LEADER

LT 4600

MULTIFORMAT VIDEO GENERATOR

INSTRUCTION MANUAL (LOGO APP)

LEADER
ELECTRONIC MEASURING INSTRUMENTS

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1.   INTRODUCTION

This manual explains the logo application (hereafter referred to as Logo App) that is supplied with the LT 4600. For information on how to use the LT 4600, see the LT 4600 instruction manual.

Logo App is a software for converting bitmap data (*.bmp) into 4-level monochrome data (*.lg) that can be used on the LT 4600.

2.   PREPARATION

To use Logo App, you need the following devices. Please obtain them separately.

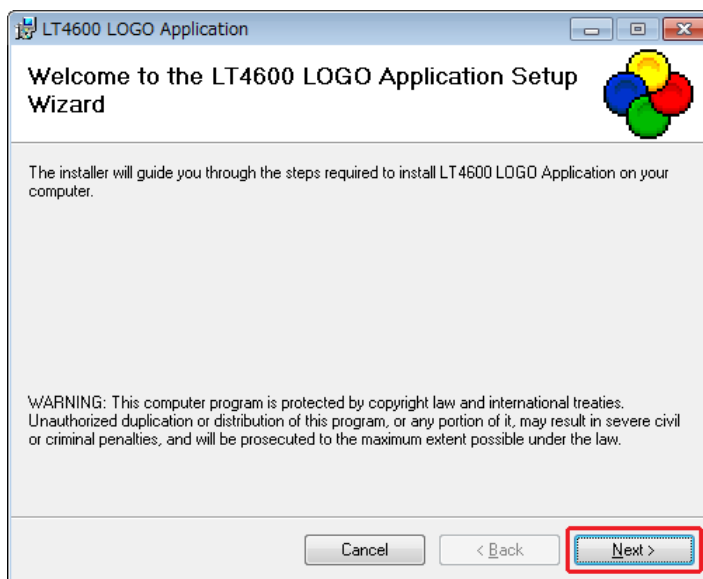| Device	Environmental conditions
PC	• Microsoft Windows Vista, 7
	• Microsoft .Net Framework 3.5 or later must be installed.
USB memory device	• Up to 8 GB

3. INSTALLATION

Follow the procedure below to install Logo App in your PC.
When updating Logo App, you do not have to uninstall the old version. The old version will be overwritten.
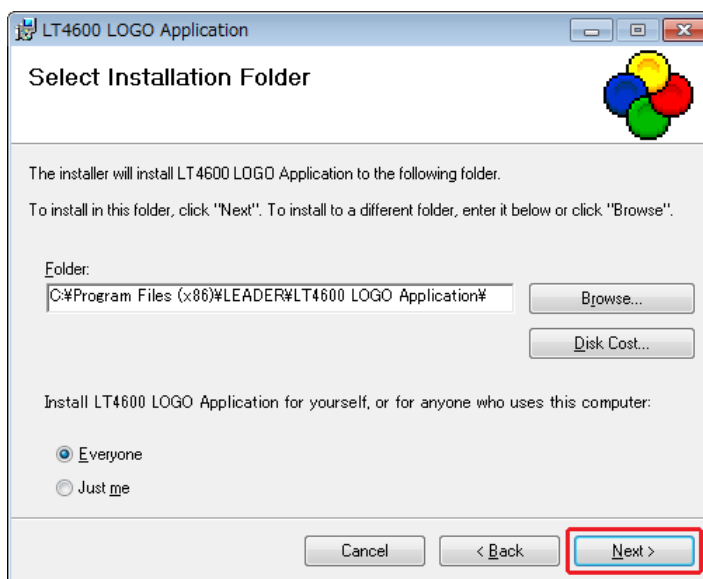
1. **Load the CD-ROM supplied with the LT 4600, and run LT4600_LOGO_Application_Installer.msi.**

