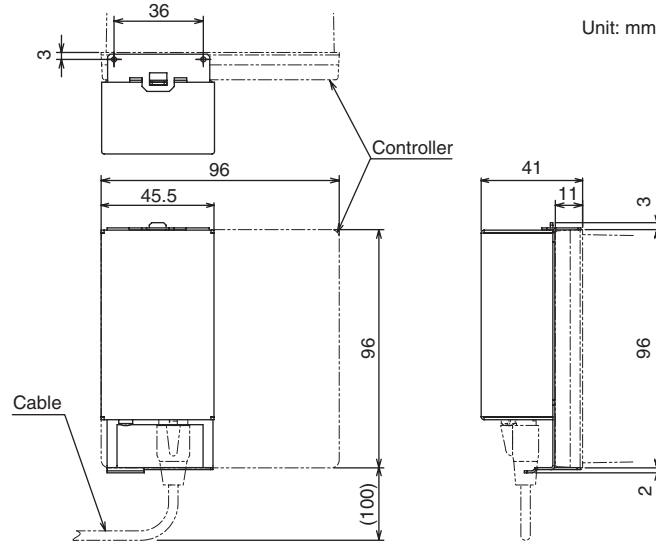


Figure 1 External View of the Dedicated Adapter (for USB Interface)



The dedicated adapter and the dedicated cable are not waterproof. Do not use them in locations that are likely to be exposed to splashes of water or other liquids.

### Dedicated Cable (for USB interface)

Built-in USB-Serial converter  
Personal computer side: USB SeriesA plug  
Adapter side: RJ45 (8-pin) plug  
Cable length: Approx. 2.7 m

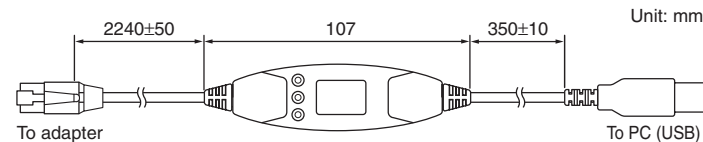


Figure 2 External View of the Dedicated Cable (for USB interface)

Note: The dedicated cable for USB interface is for the dedicated adapter for USB interface. It can not be used for the dedicated adapter for serial interface.

## Setup

### Installing USB Converter Driver Software (for USB interface)



- Before installing USB converter driver software, quit all running applications.
- Logon in Windows 2000/XP:
  - Log on with the user name which belongs to the Administrators group.
  - If logged on with the user name which does not belong to the Administrators group, the program will not start normally.

### Installing in Windows 2000 (for USB interface)

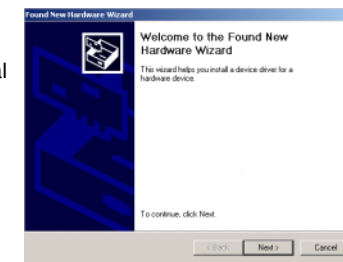
This section explains how to install the driver software necessary to use LL100/LL200 supporting USB in Windows 2000. The installation is performed in two steps. The USB device driver for the dedicated cable is installed first and then the virtual COM port driver is installed.

- Start Windows.
- Insert the CD of LL100 or LL200 into the CD-ROM drive.  
The start-up screen appears automatically.



Example of LL100 display

- Connect the connector of dedicated cable to the USB communication port of a personal computer. This automatically starts up the Found New Hardware Wizard. Click Next.



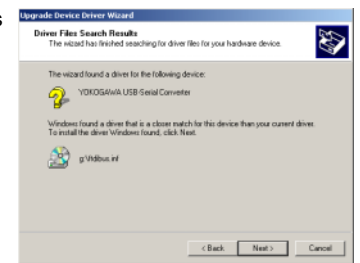
- The Install Hardware Device Drivers screen appears. Select **Search for a suitable driver for my device [recommended]**. Click Next.



