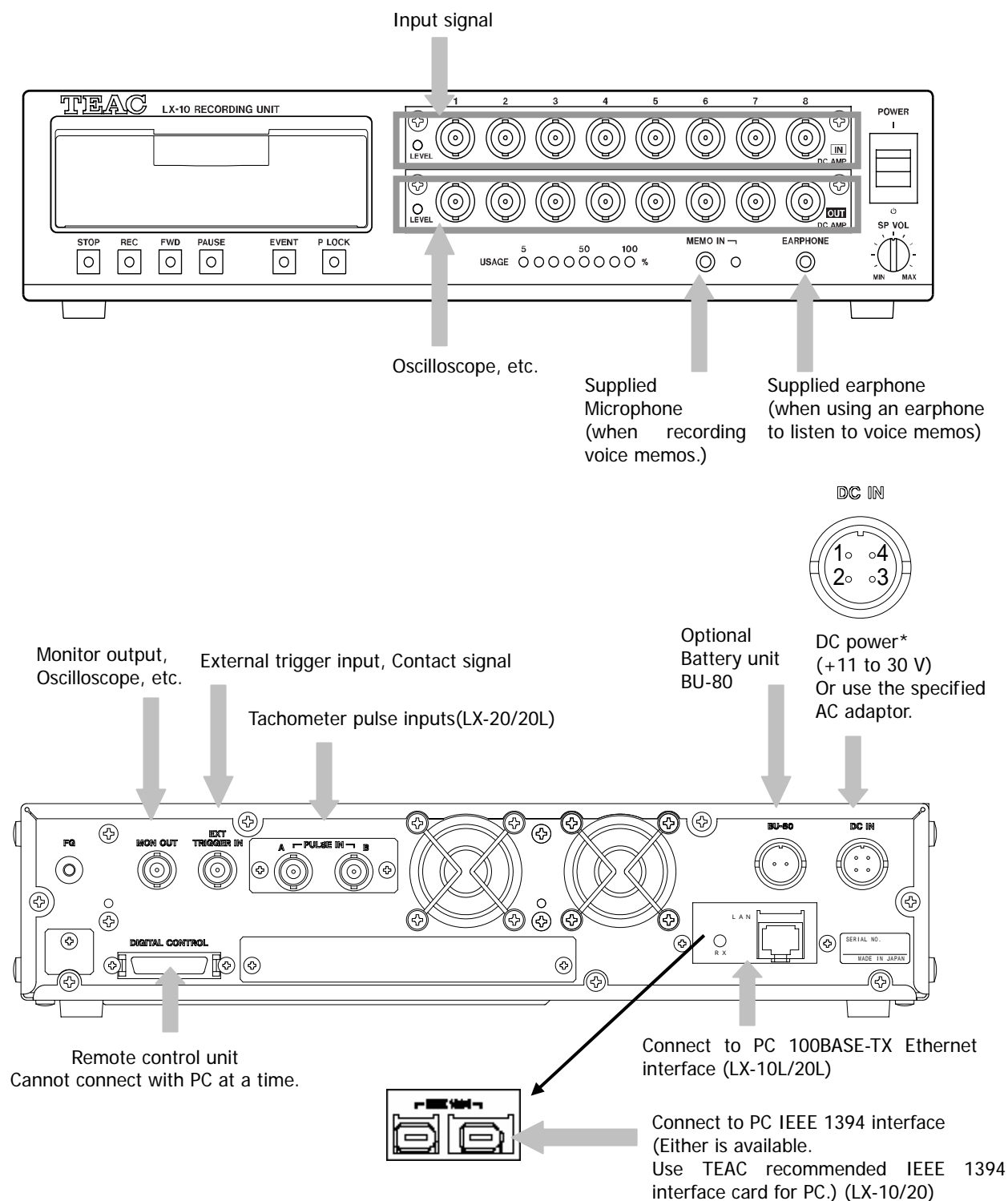


Section 2 Installation

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Connections

Connections



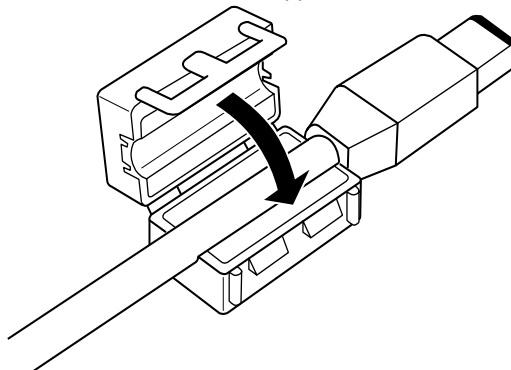
When the DC power voltage falls to +11V or less, the USAGE LEDs flash and recording and reproduction stops.

If you are recording to memory, quickly copy the data to a media or to a PC.

Notes on Connections

- Attaching Ferrite Core on IEEE 1394 Interface cable (LX-10/20 IEEE 1394 version)

To reduce the radio noise, attach the supplied ferrite cores on both ends of the IEEE 1394 cable.



- Only PC to IEEE 1394 Connector (LX-10/20 IEEE 1394 version)

Do not connect other devices than the PC to the IEEE 1394 connector. If any other devices are daisy-chained, the specified performance may not be achieved.

- Grounding

To prevent noise, establish a common ground for the LX and all the measuring instruments connected to it.