   ⊙ CD-ROM
   ├ ▢ Instruction_Manual_for_LT_4600
   └ ▢ LOGO_Application_v1.0
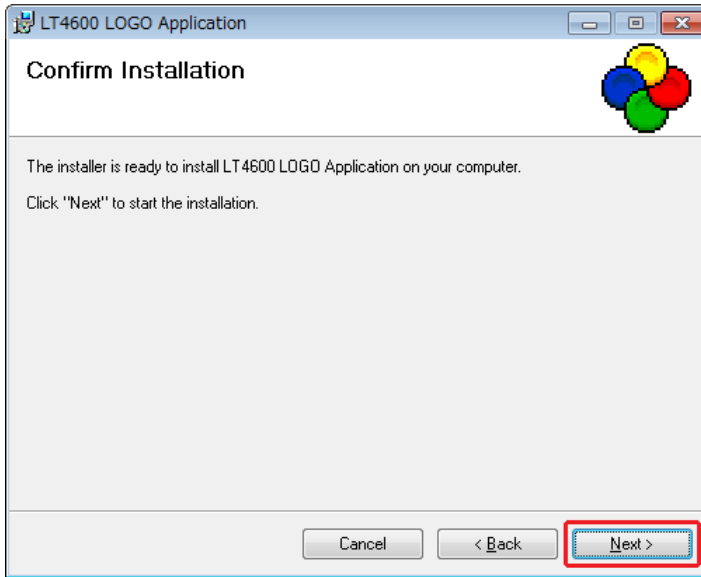   └ ▢ LT4600_LOGO_Application_Installer.msi

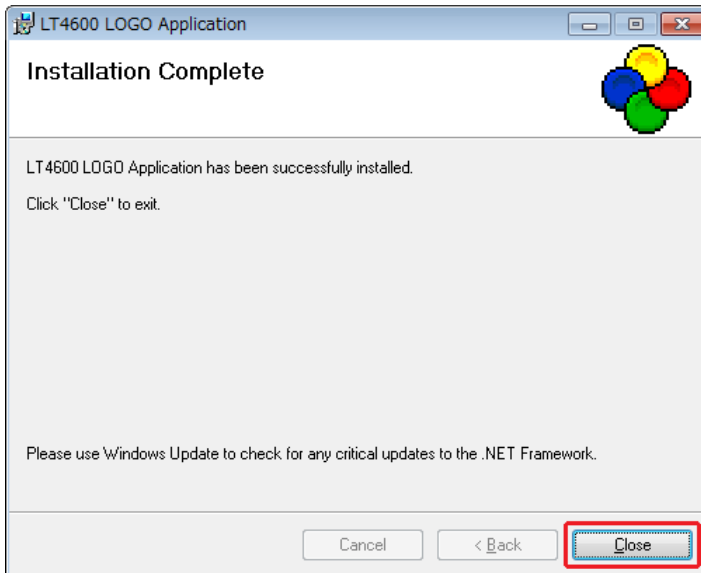2. **When the following window appears, click Next.**

3. **When the following window appears, select the installation folder, and click Next.**

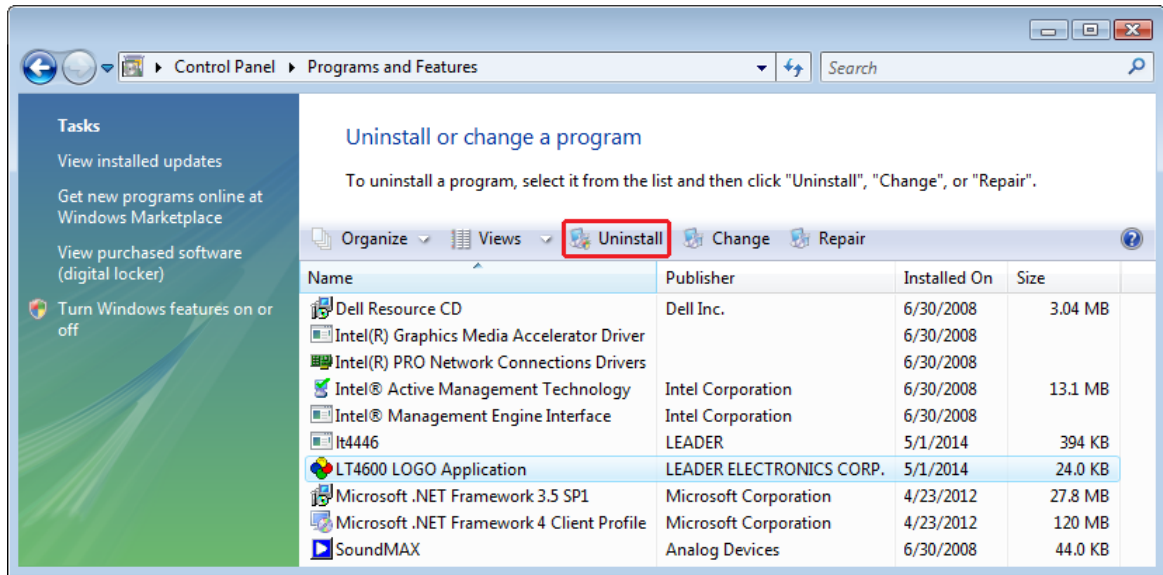**4. When the following window appears, click Next.**