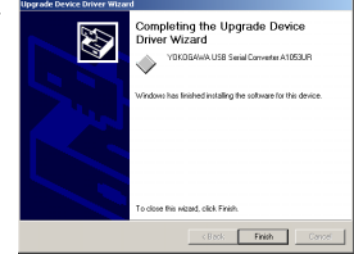
- The Locate Driver Files screen appears. Checkmark **CD-ROM drives**. Click Next.



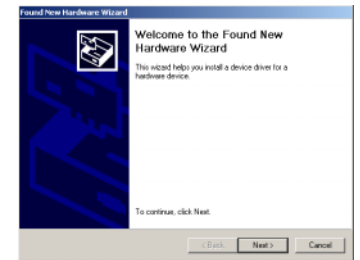
- When the search for driver files is finished, click Next.



- Copying of the USB device driver for the dedicated cable begins. When installation is completed, a confirmation screen appears. Click Finish.



- Installation of the virtual COM port driver begins continuously. Click Next.



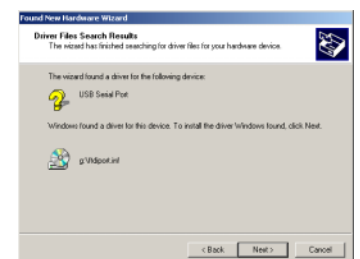
- The Install Hardware Device Drivers screen appears. Select **Search for a suitable driver for my device [recommended]**. Click Next.



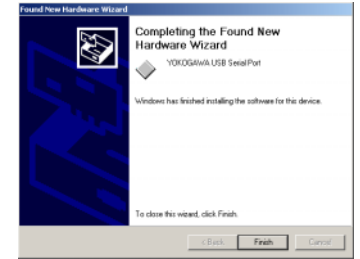
- The Locate Driver Files screen appears. Checkmark **CD-ROM drives**. Click Next.



- When the search for driver files is finished, click Next.



- Copying of the virtual COM port driver begins. When installation is completed, a confirmation screen appears. Click Finish.



At this point, you have completed installing the driver software in Windows 2000.



### ● Installing in Windows XP (for USB interface)

This section explains how to install the driver software necessary to use LL100/LL200 supporting USB in Windows XP. The installation is performed in two steps. The USB device driver for the dedicated cable is installed first and then the virtual COM port driver is installed.

1. Start Windows.
2. Insert the CD of LL100 or LL200 into the CD-ROM drive.

The start-up screen appears automatically.



Example of LL100 display

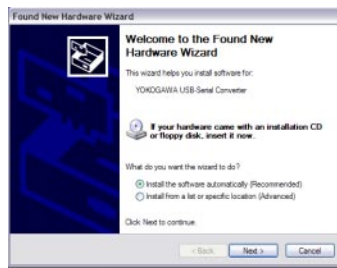
3. Connect the connector of dedicated cable to the USB communication port of a personal computer. This automatically starts up the Found New Hardware Wizard. Select **No, not this time**. Click **Next**.

The screen on the right appears only when ServicePack2 is installed.



The screen may not appear depending on the setting of Windows Update.

4. Select **Install the software automatically (Recommended)**. Click **Next**.



5. A message appears to warn that the software you are installing has not passed Windows Logo testing. Click **Continue Anyway**.

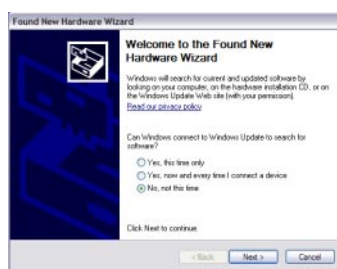


6. Copying of the USB device driver for the dedicated cable begins. When installation is completed, a confirmation screen appears. Click **Finish**.



7. Installation of the virtual COM port driver begins continuously. Select **No, not this time**. Click **Next**.

The screen on the right appears only when ServicePack2 is installed.



The screen may not appear depending on the setting of Windows Update.