PC System Requirements

We recommend use of a PC that satisfies the following requirements:

OS: Windows XP / Windows 2000 / Windows 98SE / Windows Me

CPU: Pentium III 600 MHz or faster

Screen Resolution: 800×600 dpi or better

Memory: 128 MB or more (256 MB or more for Windows XP/2000)

Free space on hard disk: 2 GB or more

CD-ROM drive: Present (for the program installation)

LX-10/20 IEEE 1394 version use the specified IEEE 1394 interface card:

For a note PC (PC card model): From RATOC Systems, Inc.: CBFW3

For a desktop PC (PCI bus): From RATOC Systems, Inc.: PCIFW3

LX-10L/20L(LAN 100BASE-TX version, use your PC on-board 100BASE-TX interface

- Use the IEEE 1394 interface card specified above. Other interface cards might not operate correctly. Please contact us for availability. When installing and setting up the interface card, read the documentation supplied with the card and set up the card in accordance with that documentation and this manual.
- ..Use the on-board type 100BASE-TX interface of your PC, do not use the PC card type interface.
- File sizes and the total number of files may be limited depending on the operation systems.

Installing LX-10/20 IEEE 1394 Version

Installing LX-10/20 IEEE 1394 Version

Overview of the LX-10/20 IEEE 1394 version installation is explained below.

Follow the installation procedures explained later on each operation system.

1. Attach the interface card to your PC.
2. Install the OHCI driver.
3. Install the LX Series device driver.
4. Install the LX Navi.

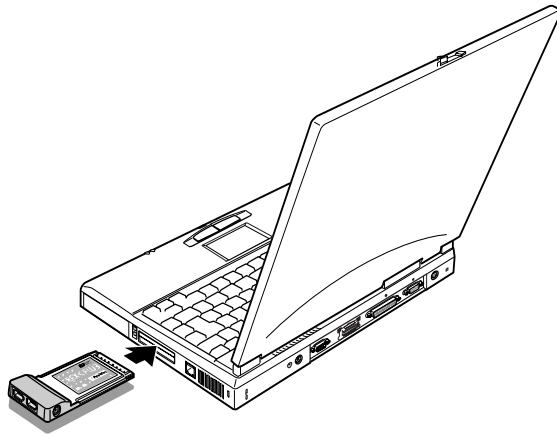
Installing Interface Card

Attach the PC card to your note PC

Insert the IEEE 1394 interface card CBFW3 to your PC card slot met the CardBus specification.

Check with your PC manual on the PC card slot information.

- You may not insert the IEEE 1394 interface card with other types of the PC card at a time.
- You may not install it to the upper slot.
- Be careful to insert it to your PC. The interface card or your PC may be damaged, if you enforce to insert it.



Attach the PCI card to your desktop PC

Insert the PCI type interface card PCIFW3 to the PCI slot of your desktop PC.

Check with your PC manual on the PCI slot information.

- Replace a standard bracket to the supplied low profile one when installing the PCIFW3.
- Be careful to insert it to your PC. The interface card or your PC may be damaged, if you enforce to insert it.

Installing OHCI Driver

For Windows 2000/XP

The following screen examples are for Windows 2000. Follow the same procedures for Windows XP.

1. Insert the CBFW3 to the CardBus PC card slot, or insert the PCIFW3, then turning on your PC. The standard Windows driver will be automatically installed. Follow the below procedures to confirm the driver has been installed correctly.

2. Double click [Control Panel] from [My Computer] .

Double click [System] to open the dialog box.

3. Click [Hardware] tab, and then click [Device Manager(D)] .

4. Double click [1394Bus Host Controller], and confirm "Texas Instruments OHCI Compliant IEEE 1394 Host Controller" is added to indicate the driver software has been correctly installed.

Now the OHCI driver installation has been completed, next proceed to the LX Series device driver installation.

Installing LX-10/20 IEEE 1394 Version

For Windows 98SE

1. Insert the CBFW3 to the CardBus PC card slot, or insert the PCIFW3, then turning on your PC. You will see the "Update Device Driver Wizard" dialog box.

Click [Next].

2. Click "Search for a better driver than the one your device is using now. (Recommended)", then click [Next].

3. Remove all checks of the selection boxes, then click [Next].

4. Click "Updated driver (Recommended)", then click [Next].

5. Click [Next] .

6. Click [Finish] to complete the driver software installation.

You can confirm that driver has been installed correctly as follows:

Double click [Control Panel] from [My Computer] to open the dialog box.

Double click [System] .

Click [Device Manager] , then double click [1394 Bus Controller] . Confirm "Texas Instruments OHCI Compliant IEEE 1394 Host Controller" is added to indicate the driver software has been correctly installed.

Download the 1394 Storage Supplement Program

From the Microsoft site, download the 1394 Storage Supplement program.

1. From the Windows Start menu, click Windows Update.

After the Microsoft site is displayed, click PRODUCT UPDATES on the left.

2. Select "Windows 98 Second Edition 1394 Storage Supplement", and download it.
(For details, click Read this first.)

Now the OHCI driver installation has been completed, next proceed to the LX Series device driver installation

For Windows Me

1. Insert the CBFW3 to the CardBus PC card slot, or insert the PCIFW3, then turning on your PC. You will see the "Update Device Driver Wizard" dialog box.

Click [Next] .

2. Click [Finish] .

3. Now you complete the driver software installation.

You can confirm that driver has been installed correctly as follows:

Double click [Control Panel] from [My Computer] to open the dialog. Then double click [System] .

Click [Device Manager] , then double click [1394 Bus Controller] . Confirm "Texas Instruments OHCI Compliant IEEE 1394 Host Controller" is added to indicate the driver software has been correctly installed.

Now the OHCI driver installation has been completed, next proceed to the LX Series device driver installation

Installing LX-10/20 IEEE 1394 Version

Installing LX Series Device Driver

For Windows 2000/XP

The following screen examples are for Windows 2000. Follow the same procedures for Windows XP.

1. When the LX-10/20 is first connected to the PC, the following dialog box is displayed.



Click [Next] .

