LEADER

LG 3850

DIGITAL TV SIGNAL GENERATOR

INSTRUCTION MANUAL

LEADER
ELECTRONIC MEASURING INSTRUMENTS

TABLE OF CONTENTS

GENERAL SAFETY SUMMARY

■ Read This before Using the Instrument
This instrument should only be used by persons with sufficient knowledge of electronics who thoroughly understand the contents of this manual.

This instrument is not designed or manufactured for households or ordinary consumers.
If a person without sufficient knowledge of electronics uses this instrument, it may be damaged, and the user may be injured. Such a person should not use this instrument unless they are supervised by a person who does possess such knowledge.

■ Note about Reading This Manual
The contents of this manual contain specialized terminology and may be difficult to understand. If you have any questions about the contents of this manual, please contact your local LEADER agent.

■ Symbols and Terms
The following symbols and terms are used in this instruction manual and on the instrument to indicate important warnings and notes.

<Symbol> ⚠	This symbol appears in this instruction manual and on the instrument to indicate an area where improper handling could result in personal injury, damage to the instrument, or malfunction of the instrument or devices connected to it. When you encounter this symbol on the instrument, be sure to refer to the information in this instruction manual that corresponds to the area that the symbol marks.
<Term> ⚠ WARNING	Ignoring the precautions that this term indicates could lead to death or serious injury.
<Term> ⚠ CAUTION	Ignoring the precautions that this term indicates could lead to personal injury or damage to the instrument.

GENERAL SAFETY SUMMARY

Read the warnings and information below thoroughly to avoid death, personal injury, and damage and deterioration of the instrument.

⚠ WARNING

■ Warnings Concerning the Case and Panels

Do not remove the instrument's case or panels for any reason. Touching the internal components of the instrument could lead to fire or electric shock.

Also, do not allow foreign materials, such as liquids, combustible matter, and metal, to enter the instrument. Turning the instrument ON when such materials are inside it could lead to fire, electric shock, damage to the instrument, or some other accident.

■ Warnings Concerning the Power Source

Do not use a power source with a voltage other than the rated power source voltage for the instrument. Doing so could lead to fire.

Confirm the voltage of the commercial power source before you connect the AC power cord. Only use a power source whose frequency is 50/60 Hz.

Only use the supplied power cord. Using any other power cord with this instrument could lead to fire. If the supplied power cord is damaged, stop using it, and contact your local LEADER agent.

Using a damaged power cord could lead to electrical shock or fire. When removing the plug from the power outlet, do not pull on the cord. Pull from the plug.

■ Warnings Concerning the Fuse

If the fuse has blown, the instrument does not operate. If the fuse has blown, turn OFF the power switch, and remove the power plug from the outlet. Changing the fuse while the cord is connected to the outlet could lead to electric shock. Only use a fuse with the designated rating. If it is unclear what caused the fuse to blow, if you believe the instrument caused the fuse to blow, or if you do not have an appropriate replacement fuse, contact your local LEADER agent.

■ Installation Environment

• Operating Temperature Range

Use this instrument in a 0 to 40 °C environment. Using the instrument with its vents blocked or in a high temperature environment could lead to fire.

Drastic changes in temperature, such as might be caused by moving the instrument between two rooms with different temperatures, can damage the instrument by causing condensation to form within it. If there is a possibility that the instrument has condensation within it, wait for approximately 30 minutes before turning ON the power.

GENERAL SAFETY SUMMARY

Read the warnings and information below thoroughly to avoid death, personal injury, and damage and deterioration of the instrument.

⚠ WARNING

- Operating Humidity Range
  Use this instrument in an environment whose relative humidity is 85 % or less where there is no threat of condensation forming.
  Also, do not operate this instrument with wet hands. Doing so could lead to electric shock or fire.

- Do Not Operate in an Explosive Atmosphere
  Using this instrument in an environment where flammable gasses, explosive gasses, or steam is emitted or stored could lead to an explosion or fire. Do not use the instrument in such an environment.

- Do Not Insert Foreign Materials
  If foreign materials, such as metal, flammable objects, or liquid are allowed into the instrument (through the vents for example), fire, electric shock, damage to the instrument, or some other accident may result.

■ If You Notice Something Wrong during Operation
  If you notice smoke, fire, a strange smell, or something else that is wrong with the instrument while you are operating it, stop operation immediately. Failing to do so could lead to fire. Turn OFF the power switch, and remove the power cord from the outlet. After making sure that fire has not spread anywhere, contact your local LEADER agent.

■ Warnings Concerning Grounding
  The instrument has a ground terminal to protect the user and the instrument from electric shock. Ensure that the product is properly grounded for safe operation.

⚠ CAUTION

■ Cautions Concerning the Output Connector
  Do not apply signals to the output connector. Doing so could damage the instrument.

■ If You Will Not Use the Instrument for an Extended Period of Time
  If you will not use the instrument for an extended period of time, remove the power plug from the outlet.

GENERAL SAFETY SUMMARY

■ Calibration and Repairs

This instrument has been carefully examined at the factory to ensure that its performance is in accordance with the standards. However, because of factors such as parts wearing out over time, the performance of the instrument may degrade. To ensure stable performance, we recommend that you have the instrument calibrated regularly. Also, if the instrument malfunctions, repairs are necessary. For repairs and calibration, contact your local LEADER agent.

■ Routine Maintenance

When you clean the instrument, remove the power plug from the outlet.

Do not use thinner or benzene when you clean the instrument's case, panels, or buttons. Doing so could lead to paint chipping and the corrosion of plastic components. To clean the case, panels, and buttons, use a soft cloth with mild detergent, and wipe gently. While cleaning, make sure that foreign materials, such as water and detergent, do not enter the instrument. If liquid or a metal object enters into the instrument, fire or electric shock may result.

■ About the European WEEE Directive

This instrument and its accessories are subject to the European WEEE Directive. Follow the applicable regulations of your country or region when discarding this instrument or its accessories. (WEEE stands for Waste Electrical and Electronic Equipment.)

Follow the warnings and precautions that have been listed in this section to use the instrument correctly and safely. Precautions are also contained in various other sections of this instruction manual. To use the instrument correctly, be sure to follow those precautions as well.

If you have any questions or comments about this instruction manual, please contact your local LEADER agent.

1. INTRODUCTION

Thank you for purchasing this LEADER instrument. To use this instrument safely, read this instruction manual thoroughly, and make sure that you know how to use the instrument properly.

If some point about the operation of this instrument is still unclear after you have read this instruction manual, refer to the contact information on the back cover of the manual to contact LEADER, or contact your local LEADER agent.
After you have finished reading this manual, keep it in a convenient place so that you can refer to it when necessary.

1.1 Scope of Warranty

This LEADER instrument has been manufactured under the strictest quality control guidelines.

LEADER shall not be obligated to furnish the following free services during the warranty period.

1. Repair of malfunction or damages resulting from fire, natural calamity, or improper voltage applied by the user.
2. Repair of an instrument that has been improperly repaired, adjusted, or modified by personnel other than a factory-trained LEADER representative.
3. Repair of malfunctions or damages resulting from improper use.
4. Repair of malfunctions caused by devices other than this instrument.
5. Repair of malfunctions or damages without the presentation of a proof of purchase or receipt bill for the instrument.

1.2 Operating Precautions

1.2.1 Power Source Voltage and Fuse

⚠ WARNING

Confirm the voltage of the commercial power source before you connect the power plug to it.
The following table indicates the LG 3850's operating voltage range and the fuse rating.
Only use a power source that supplies a voltage within the operating voltage range and has a frequency of 50/60 Hz.
When replacing the fuse, turn OFF the power switch, and remove the power plug from the outlet.