8. Select **Install the software automatically (Recommended)**. Click **Next**.



9. A message appears to warn that the software you are installing has not passed Windows Logo testing. Click **Continue Anyway**.



10. Copying of the virtual COM port driver begins. When installation is completed, a confirmation screen appears. Click **Finish**.

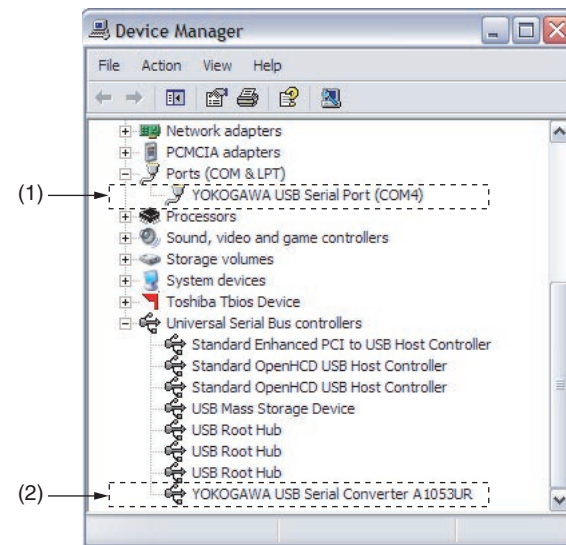


At this point, you have completed installing the driver software in Windows XP.

### ● Verifying Installation (for USB interface)

From the **Start** menu of Windows, double-click **System** in **Control Panel**. Select **Hardware** tab and click **Device Manager**.

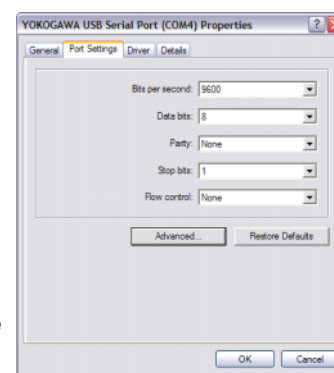
Verify that the USB device driver "YOKOGAWA USB Serial Converter A1053UR" is installed under "Universal Serial Bus controllers" and the virtual COM port driver "YOKOGAWA USB Serial Port (COMn)" is added under "Ports (COM & LPT)" as COM port.



The COM port number assigned to the dedicated cable can be verified by the port number displayed in (1) "YOKOGAWA USB Serial Port (COMn)" of Device Manager (see above).

To change the COM port number, double-click (1) in the figure above, select **Port Settings** tab of Properties screen and click **Advanced**.

Change the COM port number in the Advanced Settings for COMn screen.

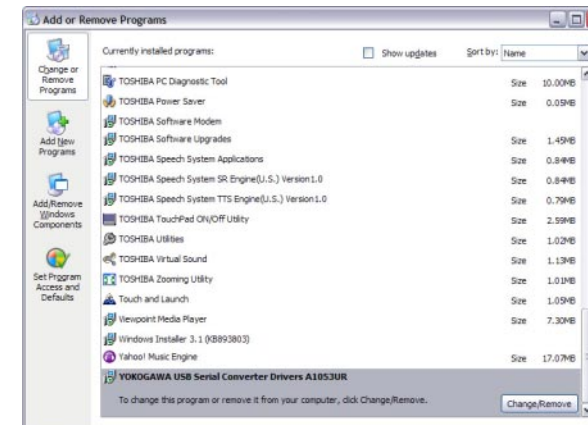


### ● Uninstalling USB Converter Driver Software (for USB interface)

When uninstalling the driver, follow the procedure below.

1. Remove the dedicated cable if it is connected to a personal computer.
2. In **Control Panel**, select **Add or Remove Programs**.