2.



In the dialog box, click “Search for a suitable driver for my device (recommended)” and then click [Next] .

3.



Insert the supplied CD-ROM, select “Specify a location”, and then click [Next] .

4.



Specify the driver folder of the inserted CD-ROM, and click [OK] .

5.



Click [Next] .

6.



In the dialog box, click [Finish] . This completes installation of the device driver.

Installing LX-10/20 IEEE 1394 Version

For Windows 98SE

1. When the LX-10/20 is first connected to the PC, the following dialog box is displayed.
(If not displayed, proceed to the later page.)



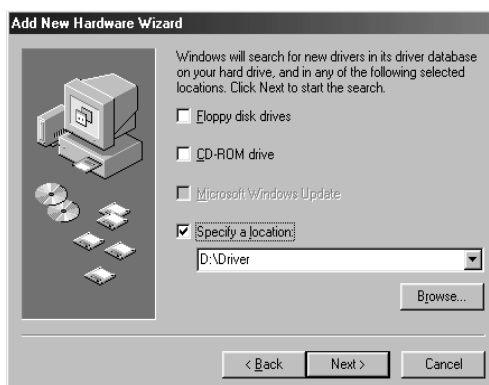
Click [Next].

- 2.



In the dialog box, click “Search for the best driver for your device (Recommended)” and then click [Next].

- 3.



Insert the supplied CD-ROM and select “Specify a location”. Specify the driver folder of the inserted CD-ROM, and click [Next] .

4.



Click [Next] .

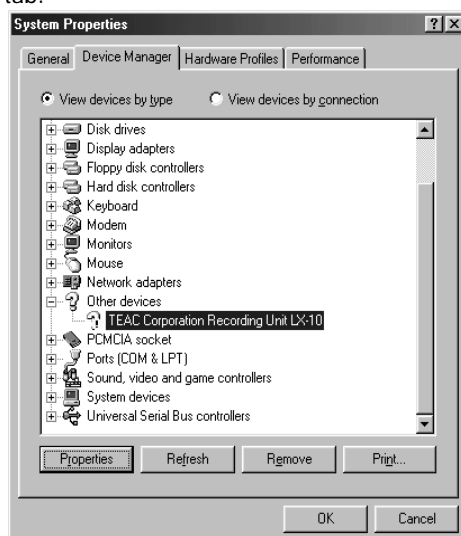
5.



In the dialog box, click [Finish] . This completes installation of the device driver.

If the Add New Hardware Wizard dialog box is not displayed when the LX-10/20 is first connected to the PC, install the driver following the steps below:

1. From the Windows Start menu choose Settings, Control Panel, [System], and then click [Device Manager] tab.



Select "TEAC Corporation Recording Unit LX-10" and click [Properties].

Installing LX-10/20 IEEE 1394 Version

2.



Click [Reinstall Driver].

3.



Click [Next] .

4.



Click "Search for a better driver than the one your device is using now. (Recommended)" and then click [Next].

5.



Insert the supplied CD-ROM and select "Specify a location". Specify the Driver folder of the inserted CD-ROM, and click [Next].

6.



Click [Next] .

7.



In the dialog box, click [Finish]. This completes installation of the device driver.

Installing LX-10/20 IEEE 1394 Version

For Windows Me

1. When the LX-10/20 is first connected to the PC, the following dialog box is displayed.



Insert the supplied CD-ROM, and select “Automatic search for a better driver (Recommended)”. Then click [Next].

2.

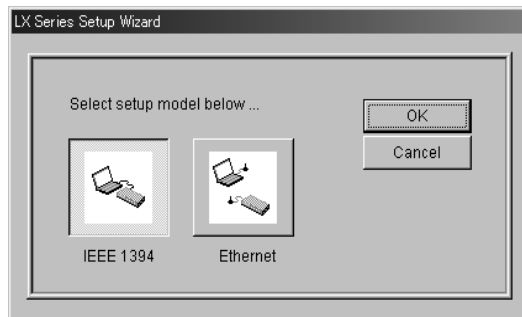


In the dialog box, click [Finish]. This completes installation of the device driver.

Installing LX Navi

To install the supplied LX Navi software:

1. Execute "Setup.exe", which is in the supplied CD-ROM.
2. Follow the displayed instructions and proceed with setup.



Click **IEEE1394** at the dialog box to be appeared in the middle of installation when using the LX-10/20 IEEE 1394 version, then click **OK**.

3. After installation, restart the PC.

Installing LX-10L/20L LAN Version

Installing LX-10L/20L LAN Version

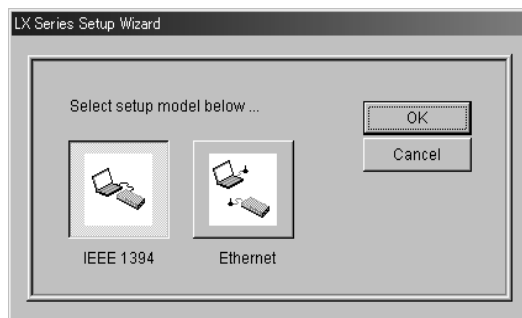
To install the LX-10L/20L LAN version:

1. Install LX Navi.
2. Set the IP address of the PC to be connected and the LX-10L/20L.
 - Use an on-board type 100BASE-TX LAN interface of your PC.
 - If your PC does not have a LAN interface, use the following LAN cards:
CBET100-CL from I-O DATA
FNW-3603-TX from PLANEX COMMUNICATIONS
Transmission rate: 10 M, full duplex (fixed)
One-to-one connection with LX-10L/20L using a cross cable

Installing LX Navi

To install the supplied LX Navi software:

1. Execute "Setup.exe", which is in the supplied CD-ROM.
2. Follow the displayed instructions and proceed with setup.



Click **Ethernet** at the dialog box to be appeared in the middle of installation when using the LX-10L/20L LAN version, then click **OK**.