Table 1-1　Operating voltage range and fuse rating

Operating Voltage Range	Fuse Rating	LEADER Fuse Part Number
90 to 250 V	500 mA, time-lag	436 3550 005

1.2.2 Reverse Voltage and Excessive Input

⚠ CAUTION

Do not apply an external voltage to the output connector.
If the cable touches a DC power supply, the internal attenuators may burn out.

1.2.3 Mechanical Shock

This instrument contains sensitive components, so it may be damaged if it is dropped or otherwise exposed to a strong shock.

1.3 Trademarks

Windows is a registered trademark of Microsoft Corporation in the United States and/or other countries.

2.   SPECIFICATIONS

2.1   General

The LG 3850 is a signal generator with switchable, separately sold encoding software that can support the different digital broadcasting systems of various countries. It has a built-in encoder and up converter that make it possible to vary channel frequencies and output levels.
It is suitable for use in a TV production line or similar location.

2.2   Features

- **USB 2.0**

   Change the encoding software by connecting the LG 3850 to a PC through USB.

- **Still Images**

   Output still-image and audio patterns seamlessly.

- **Variable Levels and Channels**

   Vary levels and channels.

- **Preset Settings**

   Save 99 preset configurations on the LG 3850.

2.3   Specifications

2.3.1   Transmission Encoder

Software Sold Separately   For details, see the specifications for the encoding software.

2.3.2   RF Signal Generator

Frequency
Range	50 to 900 MHz
Resolution	1 MHz (an offset of 1/7 MHz is added to ISDB-T and SBTVD-T)

Level
Range	10 to 99 dBuV (*1)
Resolution	1 dB
Output Connector	BNC
Output Impedance	75 Ω

*1   This is the guaranteed operating range. The guaranteed performance range is 39 to 99 dBµV (75 Ω termination). If signals in the range of 10 to 38 dBµV (75 Ω termination) will be generated, we recommend that an external attenuator be connected to the LG 3850.

2.3.3   Signal Source

Internal Signal
Software Sold Separately   For details, see the specifications for the encoding software.

(The internal signal differs depending on the encoding software.)

2.3.4   USB Interface

Input Connector	1 USB Type B connector (shared with remote control)
Specifications	USB 2.0
Input Bit Rate	0.2 to 40.0 Mbps
Input Packet Format	188 or 204 bytes
Supported Stream	MPEG-2 TS (ISO/IEC13818-1)
Broadcast System Switching	It takes approximately 30 minutes to overwrite the PLD, fixed patterns, and data.

PC Operating Environment (Recommended)

CPU	Intel (R) Core^{TM} 2 Duo, 1.6 GHz or more
Memory	1 GB or more
HDD	1 GB or more of free space
OS	Windows XP SP3

2.3.5   Display

Power ON/OFF	Indicated by an LED
Still-Image and Audio Pattern Selection	
	Indicated by LEDs that correspond to each pattern
Channels	Indicated by the 7-segment LED
Level	Indicated by the 7-segment LED
Illegal Display	Indicated by error codes on the 7-segment LED

2.3.6   General Specifications

Environmental Conditions

Operating Temperature Range	0 to 40°C
Operating Humidity Range	85 %RH or less (no condensation)
Optimal Temperature	10 to 35°C
Operating Environment	Indoors
Elevation	Up to 2,000 m
Overvoltage Category	II
Pollution Degree	2

Power Requirements

Voltage	90 to 250 VAC
Frequency	50/60 Hz
Power Consumption	20 W max.
Dimensions	213 (W) × 44 (H) × 400 (D) mm (excluding protrusions)
Weight	1.7 kg
Accessories	Power cord 1
	Cover/inlet stopper...1
	USB cable 1
	Instruction manual...1

3. PANEL DESCRIPTION

3.1 Front Panel
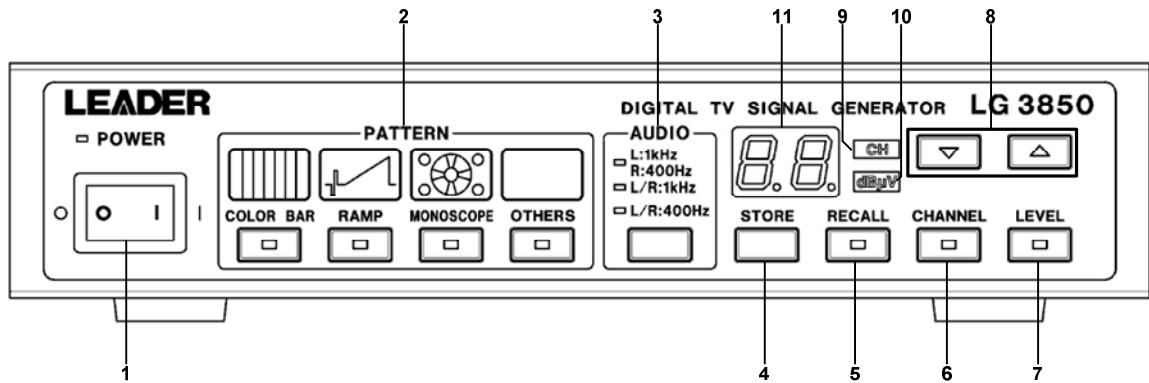
Figure 3-1   Front panel

Table 3-1   Front panel items and functions

No.	Name	Function
1	Power switch	This is the power switch. Flip the switch to the "|" side to turn the power ON. Flip the switch to the "O" side to turn the power OFF. When you turn the power ON, the LG 3850 starts with the panel settings in preset 00.
2	Pattern	Used to set the video pattern. You can select from the following four patterns. (These patterns may differ depending on the encoding software.) • COLOR BAR: A colorbar (simple animation) signal is played back. • RAMP: A ramp signal is played back. • MONOSCOPE: A monoscope signal is played back. • OTHERS: A natural-picture signal is played back. See section 5.1, "PATTERN."
3	Audio	Selects the audio pattern. You can select from the following three patterns. • L:1kHz, R:400Hz: A tone signal (left: 1 kHz and right: 400 Hz) is generated. • L/R:1kHz: A tone signal (left and right both 1 kHz) is generated. • L/R:400Hz: A tone signal (left and right both 400 Hz) is generated. See section 5.2, "AUDIO."
4	STORE key	Saves the current settings to the specified preset address. See section 5.5.1, "Saving Presets."
5	RECALL key	Recalls the settings of the specified preset address. See section 5.5.2, "Recalling Presets."
6	CHANNEL key	Used to set the LG 3850 output channel. When you press this key, the CH indicator next to the 7-segment LED lights. The channel is displayed on the 7-segment LED. You can use the ▲ and ▼ keys to change the channel. See section 5.3, "CHANNEL."
7	LEVEL key	Used to set the LG 3850 output level. When you press this key, the dBμV indicator next to the 7-segment LED lights. The level is displayed on the 7-segment LED. You can use the ▲ and ▼ keys to change the level. See section 5.4, "LEVEL."
8	▲ and ▼ keys	Increments or decrements the channel, level, and preset address.