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

4. UNINSTALLATION

To uninstall the software, select "LT4600 LOGO Application"in Programs and Features of Control Panel, and click Uninstall.
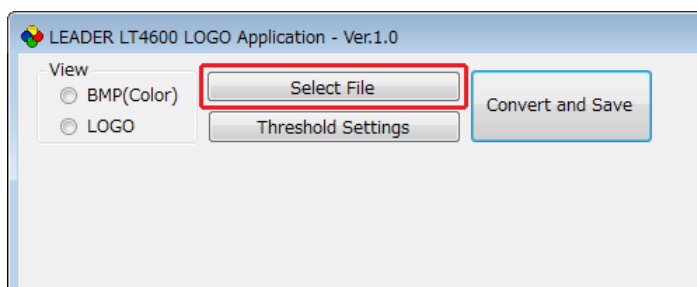

5. HOW TO USE

To convert bitmap data (*.bmp) into 4-level monochrome data (*.lg), follow the procedure below.

1. **Start "LT4600 LOGO Application" on the PC desktop.**
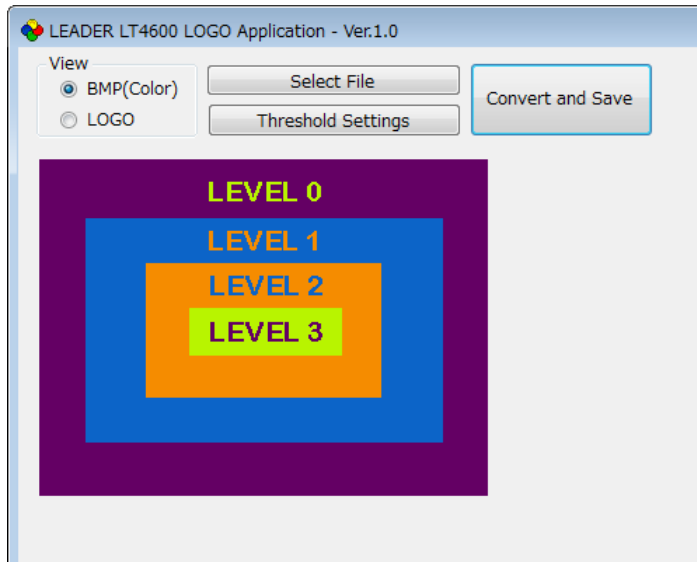

2. **Click Select File.**

3. **Select a bitmap file (*.bmp).**

    Select a file that meets the following conditions. You cannot select a file (*.lg) that has already been converted.

    File name: Up to eight characters (excluding the extension) consisting of alphanumeric characters or underscore.
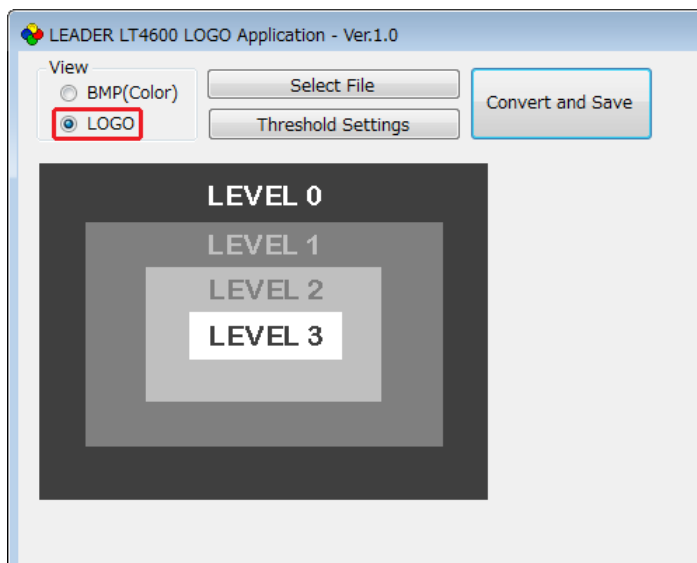   File format: 24 bits, 256 colors, 16 colors
    File size: Up to 320 dots × 240 lines (width × height)