3. After installation, restart the PC.

About IP Address Settings

Consult your network administrator when connecting the LX-10L/20L to your network per the following information.

It is required the basic knowledge about Windows network system to set the network connection parameters.

- At shipping time, the LX-10L/20L has the factory settings shown below. Modify the settings (such as the IP address) as necessary.
 - IP address: 192.168.0.10
 - Subnet mask: 255.255.255.0
 - Gateway: 0.0.0.0
 - DHCP client: DISABLE
- To communicate at 100 Mbps, all devices that exist in the path from the LX-10L/20L to the controller PC must support 100 Mbps. Use a cable that is Category 5 or better. To ensure communications quality, we recommend that you use STP cables and a switching hub that supports STP cables.
- Depending on the network environment being used, it is possible you will encounter delays in data transmission or congestion processing. In such a case, try the following to improve the situation:
 - 1) If a repeater hub is being used, change to a switching hub instead.
 - 2) As much as possible, reduce the number of broadcast packets.
 - 3) As much as possible, use a communications path that does not pass through a router.
- However, in a situation such as when the LX-10L/20L is in a remote location and communications are constrained by low-speed paths, use the LX-10L/20L with a reduced sampling rate.
- The LX-10L/20L Ethernet interface carries out TCP connection continuous communications; however, if a packet from the other party does not arrive within 180 seconds, a timeout occurs and the other party is automatically disconnected. So in the event that a normal termination was not possible because of some problem such as a PC hangup or disconnected cable, wait 180 seconds and then try reconnecting.
- If the PC enters the standby status while LX Navi is being used, communications will cease, and a timeout will cause a disconnection. If you are using the PC for a long time, make sure the system standby setting in the Windows power options is not selected.
- With the LX-10L/20L Ethernet interface, the LX-10L/20L can be operated as a DHCP (Dynamic Host Configuration Protocol) client, but if an IP address cannot be obtained within 30 seconds after startup, the LX-10L/20L starts usual operations with a fixed IP address.
- If you set a firewall on your PC or install an virus check software, you may not connect the LX. Check the security level of the program on your PC.

For other settings, such as IP address parameter settings and network usage, consult your network administrator before using the LX-10L/20L.

Starting Program

Starting Program

After installing the drivers and LX Navi and connecting the PC and the LX, start LX Navi.

- Do not run LX Navi together with application software that uses a lot of memory.

To start LX Navi:

1. On the LX-10 main unit, push up the power switch to |.

When power is turned on, the input amp is automatically calibrated. During calibration, the input amp LED will blink. When calibration ends the LED will turn off.

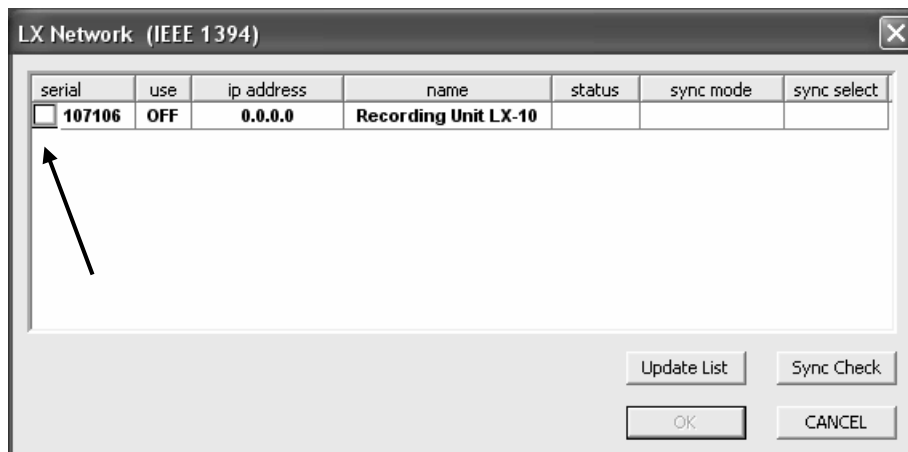
2. Start LX Navi.

After LX Navi starts, if you power off the LX-10/20 main unit or remove the IEEE 1394 cable, LX Navi will display an error message and terminate. In such a case, if you turn the power back on or reconnect the cable, and then restart LX Navi, the LX-10/20 can again be recognized.

In case of the LX-10L/20L, if you power off the LX-10L/20L main unit or remove the LAN cable, not only the communications fail, but also the congestion processing is caused to the network. Make sure to close LX Navi first to detach the LX-10L/20L from the network. Do not power off the LX-10L/20L before closing LX Navi.

- If it is taking an excessively long time for the LED to turn off.
After you power on the main unit, if it takes an excessively long time for the input amp LED to turn off, the amp might not have been recognized. In such a case, turn the power on again.
- Do not put the PC into sleep mode.
Set your PC's sleep mode to OFF. If the PC goes into sleep mode, an error occurs on the LX Navi. Note that some notebook PCs automatically go into sleep mode just by folding the display.