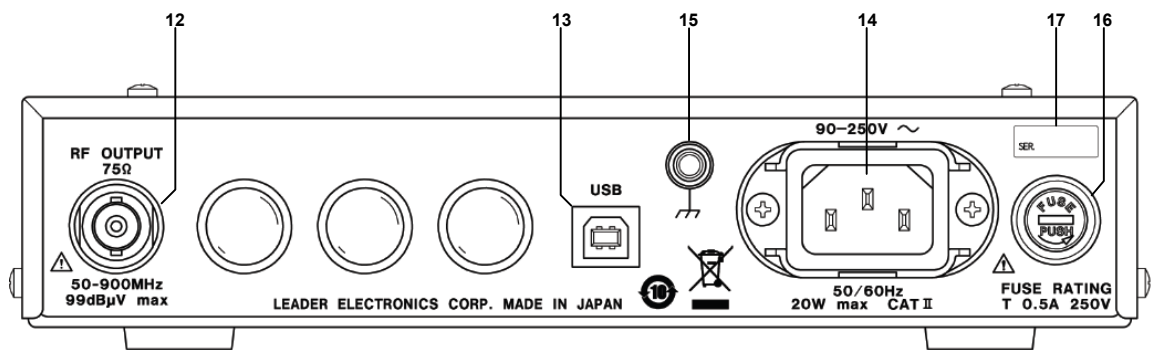| No.	Name	Function
9	CH indicator	When this indicator is lit, the number displayed on the 7-segment LED is the channel. Press the CHANNEL key to light this indicator.
10	dBμV indicator	When this indicator is lit, the number displayed on the 7-segment LED is the level. Press the LEVEL key to light this indicator.
11	7-segment LED display	This displays one of the following six items. • When power is turned ON: Displays the LG 3850 model number or the model number and version of the installed option. • When the CH indicator is lit: Displays the output channel. • When the dBμV indicator is lit: Displays the output level. • When the CH and dBμV indicators are not lit: Displays the preset address number. • When the LG 3850 is connected to a PC: Displays "PC." • When processing an illegal operation: Displays the error code.

3.2   Rear Panel

Figure 3-2   Rear panel

Table 3-2   Rear panel items and functions

No.	Name	Function
12	RF output connector	This is the RF output connector (75 Ω termination).
13	USB port	This is a USB 2.0 port. Use this port to connect the LG 3850 to a PC. You can also connect devices that do not support USB 2.0, but there may be noise in the video or audio that you play back from the device depending on the data rate.
14	AC inlet	This is the AC inlet. Use the supplied power cord to connect this inlet to an AC power supply.
15	GND connector	This is connected to the LG 3850 chassis. This is the earth connector.
16	Fuse	The LG 3850 main fuse is inserted here. When you replace the fuse, pay attention to the fuse type and rating.
17	Serial number name plate	This displays the serial number. If you contact your local LEADER agent, be sure to notify them of the number written here.

4. BEFORE YOU BEGIN MEASURING

4.1 Attaching the Cover/Inlet Stopper

A cover/inlet stopper is included with the LG 3850. Use this device to prevent the power cord from being pulled free of the AC inlet. To attach or remove the cover/inlet stopper, follow the procedure below.

- **Attaching the Cover/Inlet Stopper**

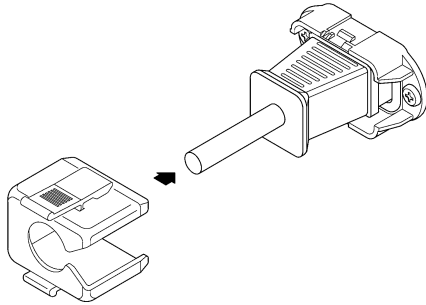**1. Cover the power cord with the cover/inlet stopper.**

Figure 4-1   Attaching the cover/inlet stopper; step 1

2. Push the cover/inlet stopper, until you hear a click, to attach it to the AC inlet.
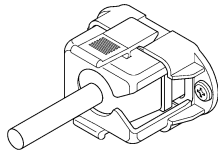
Figure 4-2   Attaching the cover/inlet stopper; step 2

3. Check that the cover/inlet stopper is securely attached to the AC inlet.

- **Removing the Cover/Inlet Stopper**

1. Release the lock by using two fingers to press the cover/inlet stopper levers.
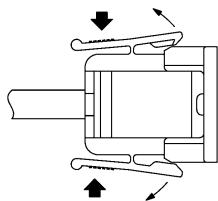
Figure 4-3   Removing the cover/inlet stopper; step 1

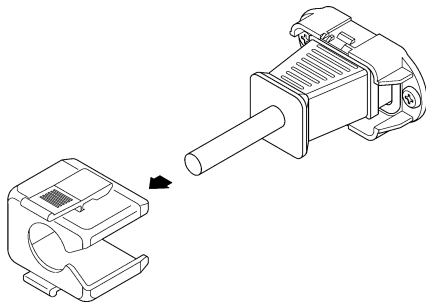**2. Pull the cover/inlet stopper away from the AC inlet.**

Figure 4-4   Removing the cover/inlet stopper; step 2

4.2   Turning the Power ON

Connect the supplied power cord, and then flip the power switch to the "|" side to turn the power ON.

The operation of the LG 3850 after it has been turned ON differs depending on whether the encoding software is installed or not. These differences are described below.

- **If the encoding software is not installed**

  The front-panel 7-segment LED displays the LG 3850 model number and then two horizontal lines.

  In this situation, because the encoding software is not installed, you cannot perform panel operations. Additionally, signals are not generated from the rear-panel RF output connector.

  $$38 \rightarrow 50 \rightarrow --$$
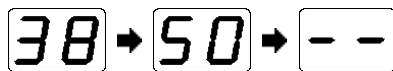
- **If the encoding software is installed**

  The front-panel 7-segment LED displays the model number of the installed encoding software (the last two model-number digits that follow SER), the encoding software version, two horizontal lines, and then the channel that is set in preset address 00.

  In the following example, LG 3850SER02 (ISDB-T SOFTWARE) Ver. 1.0 is installed in the LG 3850, and channel 13 is set in preset address 00.

  $$02 \rightarrow 1.0 \rightarrow -- \rightarrow 13$$

  Until the channel number is displayed, you cannot operate the keys on the LG 3850. Additionally, normal signals are not generated from the rear-panel RF output connector.

  The LG 3850 does not have a last-memory feature. When the LG 3850 is turned ON, it uses the settings in preset address 00.

  For details on the settings in preset address 00, see the encoding software's instruction manual. You can change these settings.

4.3 Installation

By transferring programs from PCs that the encoding software is installed on to the LG 3850, you can use this instrument as a signal generator that supports the different digital broadcasting systems of various countries.

To install the program on the LG 3850, follow the procedure below.

1. Install the encoding software

Install the encoding software on your PC from the encoding software CD-ROM (sold separately).

See section 4.3.1 "Installing the Encoding Software."

2. Install the USB driver

Install the USB driver on your PC from the encoding software CD-ROM (sold separately).

See section 4.3.2, "Installing the USB Driver."

3. Activate the license and transfer the program to the LG 3850

Connect the LG 3850 to your PC, activate the license, and transfer the program from your PC to the LG 3850.

See section 4.3.4, "Activating the License Key and Transferring the Program to the LG 3850."

The following items are required to complete the installation process.

Table 4-1   Required items

Item	Notes
PC	Must have a CD-ROM drive and USB port
	For operating conditions, see section 2.3.4, "USB Interface."
USB cable	Accessory
CD-ROM	Encoding software (sold separately) accessory
License key	Encoding software (sold separately) accessory

In the remainder of this manual, screen captures of an LG 3850 in which the LG 3850SER02 (ISDB-T SOFTWARE) is installed are used in the explanations.

4.3.1   Installing the Encoding Software

This section will explain the procedure to follow (shown below) to install the encoding software on your PC.