4. **Click LOGO to view the data after conversion.**

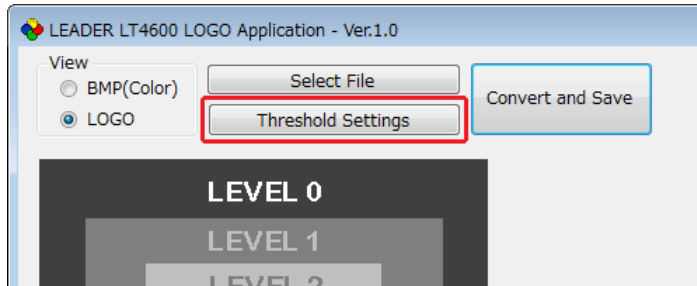   If the data after the conversion appears okay, save the data. Proceed to step 7.
    Here, only check that the colors have been separated into four grayscale levels. The intensity used to display the data on the actual LT 4600 can be adjusted from the menu, so it will be different from what appears here.
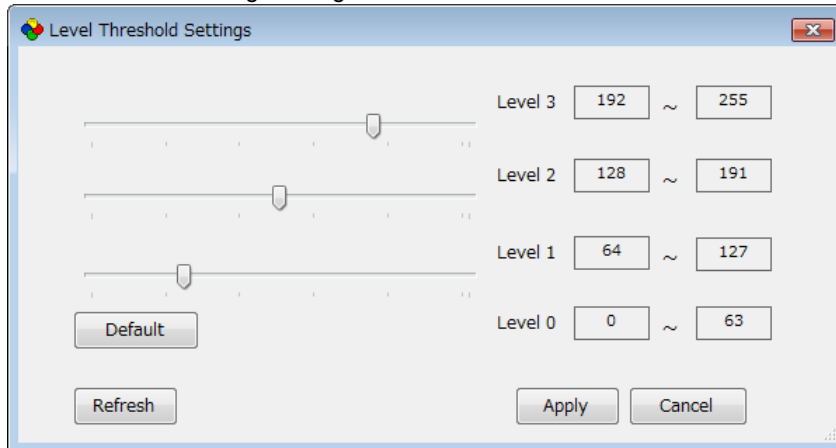
5. **Click Threshold Settings to set the conversion thresholds.**

   Use the sliders to set the thresholds.

   Main Window

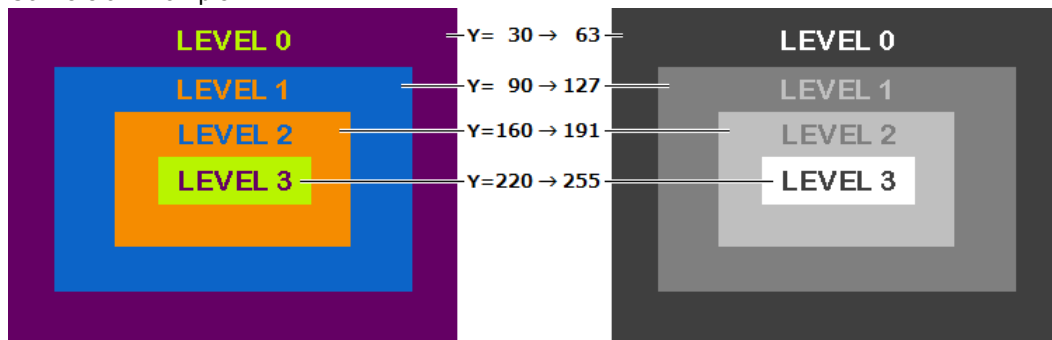   Level Threshold Settings Dialog Box

   ● **Threshold**

   The threshold represents the intensity (Y). If we assume R, G, and B to take on values between 0 and 255, it can be derived from the following formula.