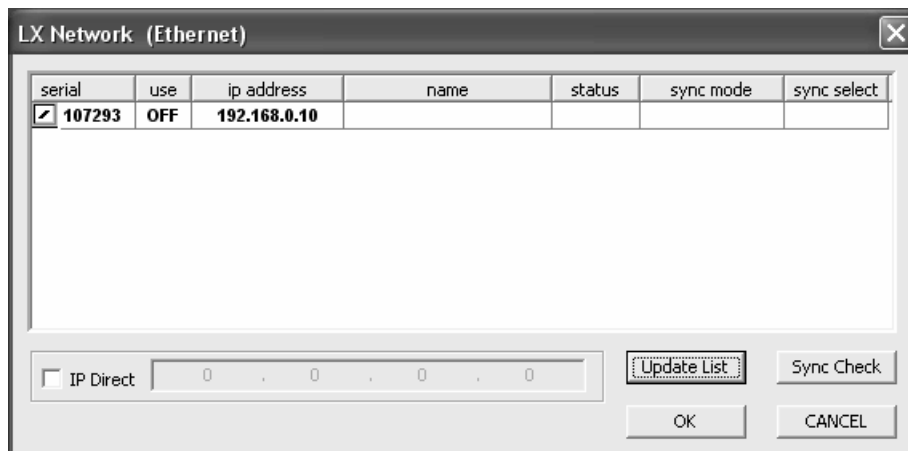
For LX-10/20 IEEE 1394 version



Check the box at the **serial** field of the **LX Network** dialog box by confirming the correct serial number is displayed, and then click **OK**. In addition, a previously used serial number will automatically contain a check in the box.

For LX-10L/20L LAN version

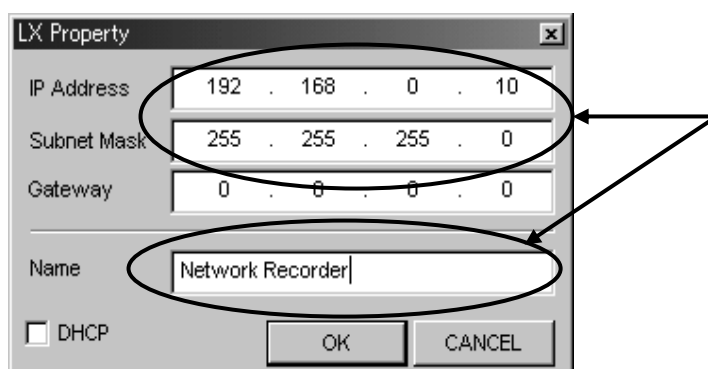
The following dialog box is displayed when LX Navi starts.



Check the box at the **serial** field **LX Network** dialog box by confirming the white-out box is appeared and the correct serial number is displayed, and then click **OK**. In addition, a previously used serial number will automatically contain a check in the box.

If the white-out box is not appeared, follow the next pages for a proper set up.

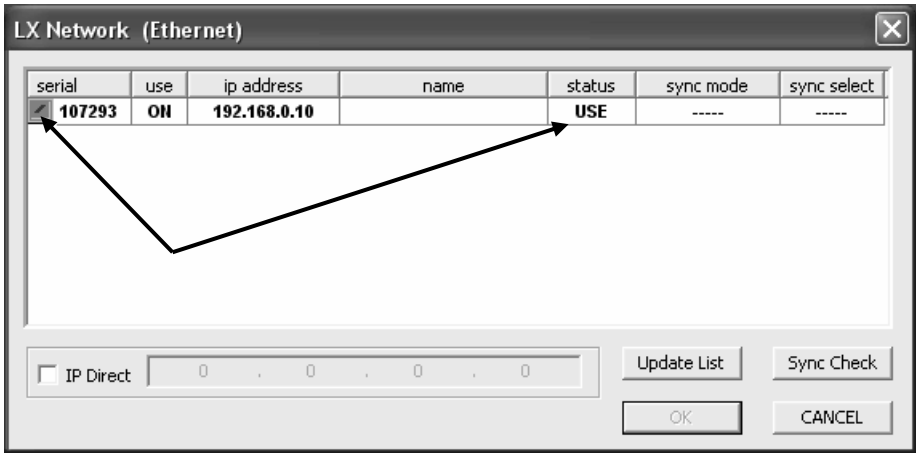
The upper part lists the LXs that exist in the same segment. If you click where **IP address** or **name** is displayed in the list area, the **LX Property** dialog box appears. In this dialog box, you specify settings such as the IP address parameters and the recorder name (**Name**). Enter the address parameters that match the network environment you are using. For **Name**, you can use any string up to 32 characters. This name is displayed in the list at startup, so use a name that identifies the particular LX-10L/20L from any others.



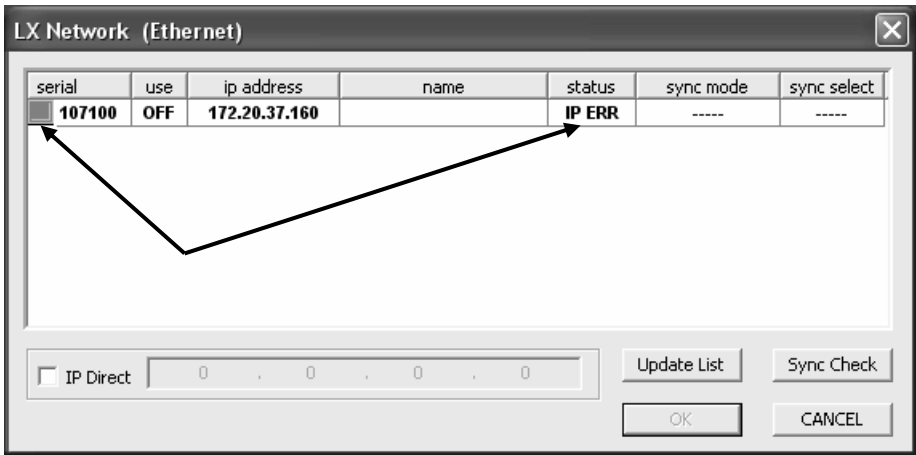
Click the **OK** button to apply the IP address parameters for the LX-10L/20L. It is not necessary to restart the LX-10L/20L, but it takes a few seconds for the changed settings to actually take effect so wait for at least 5 seconds and then connect to the LX-10L/20L. If the list is not updated or the entry disappears from the list, click the **Update List** button to update the list.