1. **Insert the encoding software CD-ROM (sold separately) into your PC.**

2. **Double-click Setup.msi in the LG 3850SERXXInstallerPackage folder on the CD-ROM.**

    The number that XX represents varies depending on the encoding software.
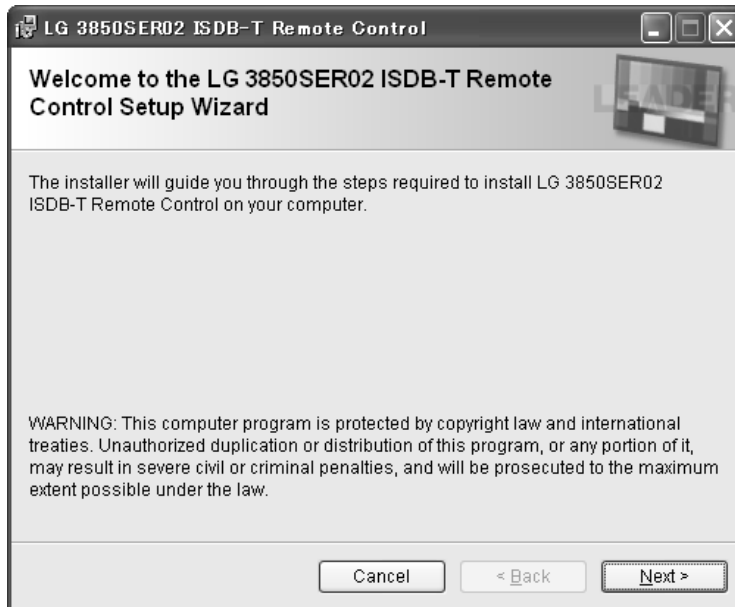
3. **When the following window appears, click Next.**

Figure 4-5   Installer start window

4. **When the following window appears, click Next.**

    If you want to specify a different installation destination, do so here.
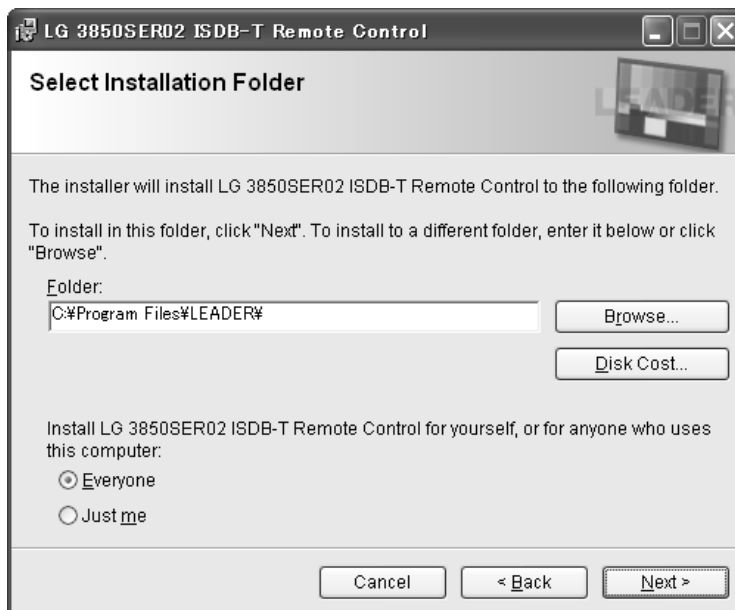

Figure 4-6   Installation destination confirmation window

5. **When the following window appears, click Next.**

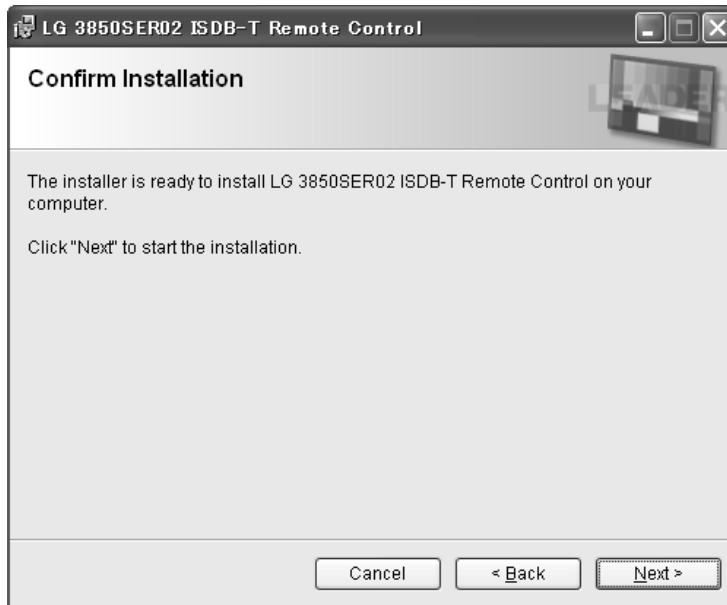Clicking Next will start the installation of the software.

Figure 4-7 Installation confirmation window

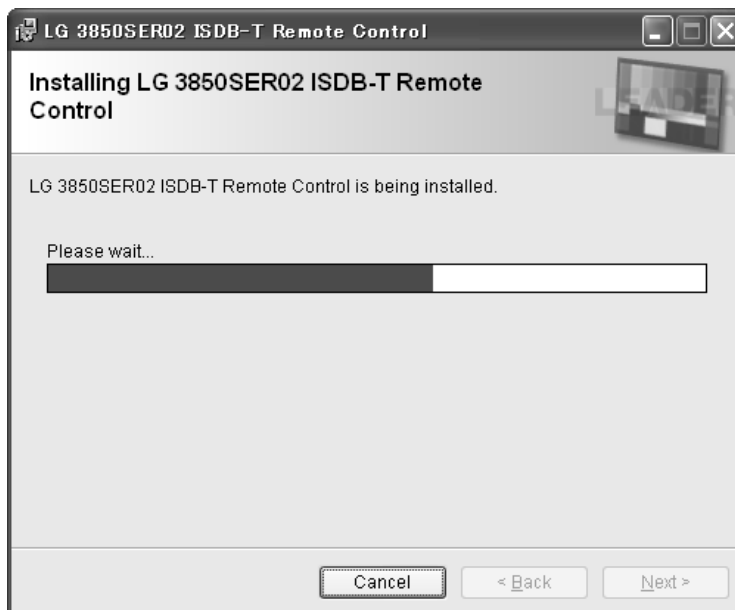During installation, the following window is displayed.

Figure 4-8 Window displayed during installation

6. When the following window appears, the installation is complete. Click Close.
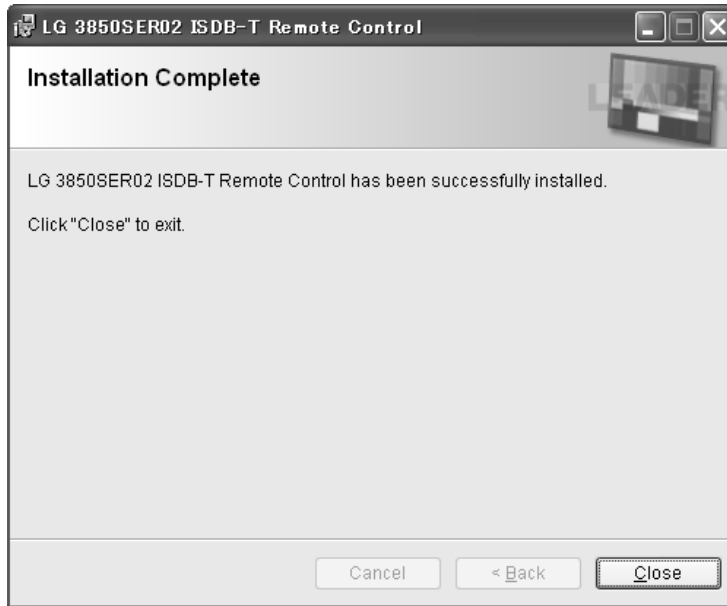

Figure 4-9 Installation complete window

4.3.2   Installing the USB Driver

To control the LG 3850 from a PC over a USB connection, you must first install the USB driver on the PC. To install the USB driver, follow the procedure below.
The installation procedure explained here is for Windows XP SP3. Depending on your PC, your screens may differ slightly from the screen captures shown in this procedure, but the procedure remains the same.