   $Y = 0.212*R + 0.701*G + 0.087*B$

   For example, if the thresholds are set as shown in the above figure, Logo App converts data according to the following rules.
   • Intensities 0 to 63 are converted to level 0 and displayed at intensity 63.
   • Intensities 64 to 127 are converted to level 1 and displayed at intensity 127.
   • Intensities 128 to 191 are converted to level 2 and displayed at intensity 191.
   • Intensities 192 to 255 are converted to level 3 and displayed at intensity 255.

   Conversion Example

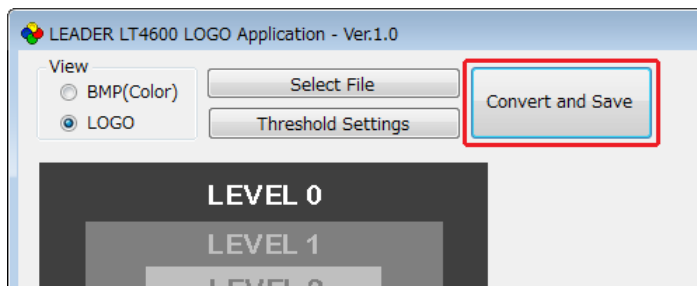● **Description of the Level Threshold Settings Dialog Box**

Item	Description
Default	The thresholds are reset to the following values. Level 3: 192 to 255 Level 2: 128 to 191 Level 1: 64 to 127 Level 0: 0 to 63
Refresh	The result of the conversion by applying the specified thresholds is displayed in the main window. The values are not applied until you click Apply.
Apply	The values are applied, and the Level Threshold Settings dialog box closes.
Cancel	The values are canceled, and the Level Threshold Settings dialog box closes.

6. **Click Apply to apply the settings.**

7. **Click Convert and Save to covert and save the data.**

   The data saved in the same location as the original data with the same name but with a different extension.
   Example: test.bmp → test.lg

8. **When the following confirmation message appears, click OK.**

6. DISPLAYING THE LOGO

This chapter explains how to overlay the data converted with Logo App on LT 4600 SDI signals. For details, see the LT 4600 instruction manual.

1. Place the converted logo (*.lg) in the LOGO folder of the USB memory device.

USB memory device
└ 🗀 LT4600
　└ 🗀 LOGO
　　└ 🗋 <u>****.lg</u>

2. Connect the USB memory device to the LT 4600.

3. Using LOGO SELECT on the LT 4600, transfer the data.

If "INT_*" appears in the lower right when you select a logo, it indicates a logo that has been imported into the LT 4600 earlier.
To display a logo from the USB memory device, select a logo that displays "*/*" in the lower right.

SDI SETTING → SDI → LOGO →

```
3. LOGO  SELECT
▲  TEST. LG          1/  1
```
➜
```
DATA  TRANSFER  OK  ?
   ■OK          □CANCEL
```
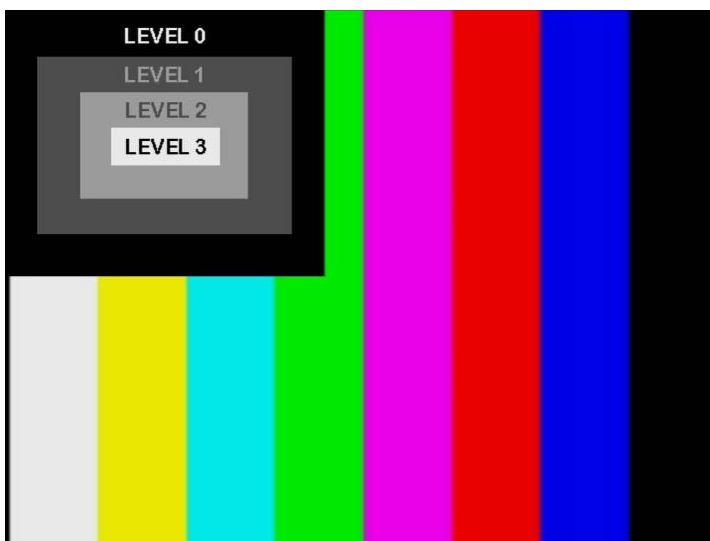
4. On the LT 4600, set LOGO ON/OFF to ON.

SDI SETTING → SDI → LOGO →

```
3. LOGO  ON/OFF
    ■ON          □OFF
```

The logo pattern appears in the upper left of the screen. You can move the logo position, change the logo intensity, and so on.
If the pattern is a check field, a logo cannot be displayed.

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