Starting Program

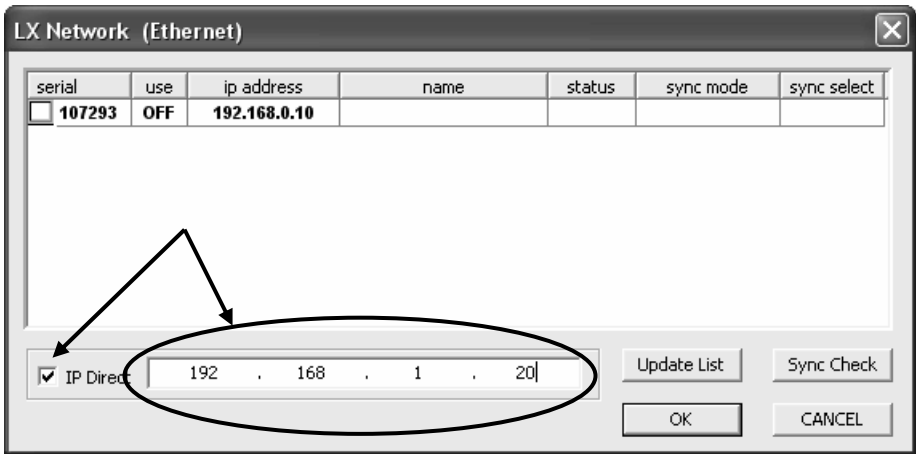
Note that if the LX-10L/20L is already being used from another PC, a red check mark is displayed and **USE** is displayed in the **status** field. In such a case, you cannot connect to that LX-10L/20L.



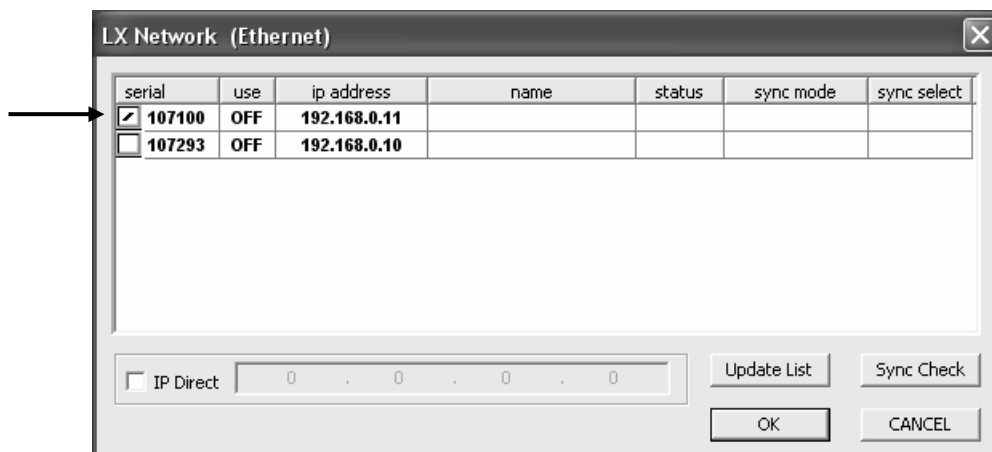
If a TCP connection is not possible because of a problem such as an incorrect IP address for the same segment, a grey check box is displayed along with IP ERR in the **status** field. In such a case, specify an appropriate IP address or check the IP address settings (Subnet mask, Gateway, etc.) between the PC and the LX-10L/20L, and then connect to the LX-10L/20L.



When connecting to an LX-10L/20L that exists in a different segment (and, for example, going beyond the router), select the **IP Direct** check box, enter the address of the device to be connected, and then click **OK**.



When multiple LX-10L/20Ls are found in the same segment, the dialog box appears as shown below. In such a case, select the check box of the LX-10L/20L to be connected, and click the **OK** button.



On the real time PC recording of the LX-10L/20L, the speed of the data transfer cannot catch up to the recording throughput per a time unit. In this scenario, the recording will stop automatically when the memory buffer of the LX is getting full with the un-transferred data. It is caused by depending on the PC specifications and the networktraffic; however, the following sampling setting is not applicable for the real time PC recording.

Sampling Frequency 96 kHz x 8 ch (Memo voice ON/OFF)

If multiple LX units by using LX Navi are connected to a single PC (regardless with IEEE 1394 or LAN), the wave form settings and the data folder settings of each LX may cause conflict to others because the LX Navi shares the common save area. Use each LX for each PC.

The Main Window will be displayed by starting LX Navi when the connection completes.