1.   **Turn ON the LG 3850.**

2.   **Use a USB cable to connect the LG 3850 rear-panel USB port to a USB port on your PC.**

    Do not connect devices other than the LG 3850 to the other USB ports on your PC.

3.   **When the installation window appears, select "Install from a list or specific location," and click Next.**

Figure 4-10   Found New Hardware Wizard

4. **When the following screen appears, select "Include this location in the search," and click Browse.**
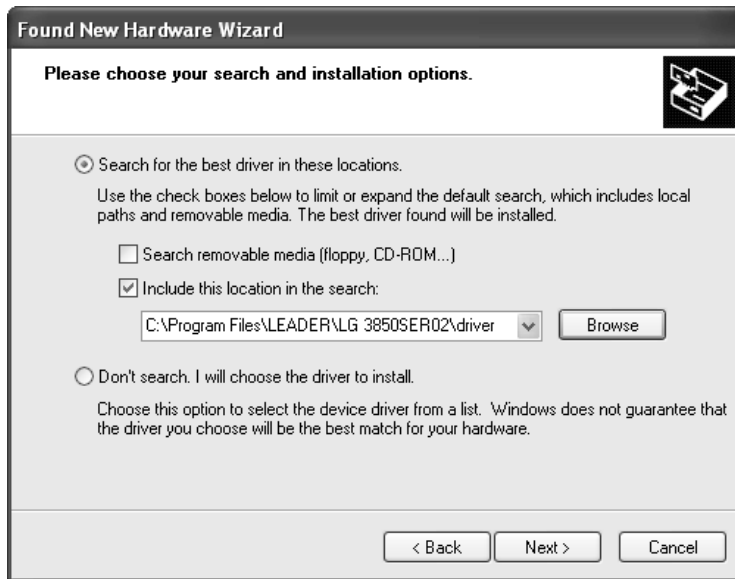

Figure 4-11   Driver search window

5. **Select the "driver" folder from the location that you installed the encoding software to in section 4.3.1, "Installation," and click OK.**

Figure 4-12   Browse For Folder dialog box

6. Check that the full path displayed here is the folder that you selected in step 5, and then click Next.

When you click Next, the PC searches for and installs the driver. This process may take some time.
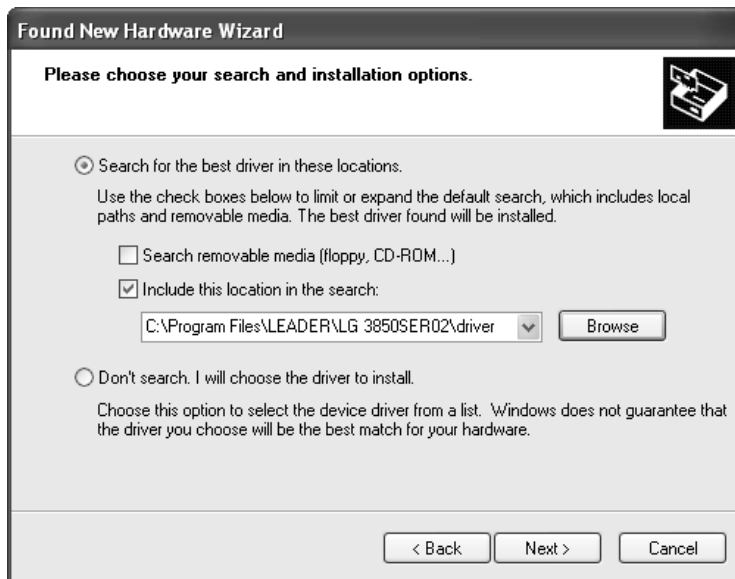
Figure 4-13 Driver folder confirmation window

7. If any warnings that are related to the hardware installation appear, click Continue Anyway.

This dialog box may not appear.

Figure 4-14 Hardware installation warning dialog box

8. **When the following window appears, the installation is complete. Click Finish.**

   If the USB driver is not installed correctly, see the next section.

Figure 4-15 Installation complete window

4.3.3   Restoring the USB Driver

If the USB driver is not installed correctly, follow the procedure below to restore the USB driver.

The manual restoration procedure explained here is for Windows XP SP3. Depending on your PC, your screens may differ slightly from the screen captures shown in this procedure, but the procedure remains the same.

1. **Turn ON the LG 3850.**

2. **Use a USB cable to connect the LG 3850 rear-panel USB port to a USB port on your PC.**

    Do not connect devices other than the LG 3850 to the other USB ports on your PC.

3. **On your PC, right-click the My Computer icon, and click Properties.**

4. **On the Hardware tab, click Device Manager.**

Figure 4-16   System Properties dialog box

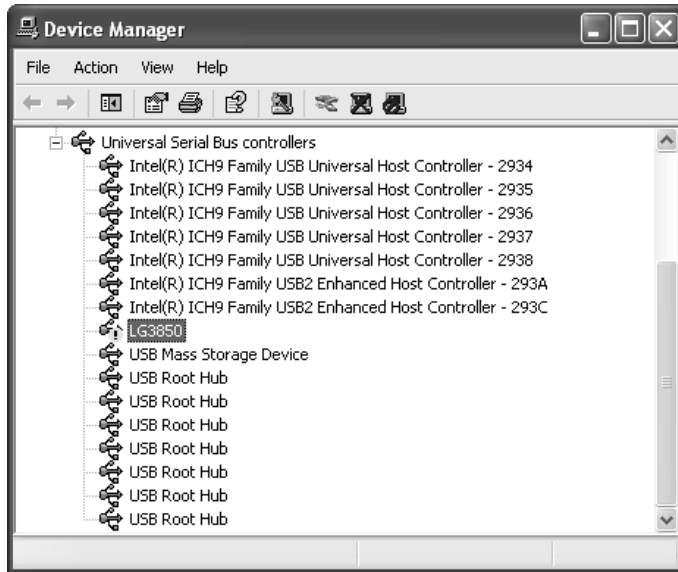**5.   Under USB (Universal Serial Bus) controllers, select LG3850.**

Figure 4-17   Device Manager window

6.   Right-click LG3850, and click Update Driver.
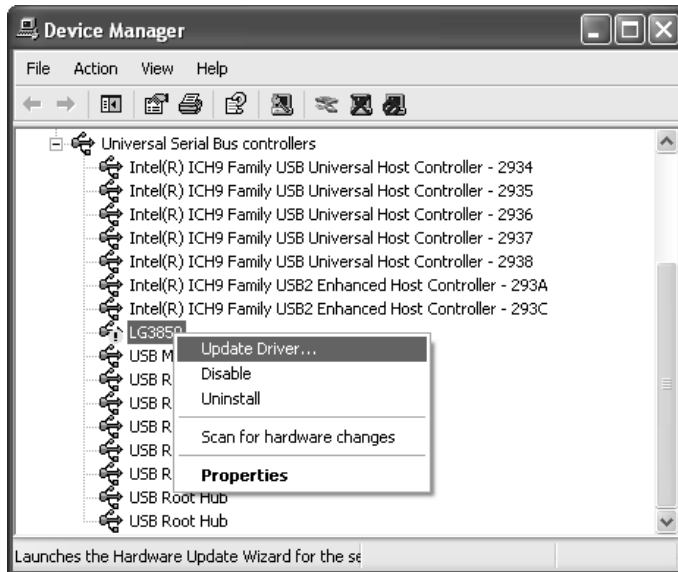

Figure 4-18   Selecting "Update Driver"