Note: The indications are **Add or Remove Applications** for Windows 2000 and **Add or Remove Programs** for Windows XP



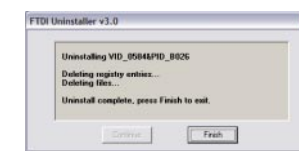
Example of Windows XP

3. Select **YOKOGAWA USB Serial Converter Drivers A1053UR** and click **Remove**.

4. Follow the instructions appearing on screen. Verify that the dedicated cable is removed. Click **Continue**.



5. Follow the instructions appearing on screen. Click **Finish**.



### Installing LL100/LL200 (for serial interface and USB interface)

#### NOTE

- When reinstalling LL100/LL200, uninstall the installed LL100/LL200 first and then reinstall LL100/LL200.
- Before installing LL100/LL200, quit all running applications.
- Logon in Windows 2000/XP:
  - Log on with the user name which belongs to the Administrators group.
  - If logged on with the user name which does not belong to the Administrators group, the program will not start normally.

1. Start Windows.
2. Insert the CD of LL100 or LL200 into the CD-ROM drive. The start-up screen appears automatically.



Example of LL100 display

3. Click **LL100 Installation** or **LL200 Installation**.
4. To continue, follow the message given in each dialog box.



#### NOTE

Avoid entering just the drive as the installation location, such as D:\. Enter the full directory path.

### ● Verifying Installation

From the **Start** menu of Windows, point to **Programs**, then **Green Series** and verify that the **Green Series** contains **Green Series LL100** or **Green Series LL200**.

### ■ Connecting Controller to Personal Computer (for USB interface)

Follow the procedure below to connect the controller to a personal computer.

1. Connect the dedicated adapter to the USB communication port of a personal computer using the dedicated cable.
2. As shown in Figure 4, hand the dedicated adapter from the top groove of the controller.
3. Push the adapter to the controller's front panel to securely fix it in place.

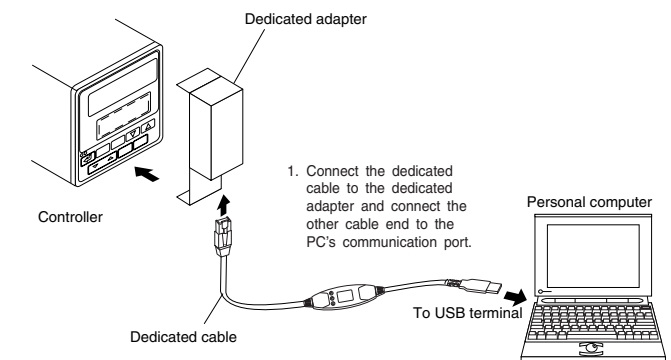


Figure 3 Connection via Dedicated Adapter



#### NOTE

- Make sure the dedicated adapter is attached to the controller in a vertical orientation. Communication is not possible if the dedicated adapter is attached in a slanting position.
- Do not remove the dedicated cable (for USB interface) while LL100/LL200 communicate, or it may affect the stability of the operation system.
- Do not suspend while LL100/LL200 communicate, or the system may fail to recover subsequently from the suspension.

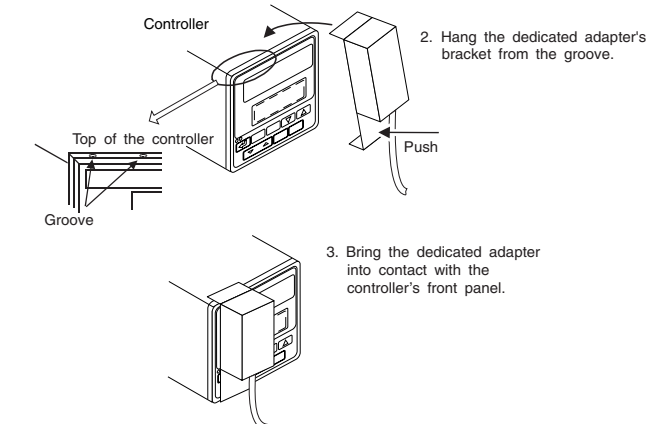


Figure 4 Attaching the Dedicated Adapter

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