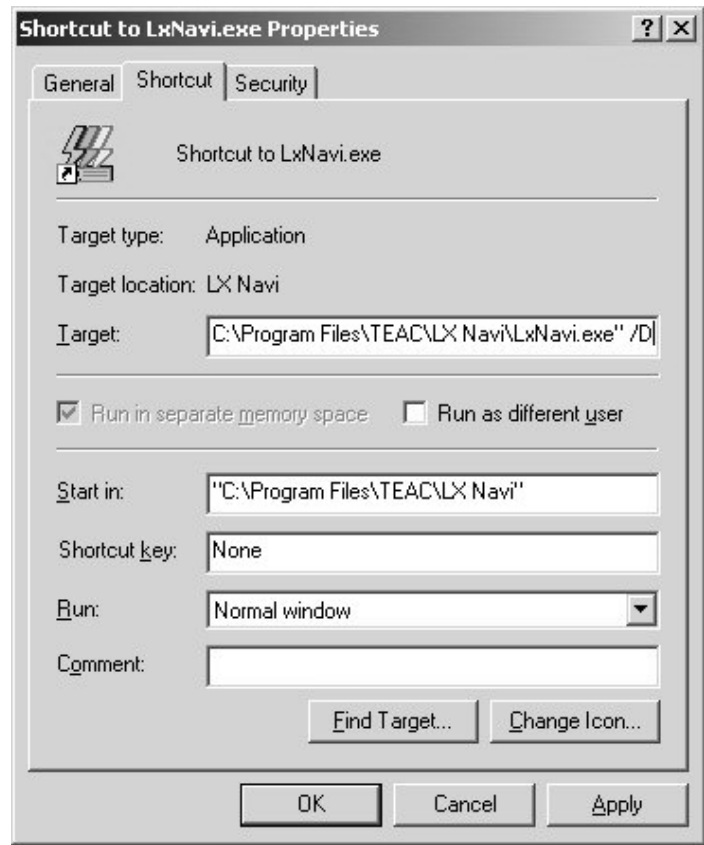
See Section 3 Introduction to LX Navi.

Starting Navi directly without the LX Network dialog box displayed

Specify the “/D” option when starting LxNavi with reference to the following methods. If previously used serial numbers of LX are connected to I/F, Navi will launch directly without the LX Network dialog box displayed. The LX Network dialog box is displayed if previously used serial numbers of LX are connected to I/F.

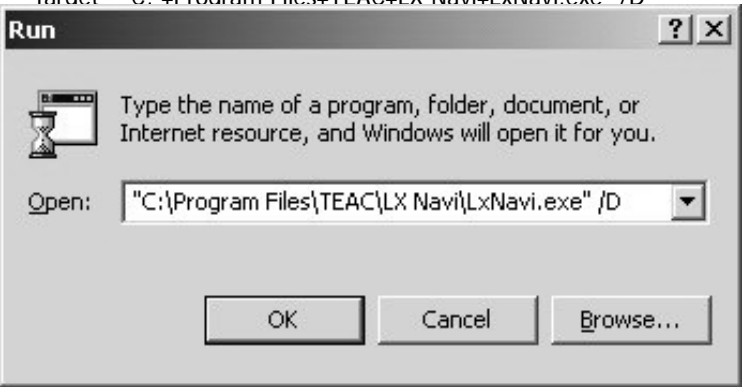
(Example 1) Open the LxNavi shortcut properties and specify “/D” where **Target** is displayed.

Target "C:\Program Files\TEAC\LX Navi\LxNavi.exe" /D



(Example 2) from the **start** menu click **Run...**, specify LxNavi/exe and enter option “/D” after that, and click **OK**.

Target "C: \Program Files\TEAC\LX Navi\LxNavi.exe" /D



Inserting and Ejecting Media

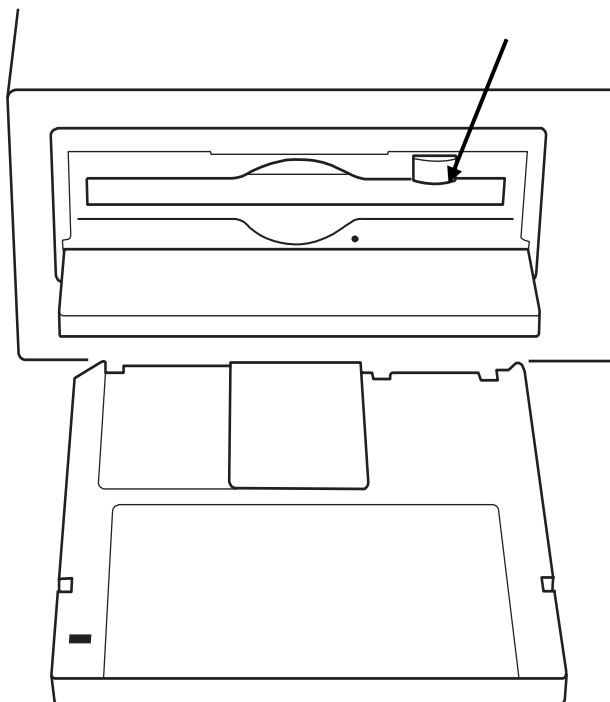
Inserting Media

- Insert or eject the media when the LX is at the STOP state of the REC mode.
 - To discharge static electricity from your body, touch a metallic surface near you before handling the unit.
- Never touch the PC card being inserted to the PC card slot while recording and playing back.

1. Power on the LX main unit. Wait until the STOP lamp glows before proceeding to the next step.
2. Open the cover of the drive.
3. Insert the media, with the label facing up, into the slot.
4. Close the cover of the drive.

For MO drive

Eject button



- Use Specified MO Disks Only

MO

Use 1.3 GB, 3.5 inch MO disks from Fujitsu Ltd. Other MO disks might be unable to record or reproduce correctly.

PC Card

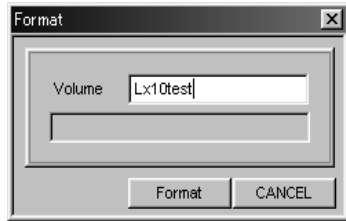
To ensure the recording performance of the main unit, use the PC cards specified in section 1-6 'Verified PC cards'.

Inserting and Ejecting Media

- Formatting Media

MO

A specified MO disk is not formatted. If you insert an unformatted MO disk into the drive, the MO disk will not be recognized as a recording device, and recording will not be possible. To format an MO disk, from the **File** menu of LX Navi choose **Format**. Type the volume name and then click **Format**.