7. **When the installation window appears, select "Install from a list or specific location," and click Next.**

Figure 4-19   Found New Hardware Wizard

8. **Beginning at step 4 in the procedure in section 4.3.2, "Installing the USB Driver," reinstall the driver.**

9. **When "LG3850 DIGITAL TV SIGNAL GENERATOR" appears on the Device Manager window, the driver restoration is complete. Close the window.**
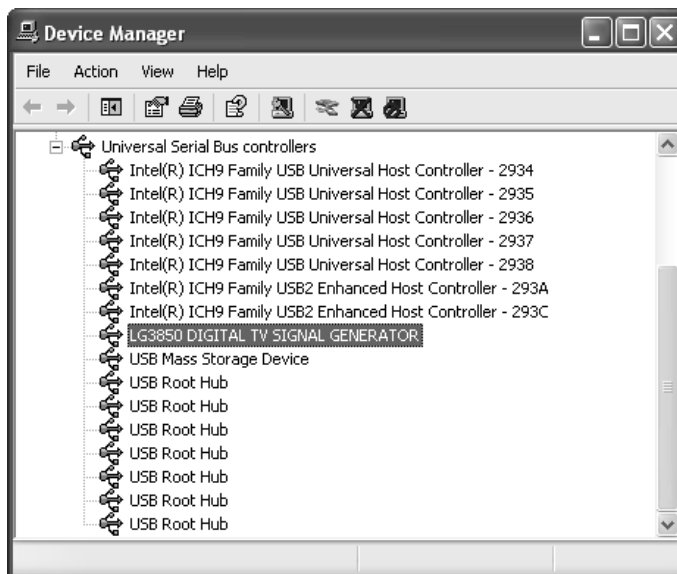

Figure 4-20   The Device Manager window after USB driver restoration

4.3.4 Activating the License Key and Transferring the Program to the LG 3850

Before you can transfer the encoding software program to the LG 3850, you must first activate the program's license. Refer to the "Information on LG 3850SER02 License Key" that came with the encoding software (sold separately), and then follow the procedure below.
One license key can only be used on one LG 3850. You cannot use the software on multiple LG 3850s.

1. **Use a USB cable to connect the LG 3850 rear-panel USB port to a USB port on your PC.**

   The encoding software and USB driver must have already been installed on the PC.

2. **Turn ON the LG 3850.**

3. **On the taskbar, click Start, select the LEADER folder, and then start the LG 3850SERXX Remote Control application.**

   The number that XX represents varies depending on the encoding software.

4. **When the Main window appears, select the LG 3850 from the Connect list. On the LG 3850 menu, click License.**

   If you cannot select License, the license has already been activated. In this situation, you do not have to carry out the remainder of this procedure.
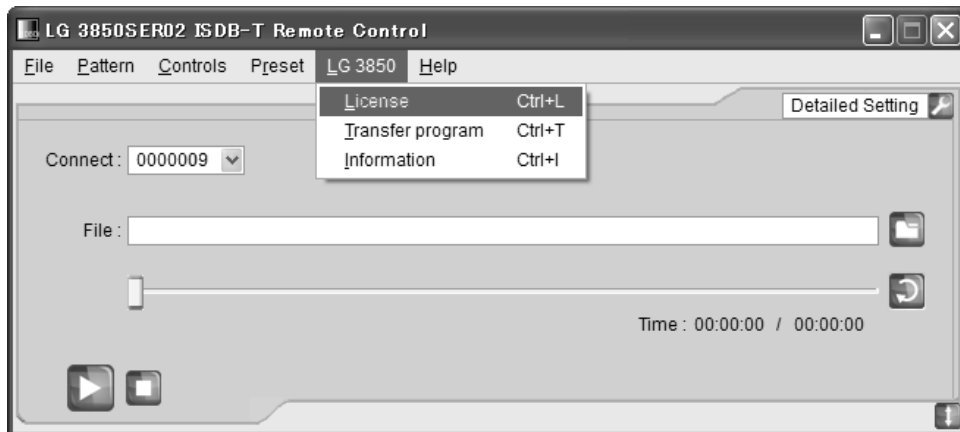

Figure 4-21   Main window

5. **When the Input License dialog box appears, check that the value in the Serial No. box matches the SER.NO. value that is written on the "Information on LG 3850 License Key."**

Figure 4-22   Input License dialog box

6. **In the Input License dialog box, enter the 10-digit license key in the License Key boxes (5 digits per box), and then click Apply.**
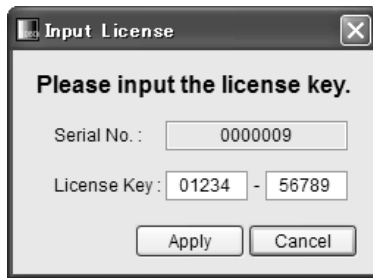

Figure 4-23   Input License dialog box

If the license key is incorrect, the "License Error" message appears. Click OK, and then reenter the license key.
If you enter an incorrect license key three times, you will no longer be able to enter the license key. In this situation, restart the LG 3850SERXX Remote Control application, and then enter the license key again. (The number that XX represents varies depending on the encoding software.)
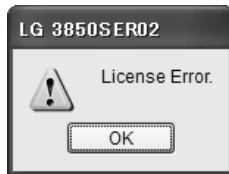

Figure 4-24   License activation failure message

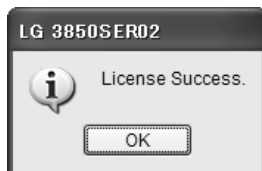7. **When the "License Success" message appears, click OK.**

Figure 4-25   License activation message

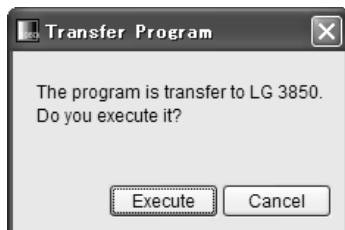8. **When the Transfer Program dialog box appears, click Execute.**

Figure 4-26   Transfer Program dialog box

When you click Execute, the program is transferred from your PC to the LG 3850.
Do not turn the LG 3850 OFF or disconnect the USB cable while the program is being
transferred. It takes about 30 minutes to transfer the program.
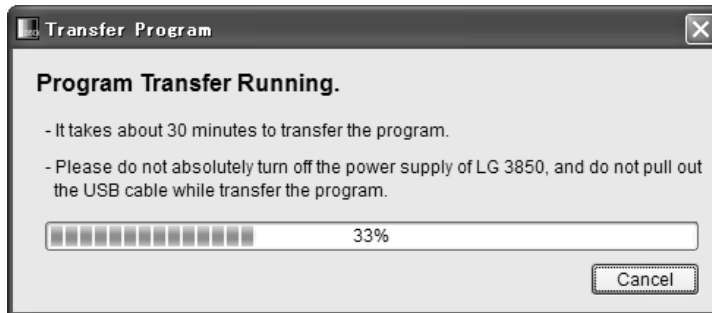
Figure 4-27   Window displayed while the program is being transferred

4.3.5   Transferring the Program

You can also transfer the program by clicking a command on the LG 3850SERXX Remote
Control menu bar. When you only want to transfer the program to an LG 3850 on which the
license has already been activated, follow the procedure below.

1. **Use a USB cable to connect the LG 3850 rear-panel USB port to a USB port on your PC.**

    The encoding software and USB driver must have already been installed on the PC.

2. **Turn ON the LG 3850.**

3. **On the taskbar, click Start, select the LEADER folder, and then start the LG
    3850SERXX Remote Control application.**

    The number that XX represents varies depending on the encoding software.

4. **When the Main window appears, click Transfer program on the LG 3850 menu.**

    If the Input License dialog box appears, the license key has not been activated yet.
    Follow the procedure in section 4.3.4, "Activating the License Key and Transferring the
    Program to the LG 3850," to activate the license key.
    If you cannot select Transfer program on the LG 3850 menu, the program has already
    been transferred to the LG 3850. In this situation, you do not have to carry out the
    remainder of this procedure.

Figure 4-28   Main window

5. **When the Transfer Program dialog box appears, click Execute.**

    Do not turn the LG 3850 OFF or disconnect the USB cable while the program is being transferred. It takes about 30 minutes to transfer the program.
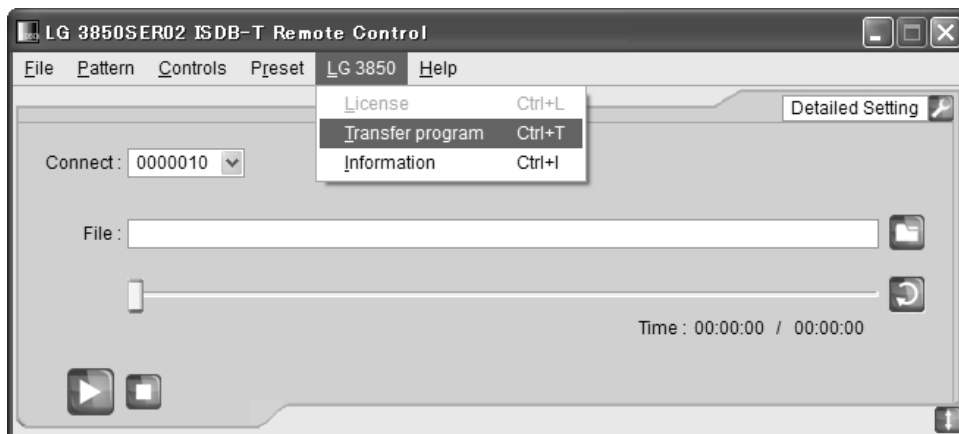
4.3.6   Updating the Encoding Software

When a new version of the encoding software is released, follow the procedure below to update the software. If you have multiple encoding software applications installed, you have to update each of them individually.

1. **In Control Panel, open Add or Remove Programs.**

2. **Select LG 3850SERXX Remote Control, and click Remove.**

    The number that XX represents varies depending on the encoding software.
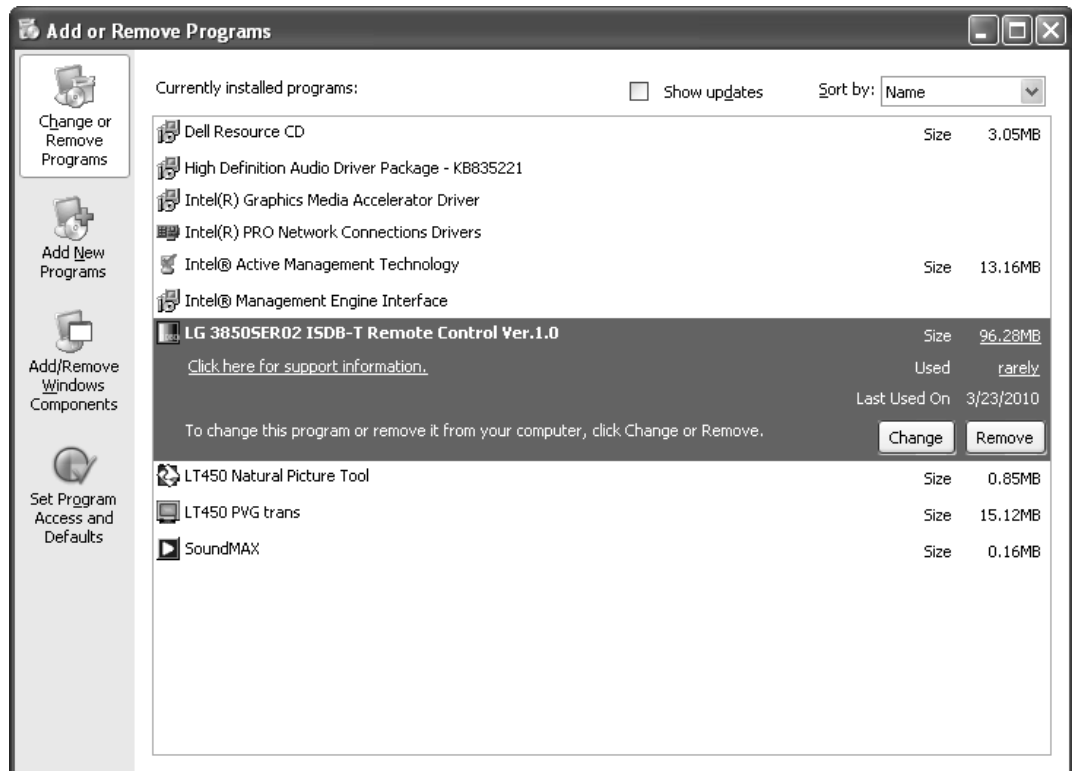

Figure 4-29   Add or Remove Programs window

3. **After the old version is uninstalled, install the new version.**

    First, follow the procedure in section 4.3.1, "Installing the Encoding Software," to install the software on your PC.
    Next, follow the procedure in section 4.3.5, "Transferring the Program," to transfer the program to the LG 3850 from your PC.

4.4   About Licenses

4.4.1   Purchasing Additional Licenses

When you purchase additional encoding software applications, you have to notify your local LEADER agent of the MAC addresses of your LG 3850s.

To check a MAC address, follow the procedure below. In this procedure, use the encoding software that you already have.

1. **Use a USB cable to connect the LG 3850 rear-panel USB port to a USB port on your PC.**

   The encoding software and USB driver must have already been installed on the PC.

2. **Turn ON the LG 3850.**

3. **On the taskbar, click Start, select the LEADER folder, and then start the LG 3850SERXX Remote Control application.**

   The number that XX represents varies depending on the encoding software.

4. **When the Main window appears, select the LG 3850 from the Connect list. On the LG 3850 menu, click Information.**

   The MAC address is displayed on the Information dialog box.
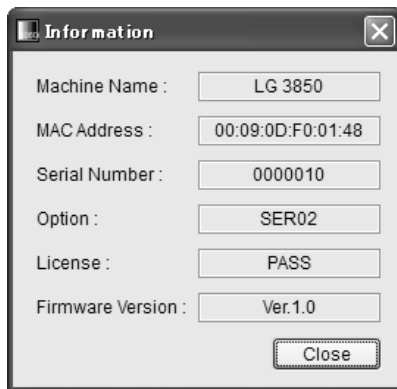

Figure 4-30   Information dialog box (when an LG 3850SER02 is installed)

4.4.2   Checking the License Activation

To check whether the encoding software license key has been activated on the LG 3850, see the License property as shown in Figure 4-30, "Information dialog box (when an LG 3850SER02 is installed)."
If "PASS" is displayed, the license key has been activated.