PC Card

From the **File** menu of LX Navi choose **Format**. Or format the PC card to FAT16 by PC. The LX cannot use the PC card formatted by FAT32, re-format by FAT16 to use such card.


Ejecting Media

- Turn off the power after you eject the media

Remove the media before powering off the LX. If the power is turned off during writing, data recorded on the media might become unreadable. Also, eject the media before moving the LX main unit. Moving the unit while the media is inserted might result in damage.

- Insert or eject the media when the LX is at the STOP state of the REC mode.
- To discharge static electricity from your body, touch a metallic surface near you before handling the unit.

Never touch the PC card being inserted to the PC card slot while recording and playing back.

1. Open the cover of the drive.
2. For MO disk, click the  button on the toolbar of LX Navi to eject the MO disk.
For PC card, push the eject lever of the drive to eject the PC card.
3. Remove the media.
4. Close the cover of the drive.

- While LX Navi is running, the Eject button on the MO drive has no effect.
- You cannot remove the media during recording or reading. The data will be corrupted.

About Data on Media

In a PC's drive, the data recorded on a media can be recognized as files in TAFMat format. Therefore, the files can be read by commercially available analytical software. However, write-protect an MO disk before inserting it into a PC drive. If the MO disk is not write-protected and you perform a file operation such as moving, deleting, or renaming a file or folder, the link between the data file and the header file might be lost, and the data might become unreadable on the PC. Also, the data might be unreadable when such media is re-inserted in the LX.

About Expansion Unit

When the expansion unit AU-LXEPIO(for DC amp/Output amp) or AU-LXEPIOP(PA amp/ST amp/Output amp) is added, install input/output amps in the following combinations:

16 inputs + 16 outputs

(From the upper slot to the lower)

Slot 1: Input amp

Slot 2: Input amp

Slot 3: Output amp

Slot 4: Output amp

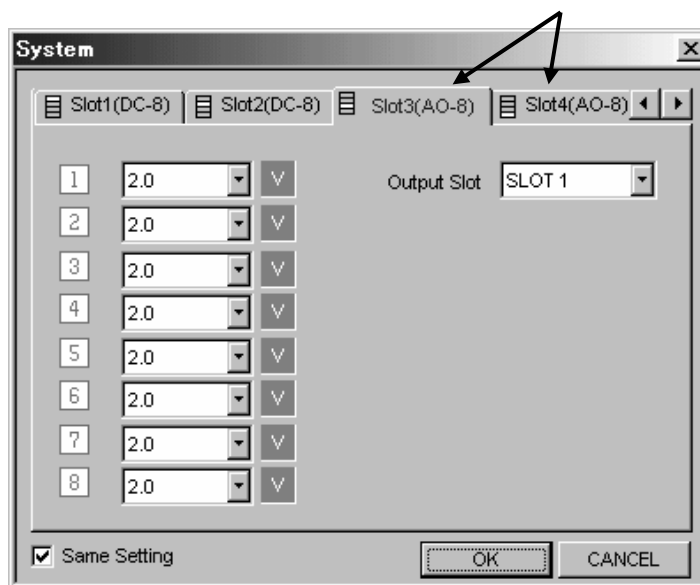
32 inputs

Install input amps into all slots.

About Slot Settings

When the expansion unit is added, tabs are added to the System dialog. Click the tab and set for each slot.

Tabs added by the expansion unit.



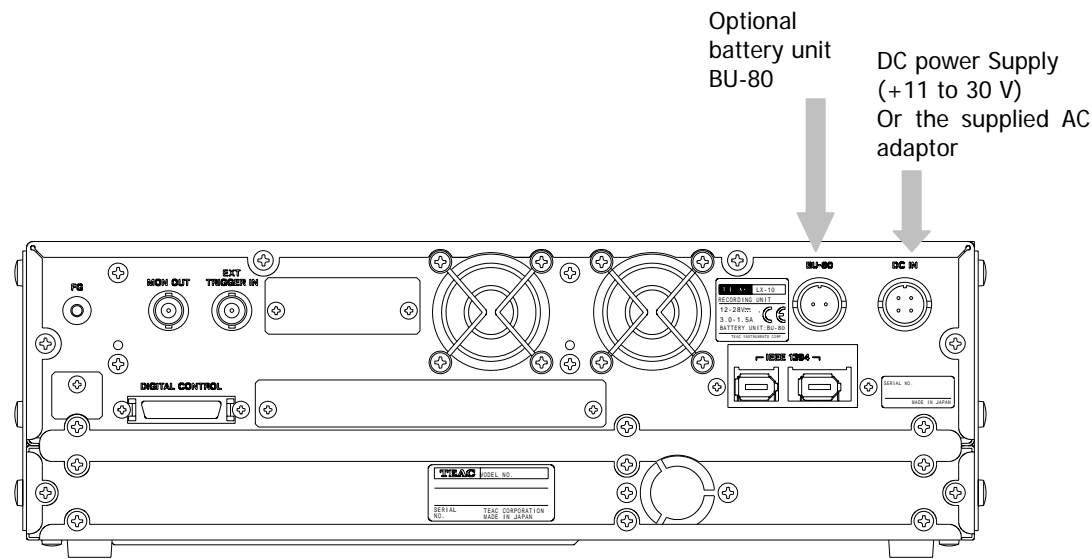
About Maximum Sampling Frequency When Using Expansion Unit

Channels	Memory Recording	Media Recording (MO/PC card)
2 ch	96 kHz	96 kHz
4 ch	96 kHz	96 kHz
8 ch	96 kHz	48 kHz
16 ch	48 kHz	24 kHz
32 ch	24 kHz	12 kHz

About Expansion Unit

About Power Supply Connection

LX Main Unit + AU-LXEPIO



LX Main Unit + AU-LXEPIOP