5. SETTINGS AND THE DISPLAY

Depending on the installed encoding software, the explanations given in this chapter may be different from the settings that you can configure on your LG 3850.
Refer to the encoding software instruction manual as you read this chapter.

5.1 PATTERN

Press each of the front-panel PATTERN keys to play back the internal still-image patterns.
For settings such as the format and the transmission parameters, see the encoding software instruction manual.
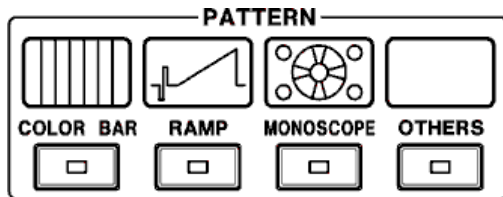
Figure 5-1   PATTERN

COLOR BAR:	A colorbar (simple animation) signal is transmitted.
RAMP:	A ramp signal is transmitted.
MONOSCOPE:	A monoscope signal is transmitted.
OTHERS:	A natural-picture signal is transmitted.

5.2 AUDIO

Each time that you press the front-panel AUDIO key, the output audio switches between the settings listed below.
The audio-display LED that corresponds to the selected audio lights.

Figure 5-2   AUDIO

L:1kHz R:400Hz:	A tone signal (left: 1 kHz and right: 400 Hz) is generated.
L/R:1kHz:	A tone signal (left and right both 1 kHz) is generated.
L/R:400Hz:	A tone signal (left and right both 400 Hz) is generated.

5.3   CHANNEL

Press the front-panel CHANNEL key to select the output channel. When the channel is being selected, "CH" lights, and the output channel is displayed on the 7-segment LED.

Press the ▼ and ▲ keys to select the output channel. Press and hold the ▼ or ▲ key to switch the setting quickly. For the channels that you can set, see the encoding software instruction manual.

Figure 5-3   CHANNEL (channel 13)

5.4   LEVEL

Press the front-panel LEVEL key to set the output level. When the level is being set, "dBµV" lights, and the output level is displayed on the 7-segment LED.

Press the ▼ and ▲ keys to select the output level. Press and hold the ▼ or ▲ key to switch the setting quickly. You can set the output level to a value that is in the range of 10 to 99 dBµV (75 Ω termination) in steps of 1 dB.

Figure 5-4   LEVEL (60 dBµV)

5.5   Preset Settings

On the LG 3850, you can save and recall 99 preset configurations (stored in preset addresses 01 to 99).
The settings in preset address 00 are recalled when the LG 3850 turns ON or when the connection with a PC is disconnected.

The settings that are saved and recalled are the PATTERN, AUDIO, CHANNEL, and LEVEL settings.

5.5.1   Saving Presets

To save a preset, follow the procedure below.
Save presets for each encoding software application. The settings that you save are retained even when the LG 3850 is turned OFF.

1. **Configure the panel settings as you want to save them, and then press STORE.**

    The "CH" and "dBµV" LEDs light, and the address number blinks on the 7-segment LED.
    After you press STORE, if you want to cancel the saving of the preset, press PATTERN, AUDIO, CHANNEL, or LEVEL.

    Figure 5-5   When you have pressed STORE

2. **Select the address number that you want to save to.**

    You can select an address number from 00 to 99. Press ▲ and ▼ to select the address number.

    Figure 5-6   Selecting the address number

3. **Press STORE again.**

    The panel settings are saved to the selected address number, and the LG 3850 switches to the channel display.

    Figure 5-7   Completion of the preset-saving operation

5.5.2　Recalling Presets

To recall a preset, follow the procedure below.

1.　Press RECALL.

The "CH" and "dBµV" LEDs light, and the address number is displayed on the 7-segment LED.
After you press RECALL, if you want to cancel the recalling of the preset, press PATTERN, AUDIO, CHANNEL, or LEVEL.

Figure 5-8　When you have pressed RECALL

2.　Select the address number that you want to recall from.

You can select an address number from 00 to 99. Press ▲ and ▼ to select the address number.
If you want to recall the preset that is stored in the address number that is displayed on the 7-segment LED immediately after you press RECALL (in this case, 00), press RECALL again.

Figure 5-9　Selecting the address number

When you stop pressing ▲ and ▼, the panel settings in the selected address number are recalled, and the LG 3850 switches to the channel display.

Figure 5-10　Completion of the preset-recalling operation

5.6   Error Code Display

If there is a problem with the LG 3850, an error code is displayed on the 7-segment LED. The error codes are explained below.

Table 5-1   List of error codes

No.	Error Code	Error Description	Solution
1	E1	PLL1 is unlocked.	Contact your local LEADER agent.
2	E2	PLL2 is unlocked.	Contact your local LEADER agent.
3	E3	PLL3 is unlocked.	Contact your local LEADER agent.
4	E4	PLD configuration failed.	Contact your local LEADER agent.
5	E9	Improper USB disconnection between the PC and the LG 3850.	Check that the USB cable is not disconnected. Perform the Connect operation on the Main window of the LG 3850SERXX Remote Control application again, or restart the LG 3850.

5.7   Connecting the LG 3850 to a PC

You can use the LG 3850 as a stand-alone unit. You can also connect the LG 3850 to a PC to control the LG 3850 from the PC. While the LG 3850 is connected to a PC, the 7-segment LED displays "PC," and you cannot perform panel operations.

When you disconnect the connection to the PC, the LG 3850 uses the settings in preset address 00, and you can perform panel operations.

If the connection to the PC is disconnected improperly, the 7-segment LED normally displays an error code, but it may continue to display "PC." In this situation, check that the USB cable is not disconnected, and then perform the Connect operation on the Main window of the LG 3850SERXX Remote Control application again, or restart the LG 3850.

For additional information, see the encoding software instruction manual.

6. CALIBRATION AND REPAIRS

This instrument has been carefully examined at the factory to ensure that its performance is in accordance with the standards. However, because of factors such as parts wearing out over time, the performance of the instrument may degrade. To ensure stable performance, we recommend that you have the instrument calibrated regularly. Also, if the instrument malfunctions, repairs are necessary. For repairs and calibration, contact your local LEADER agent.

所含有毒有害物质信息

部件号码：LG 3850

此标志适用于在中国销售的电子信息产品, 依据2006年2月28日公布的《电子信息产品污染控制管理办法》以及SJ/T11364-2006《电子信息产品污染控制标识要求》，表示该产品在使用完结后可再利用。数字表示的是环境保护使用期限，只要遵守与本产品有关的安全和使用上的注意事项，从制造日算起在数字所表示的年限内，产品不会产生环境污染和对人体、财产的影响。
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产品中有毒有害物质或元素的名称及含量

部件名称 Parts	有毒有害物质或元素　　Hazardous Substances in each Part					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
实装基板	×	○	○	○	○	○
主体部	×	○	○	○	○	○
开关电源	○	○	○	○	○	○
线材料一套	×	○	○	○	○	○
外筐	○	○	○	○	○	○
附件	○	○	○	○	○	○
包装材	○	○	○	○	○	○

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LEADER ELECTRONICS CORP.
2-6-33 Tsunashima-Higashi, Kohoku-ku, Yokohama 223-8505, Japan
PHONE:81-45-541-2123   FAX:81-45-541-2823   http://www.leader.co.jp

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